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UNIVERSITY OF ALBERTA

EFFECTS OF AGENDA USE OVER TIME ON PARTICIPANTS' LEVEL OF INVOLVEMENT IN SUPERVISORY CONFERENCES

BY

LYNETTE S. JANS

A THESIS SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

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ABSTRACT

This project investigated the impact of a supervisee-prepared agenda on supervisees' and supervisors' level of involvement over time. Level of involvement was measured by the initiatory/reflexive ratios obtained from the MOSAICS system (Smith & Anderson, 1982b) and percentages of talk time. Participants were twenty-three student clinician/supervisor pairs. A 2 x 3 two-factor mixed design was used to investigate the effects of agenda use and time on supervisees' and supervisors' level of involvement in the conference. Relationship between supervisees' level of involvement and perception of supervisees' independence defined by both supervisees and supervisors was explored. Experimental group supervisees prepared and used an agenda during all supervisory conferences until after the midterm conference at which time agenda use was withdrawn. Both experimental group and control group subjects audio taped supervisory conferences at the first quarter, midterm, and third quarter levels of the clinical practicum. Both groups completed a responsibility index form. Comparisons of control group with experimental group, using supervisee and supervisor data separately, revealed significant differences in level of involvement, as measured by initiatory/reflexive ratios. Comparisons of control group with experimental group, using supervisee and supervisor data separately, revealed no significant differences in level of involvement, as measured by percentages of talk time. Significant changes were observed in amounts of supervisor and supervisee talk over time. It can be concluded that use of a supervisee-prepared agenda had desirable effects on supervisees' and supervisors' behavior. Some correlations between

supervisee level of involvement and perce[illegible]endence were observed. Results corroborated earlier research th[illegible]f a supervisee-prepared agenda to encourage supervisees' inv[illegible]ences. The design of this study was also able to establish that [illegible]e agenda, supervisee involvement was maintained. The sup[illegible] prepared agenda is not only an effective tool for initiating positive changes [illegible] supervisees' and supervisors' involvement in supervisory conferences, but it al[illegible] to have a lasting impact on conference behavior.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAI TER 1

INTRODUCTION

In 1978, The American Speech-Language-Hearing Association (ASHA) Committee on Supervision reported a need for validation of the supervisory process. It was stated that no data exist "to indicate that supervision makes a difference in the effectiveness of clinicians at any level of training or in the employment setting" (ASHA, 1978, p. 480).

Since that statement the supervisory process has been studied extensively. There has been a proliferation of textbooks on the subject (Anderson, 1988; Crago & Pickering, 1987; Farmer & Farmer, 1989; Oratio, 1977; Rassi & McElroy, 1992), an expanding body of theoretical and empirical developments including models of supervision (Anderson, 1988; Caracciolo, Rigrodsky, & Morrison, 1978a; Farmer & Farmer, 1989; Oratio, 1977), and descriptive research about the supervisory conference (Brasseur & Anderson, 1983; Caracciolo, Rigrodsky, & Morrison, 1978b; Culatta & Seltzer, 1976; Dowling & Witkopp, 1982; Hatten, 1966; McCrea, 1980; Pickering, 1984; Roberts & Smith, 1982; Smith & Anderson, 1982a; Tufts, 1984; Underwood, 1973).

Various theoretical models and supervisory principles have been recommended in speech-language pathology to encourage clinical competency. The models differ in organization but are similar in that the common supervisory objective is to develop independent and self-analytical professionals (Anderson, 1988; Caracciolo, Rigrodsky,

& Morrison, 1978b; Farmer & Farmer, 1989; Oratio, 1977). These models also recognize that supervisory styles should be adjusted dependent on the student clinician's experience level and that the student clinician needs to actively participate in the supervisory conference and problem-solving.

In 1985, a position statement entitled "Clinical Supervision in Speech-Language Pathology and Audiology" was adopted (ASHA, 1985). The position statement described the central premise and tasks of supervision. A central premise of supervision is "the development of self-analysis, self-evaluation, and problem-solving skills on the part of the individual being supervised" (ASHA, 1985, p.57). Thirteen tasks were identified as important to the area of supervision competency. The tasks focused on the general areas of academic knowledge, clinical skills and disposition, and interpersonal skills and disposition. One of the tasks included interacting with the supervisee in planning, executing, and analyzing supervisory conferences. The competencies of the task focused specifically on the importance of encouraging supervisee self-analysis and self-exploration.

Studies have been conducted investigating the nature of conference interactions between the supervisor and the student clinician in the supervisory conference. It was found that supervisors assume a dominant role, providing feedback consisting of their opinions and suggestions and that student clinicians tend to be passive, contributing mainly descriptive accounts of treatment sessions (Blumberg, 1974; Culatta & Seltzer, 1976; Dowling & Shenk, 1981; Irwin, 1981; McCrea, 1980; McFarlane, 1992; Pickering, 1984; Roberts & Smith, 1982; Shapiro, 1985; Tufts, 1984). These

behaviors are inconsistent with supervisee self-analysis, the desired goal of supervision. It seems reasonable to believe that, as student clinicians' skills increase, they should be increasingly participatory, initiatory, and self-evaluative, however, these behaviors were not evident in the above investigations.

From this research base, knowledge about conference interaction strategies designed to enhance the supervisory conference has evolved. Teaching clinics and peer supervisors are strategies that alter the traditional supervisory conference and, therefore, may increase supervisee participation and self-analysis. These attempts have been largely unsuccessful in modifying supervisee behavior (Dowling, 1979, 1983; Dowling & Shank, 1981; McFarlane & Hagler, 1992a). Another strategy to motivate change during the supervisory conference has been to provide supervisors with feedback about their conference behavior (Cimorell-Strong & Ensley, 1982; Culatta & Seltzer, 1977; Hagler, 1986). In these investigations, mixed results were achieved. It is important to note that none of the investigators were able to provide empirical evidence that modification of supervisor behavior will affect supervisee behavior.

Dowling (1989) indicated that a priority for research should be to determine what can be done to encourage supervisees' increased involvement in the conference. A repeatedly suggested method for increasing supervisees' participation has been the use of a conference agenda (Anderson, 1988; Farmer & Farmer, 1989; Mawdsley, 1989; Pooper, 1984). Shaechnig, Dowling, and Williams (1992) investigated the amount of participants' talk time and question usage when the responsibility for agenda planning

was shifted from the supervisor to the supervisee. Even though there was a shift in agenda planning responsibility, supervisors continued to talk more and dominate meetings. The investigators indicated that it was not known exactly how the agenda was used in the supervisory conference and that the supervisee may not have assumed responsibility for the planned exchange. McFarlane (1992) implemented a supervisee-prepared agenda to increase active involvement of the student clinician in the supervisory conference. Positive changes in conference interactions were found, but the author questioned whether the student would continue to be actively involved in the supervisory conference across time. A pilot study (Jans, 1992) was conducted with ten supervisor-supervisee pairs to determine whether the positive changes resulting from agenda use noted by McFarlane (1992) would continue over time. No difference in conference interactions was noted between experimental and control groups. Jans (1992) questioned whether experimental group participants consistently used the supervisee-prepared agenda.

Theoretical supervision models emphasize self-supervisory skills (Anderson, 1988; Farmer & Farmer, 1989) and the development of self-evaluating individuals (ASHA, 1985). Encouraging supervisee participation in the supervisory conference is consistent with these models. Descriptive data about the supervisory conference have revealed that the supervisor is dominant and the supervisee is passive throughout the conference, which is inconsistent with the goal of supervision. Teaching clinics, peer supervisors, and feedback to the supervisors to alter conference interactions have been unable to increase the supervisees' involvement in the conference. McFarlane (1992)

used an agenda to increase students' active involvement in the conference, but reported the need to investigate whether students would be able to maintain their increased involvement over time. Continued research is essential to develop effective supervisory techniques and to propel "clinical supervision from an intuitive enterprise to a clinical science" (Gillam, Strike Roussos & Anderson, 1990, p. 737).

CHAPTER 2

LITERATURE REVIEW

Since the beginning of the profession, statements have been made about the importance of supervision (Kleffner, 1964; Villareal, 1964) and there has been an increase in the supervision knowledge base. An overview of the supervisory process will be presented beginning with proposed supervisory approaches, and supervision tasks and competencies. The supervisory conference will be highlighted because it is believed that the "essence of supervision takes place in the conference" (Oratio, Sugarman, & Prass, 1981, p. 40). Conference investigations that looked at (1) the nature of conference interactions, (2) the need for student clinician involvement in the supervisory conference, and (3) attempts to change the structure of interactions are reviewed.

Supervisory Approaches

With the emergence of the communication disorders field in the 1900's, came an inherent recognition of clinical practice and the need for someone to oversee the work of novice clinicians (Farmer & Farmer, 1989). Limited attention was paid to the supervisory process, thus prompting supervision to be referred to as the "neglected component of the profession" (cited in Anderson, 1988, p. 13). Each decade brought developments and increased interest in the study of the supervisory process. In the decade of the 1970's, a surge of scholarly activity occurred. There were numerous conference proceedings, articles, and dissertations completed. Three books on

supervision were published (Oratio, 1977; Schubert, 1978; Rassi, 1978). The interest continued into the 1980's with a positive move forward in terms of literature and professional development. Articles were published in ASHA (Anderson, 1981; Cimorell-Strong & Ensley, 1982), Journal of Speech and Hearing Disorders (Pickering, 1984), and Journal of Speech and Hearing Research (Brasseur & Anderson, 1983; Roberts & Naremore, 1983; Roberts & Smith, 1982; Smith & Anderson, 1982a, 1982b). Special interest groups in supervision became part of the national organizations of the American Speech-Language and Hearing Association and the Canadian Association of Speech-Language Pathologists and Audiologists. Despite continued efforts to emphasize the need and importance of supervision, research in supervision lacked an empirical foundation to support the practice of supervision in clinical training (Anderson, 1988; Shapiro & Anderson, 1989). In an attempt to move towards an empirically sound base, a number of supervisory approaches to the process were developed which provide a framework to organize methods of practice and study. The supervisory approaches in speech-language pathology have drawn extensively from other disciplines such as education, social work, counselling, and business management.

Oratio's (1977) *Molar Model of Clinical Supervision* encompasses two primary objectives: (1) changing the clinician's behavior in a specific direction thus developing professional independence and clinical autonomy; and (2) focusing on technical knowledge, clinical skill, and self-exploration which is thought to be critical to professional development and effective therapeutic performance. Supervision was

proposed as the central element of the process with intensive training and experience in "observation, analysis, post-therapy conference, didactic teaching, micro-therapy, live demonstration, and actual clinical practice" (Oratio, 1977, p. 130).

A Rogerian orientation to the relationship between supervisor and supervisee was proposed by Caracciolo, Rigrodsky, and Morrison (1978a) based on Carl Rogers' client-centred therapy and the supervisory model proposed by Dussault (1970) for teacher education. The authors suggested that the same facilitating interpersonal conditions that are important to facilitate change in client behavior are also relevant to the supervisory process. These conditions, if offered by the supervisor to the supervisee, will "provide a psychosocial environment which enables the student to develop into a competent, secure, and independent professional clinician" (Caracciolo, Rigrodsky, & Morrison, 1978a, p. 286).

Mawdsley and Scudder (1989) described the *Integrative Task-Maturity Model of Supervision* (ITMMS). This approach is a combination of Hersey and Blanchard's (1982) leadership model, *Wisconsin Procedure of Appraisal of Clinical Competence* (W-PACC) (Shriberg, et al., 1975), and Cogan's (1973) cycle of clinical supervision. This model includes a system for determining appropriate supervisory styles and supervisory techniques based on the supervisees' level of task maturity. The purpose is to promote efficient, effective supervision encouraging the development of a mature student clinician.

Farmer and Farmer (1989) proposed a *Trigonal Model* that organized supervision in speech-language pathology into three components: (1) *constituents*, which includes

the people involved in the supervisory process, (2) *concepts*, ideas and knowledge of the supervisory process, and (3) *contexts*, locations where supervision takes place. In this model, differential supervision is emphasized, which allows for the people involved to participate to the best of their abilities. The ultimate goal of supervision is to promote professional independence.

Based on clinical supervision concepts from teacher education (Cogan, 1973; Goldhammer, 1969), Anderson (1988) developed the *Clinical Supervision* or *Colleagueship Model*. This approach focuses on the improvement of the technical, professional, and interpersonal skills of the clinician through a "cycle" (Cogan, 1973) or "sequence" (Goldhammer, 1969) of supervision. Supervision is viewed on a continuum with specific styles of supervision appropriate to each stage on that continuum. The three stages proposed are evaluation-feedback, transitional, and self-supervision. In the evaluation-feedback stage, the supervisor is in charge of all decision making and evaluation. The transitional stage incorporates a mixture of direct and indirect supervisory behaviors. This mixture of behaviors is referred to as a collaborative style. A collaborative style is thought to be appropriate during most of the clinical training of student clinicians. The final stage, self-supervision, required a consultative supervisory style and fosters increased self-evaluative skills. Components of the supervisory process are understanding the process, planning, observing, analyzing, and integrating. Supervisee participation in all levels of the supervisory process is central to this model. The goal of a self-supervising, independent professional is encouraged through supervisee participation in the clinical

process. This clinical supervision model has become widely accepted in speech pathology.

Summary

The approaches that have been described differ in components and constructs, however, there are important similarities. These approaches recognize the need for active supervisee involvement in the supervisory conference, self-analysis, and independence as the ultimate goal of supervision. They provide a theoretical framework for discussing and organizing supervision practice.

Although these models have a great deal of face validity and have been incorporated into clinical settings, they have not been statistically validated (Brasseur, 1989; Roberts & Smith, 1982). These models assume that supervised experience results in professional development (Shapiro & Anderson, 1989). This, and other assumptions, need to be validated through systematic study of the supervisory process (ASHA, 1978).

Supervisory Tasks and Competencies

ASHA (1985) adopted a list of tasks and competencies in an attempt to provide a framework for study and validation of the supervisory process. The document referred to clinical supervision as the "tasks and skills of clinical teaching related to the interaction between a clinician and client" (ASHA, 1985, p. 57). Clinical teaching was defined as the interaction between the supervisor and supervisee which furthers the development of clinical skills of student clinicians (ASHA, 1978).

Thirteen tasks and 81 competencies important to effective clinical supervision were outlined. The tasks and supporting competencies were reported to have face validity as judged by experts in the area of supervision. Ultimately, the tasks of supervision lead to the development of self-analysis, self-evaluation, and problem-solving skills. Specifically, the tasks include encouraging the development of interpersonal skills, assisting the supervisee in attaining assessment and management skills, observing and analyzing sessions, interacting with the supervisee in the supervisory conference, encouraging effective technical writing skills, and facilitating professional development (ASHA, 1985).

Anderson (1988) stated that the adoption of the list of competencies has provided a set of guiding skills, but if they are to provide a meaningful basis for development of supervisory procedures, validation needs to be conducted. There is a need to conduct investigations of what actually happens during the supervisory process and what interventions are effective (Borders, 1989).

One area of the supervisory process that has received research attention is the supervisory conference interaction. It appears to be the most common structure for communicating feedback and is viewed as the place where supervision takes place (Oratio, Sugarman, & Prass, 1981). The following section will review descriptive studies of supervisory conference interactions.

Descriptive Data of Conference

Descriptive data concerning supervisory conferences in a university program were reported by Hatten (1966). Supervisors were found to talk approximately 60% of the

time and supervisees only 35% of the time. Topics changed frequently during the course of the interaction with the majority of topics focusing on therapy techniques and client's qualities.

Underwood (1973) utilized the System for Analyzing Supervisor-Teacher Interaction and investigated several variables in the conference. Supervisors were reported to be highly directive while the supervisee played a passive role.

Culatta and Seltzer (1976) developed the Content and Sequence Analysis System to identify interaction variables and trends within the supervisory conference. This system was adapted from the Content and Sequence Analysis of Speech and Hearing Therapy (Boone & Prescott, 1972) which codes clinician-client interaction. Student clinicians were found to provide observations and information about the treatment session and the supervisor used the information to suggest strategies. Few evaluative comments were made by the supervisor. Specifically, the supervisor spoke 55% of the time and the student clinician 43% of the time. The supervisor asked 70% of the questions, provided 66% of the evaluations, and provided 61% of the strategies.

A ten-category system adapted from Flanders (1967) was used to investigate supervisor-supervisee behavior during supervisory interactions (Irwin, 1975). Supervisors used a direct style 77% of the time and an indirect style 23% of the time. Supervisees mostly responded to the supervisor and exhibited few initiated interactions.

These studies found that the supervisor had a directive role in conference interactions. There were methodological limitations with these studies and the

literature suggested that there was a need for reliable and valid instruments to measure the multidimensional aspects of the supervisory conference.

The Multidimensional Observation System for the Analysis of Interaction in Clinical Supervision (MOSAICS) (Weller, 1971) was adapted by Smith (1978) and Smith and Anderson (1982b). This system was developed to provide a valid, reliable, and comprehensive multidimensional analysis of both content and process of group and individual supervisory interaction. The system provides information about content and process by coding along four dimensions (speakers, pedagogical moves, substantive areas, and substantive-logical meanings) and into 23 categories. These categories are combined into four ratios (initiatory/reflexive, analytic/evaluative, diagnostic/prescriptive, and complex/simple).

Roberts and Smith (1982) analyzed the behavior of supervisors and supervisees over a six-week period utilizing the adapted MOSAICS (Smith & Anderson, 1982b). The initiatory/reflexive (I/R) ratio was the strongest measure of role differences. The I/R ratio for supervisors was .473 indicating that initiatory and reflexive behaviors were approximately equal. The supervisees' behavior was predominately reflexive (I/R=.139). The results indicate that the supervisor assumed a dominant, initiatory role while the supervisee assumed a predominantly passive, reflexive role. They responded and reacted to the supervisor and initiated less. The supervisee did not play an active role in the conference interactions.

McFarlane (1992) analyzed conference content and also found that supervisors and supervisees were distinguished by initiatory moves. The supervisor I/R ratio was

.55 compared to the supervisee ratio of .244. This type of conference interaction has been described and supported by other research (Caracciolo, Rigrodsky, and Morrison, 1978b; Dowling and Witkopp, 1982; Smith and Anderson, 1982a; Tufts, 1984).

Summary

The specific supervisory behaviors necessary to promote student independence are not known, but a mixture of direct and indirect styles is recommended to encourage independence and self-analysis (Anderson, 1988; Smith & Anderson, 1982b).

Supervisory conference interactions have been shown to be highly directive. The supervisor assumes a dominant, initiatory role while the supervisee assumes a passive, reflexive role. The interactions found in supervision appeared to be contrary to the clinical supervision approach supported by the profession. Supervisors do not appear to encourage supervisees' active involvement in the conference; this is believed to hinder supervisees' ability to develop clinical autonomy (Roberts & Smith, 1982).

More recent research has focused on variables that may encourage active supervisee participation in the conference. This research will be discussed next.

Changes to Conference Interactions to Promote Involvement

Studies have investigated changes in conference type (Dowling & Shank, 1981; McFarlane & Hagler, 1992), feedback to the supervisor on conference behavior (Cimorell-Strong & Ensley, 1982; Culatta & Seltzer, 1977; Hagler, 1986), and supervisee-directed change (McFarlane, 1992; Shaachnig, Dowling, & Williams, 1992) as strategies to promote supervisees' active involvement.

Changes in Conference Type

The teaching clinic is an alternative to traditional supervision. The clinic is a structured group supervisory method. The demonstration clinician brings a video tape of a therapy session. The supervisor participates as the clinic leader and peers function as group monitors and peer supervisors. This is an attempt to modify the conventional supervisory method and encourage increased supervisee participation and self-analytical behavior. Dowling and Shank (1981) used the Culatta and Seltzer (1976) analysis system to evaluate the quality and quantity of talking in the teaching clinic conference compared to the conventional supervisory conference. There were no differences found in talk behavior.

Dowling, Sbaschnig, and Williams (1982) questioned the reliability and validity of the Culatta and Seltzer (1976) system. Dowling (1983) utilized the MOSAICS system (Smith & Anderson, 1982b) to investigate whether supervisors, peers, and demonstration clinicians differed in quantity or type of talk during the teaching clinic supervisory conference. The supervisor was found to have a higher initiatory/reflexive ratio. The supervisor played a dominant role while the supervisee was a passive participant. These results are similar to the findings in the conventional conference. This attempt to modify the format of the conference did not appear to alter supervisee initiatory behavior.

Another suggested method to encourage supervisee participation is the use of peer supervisors (Anderson, 1988; Dowling, 1979; Farmer & Farmer, 1989). Peers are thought to promote the type of self-analytical behavior considered to be desirable in

student clinicians. Farmer and Farmer (1989) indicated that peer supervision promotes an increased comfort level and empathy between the participants, which will ultimately increase the amount of self-analysis and directiveness used by the student clinician. Peers included in the teaching clinic situation did not appear to have the desired effects on supervisee participation (Dowling, 1983; Dowling & Shank, 1981). It is important to remember that in the teaching clinic the supervisor was still involved in the supervisory conference. McFarlane and Hagler (1992a) analyzed supervisory conferences in two conditions, conventional supervision and peer supervision. Conferences were analyzed with MOSAICS (Smith & Anderson, 1982b). Surprisingly, the authors reported that the mean supervisee I/R ratios were virtually identical under both conditions. The findings revealed that supervisory moves of peer supervisors were less initiatory than those of clinical supervisors. The peer supervision experience seemed to follow the colleagueship model of supervision, however, the students were not more initiatory in conferences with a peer. Simply changing the interactants in the conference did not appear to be a sufficient condition to increase supervisee involvement.

Effects of Feedback to the Supervisor

Culatta and Seltzer (1977) provided feedback to supervisors on their conference behavior based on the Content and Sequence Analysis System. Supervisory behaviors were selected for modification. The results indicated that knowledge of the behaviors did not motivate change in the supervisors.

In an investigation that provided supervisors with written feedback about their

effectiveness from the supervisees, results showed supervisors were dominant in both the feedback and non-feedback groups (Cimorell-Strong & Ensley, 1982).

A *bug-in-the-ear* method as a form of feedback to the supervisor was used to modify the amount of verbal behavior of supervisors during conferences (Hagler, 1986). This form of electronic feedback delivers immediate information to the subject. Supervisors were able to reduce their verbal behavior in response to the simple directive "try to talk less". The author stated that this was a "first step toward systematic modification of a supervisor conferenc..g behavior, which may lead someday to strategies for teaching supervisory styles" (Hagler, 1986, p. 67).

Wellman (1991) investigated effects of supervisor feedback and self-exploration on conference behaviors. The *Underwood Category System for Analyzing Supervisor-Clinician Behavior* (Underwood, 1979) was used by supervisors to analyze sessions. Results indicated that supervisors who engaged in self-exploration were more concrete and asked more productive questions. There was also a change in supervisees' diagnostic/prescriptive and complex/simple conference behaviors.

Supervisee-directed Change

Roberts and Smith (1982) reasoned that, if the goal of supervision is to develop an independent and self-supervising professional, the supervisee should be involved more in the supervisory conference. Anderson (1988) stated that setting of agenda items was valuable and that planning for the maximum participation of the supervisee was necessary. Pesper (1984) obtained questionnaire responses from two groups of graduate students, one group that prepared a conference agenda and one group that

did not. Both groups rated conferences positively. An increased desire to determine conference content was noted by the group that prepared an agenda (Peaper, 1984). A Student initiated conference protocol (Mawdsley, 1989) was developed to encourage supervisees to become actively involved in conference planning. Positive reactions to the tool were reported by supervisors who agreed to allow supervisees to use the tool.

The use of a supervisee-prepared agenda in conferences between student clinicians and peers was found to produce dramatic results (McFarlane & Hagler, 1992a). The use of an agenda caused an increase in student clinicians' initiations and a decrease in peer supervision initiations. The agenda appeared to have the potential to affect positive change in conference interaction. The authors suggested further research be applied to the traditional supervisory pair to determine the effects of a supervisee-prepared agenda.

McFarlane (1992) investigated the use of an adapted Student initiated conference protocol (Mawdsley, 1989) in a traditional supervisory conference. A single factor between-groups experimental design was used. Student clinicians were instructed to use the conference agenda on two occasions, audio taping the occasion of second use. The audio tape was analyzed utilizing the MOSAICS system adapted by Smith and Anderson (1982b). The ratio of initiatory/reflexive (I/R) moves was calculated. The supervisor and supervisee in the experimental group had approximately equal initiatory/reflexive ratios (I/R ratio for supervisor (sor)=.422, I/R ratio for supervisee (see)=.507) as compared to the control group in which the supervisor had a significantly higher I/R ratio than the supervisee (I/R sor=.55, I/R see=.244). The

agenda appeared to be an "easily implemented, theoretically sound, efficient device for changing one of the most salient aspects of the conference, that is, which party determines the content" (McFarlane, 1992, p. 86). McFarlane suggested that the next step would be to empirically test the use of a supervisee-prepared agenda across time.

A pilot study (Jans, 1992) was conducted to investigate the changes noted in conference interactions when the supervisee-prepared agenda was used across time. Ten supervisor/supervisee pairs were divided randomly and equally into two supervisory conditions, control group and experimental group. Supervisees in the experimental group were asked to complete a supervisee-prepared agenda between the third and ninth weeks of their clinical placement with use of the tool discontinued at the ninth week. Audio tapes of the control group and experimental group supervisory conferences at the third, sixth, and ninth week were recorded and analyzed using the MOSAICS (Smith & Anderson, 1982b). Results of this pilot study indicated that there was no significant change in the conference interactions, but it was reported that the use of the supervisee-prepared agenda was not adhered to during the study.

Another investigation conducted by Sbaschnig, Dowling, and Williams (1992) attempted to increase the amount of participant talk time and question usage by shifting the responsibility for agenda planning from the supervisor to the supervisee. The shift in agenda planning responsibility was implemented to encourage active involvement in the supervisory conference and move the supervisee toward self-supervision, however, results of the study indicated that the supervisors continued to talk more and dominate meetings. The investigators indicated that it was not known

exactly how the agenda was used in the supervisory conference. Supervisees may not have assumed responsibility for the planned exchange, thus not showing active involvement.

Summary

Roberts & Smith (1982) suggested that a possible target in supervisory intervention was to teach the supervisors to decrease their initiations and participation and that supervisees could be taught to increase their initiations and involvement. Studies addressing supervisor-directed change in the supervisory conference had mixed results. The teaching clinic and use of a peer supervisor were unable to increase the supervisee participation level. Hagler (1986) and Wellman (1991) documented that supervisors were able to modify their conference interaction. These studies were unable to document change in supervisee behavior resulting from changes in supervisor behavior.

A review of the literature showed that the supervisee typically had a passive role in conference interaction. Dowling (1989) stated that a priority for future research is to determine ways to improve the supervisees' involvement in the conference interaction. The use of a supervisee-prepared agenda facilitated active participation on the part of the supervisee in both peer conferences and in the traditional supervisory conference (McFarlane & Hagler, 1992; McFarlane, 1992). It seems that this particular type of direct intervention with the supervisee encourages supervisee involvement in the conference. It is not known whether increased supervisee involvement is a lasting result of such intervention. Missing from the research is an

indication of the effects of conference change on supervisee learning or supervisee independence. Much attention has been paid to the dynamic interaction between the supervisor and supervisee but there is limited knowledge about second order effects that occur due to interaction changes. This area of research would provide valuable information to evaluate the appropriateness of the currently accepted supervision models.

Purpose

Positive changes in the supervisory process were observed following direct intervention with the supervisee during conferences. McFarlane (1992) found that the supervisee-prepared agenda was an easily implemented and theoretically sound device for producing an immediate, dramatic, short-term change in conference content and verbal interactions between traditional supervisory pairs.

This study investigated the impact of the supervisee-prepared agenda on supervisees' level of conference involvement over time. Level of involvement was measured by the initiatory/reflexive ratio obtained from the MOSAICS system (Smith & Anderson, 1982b) and percentage of talk time.

The following specific research questions were addressed:

1. Does use of supervisee-prepared agenda affect supervisees' level of involvement in supervisory conferences?
2. Does use of supervisee-prepared agenda affect supervisors' level of involvement in supervisory conferences?
3. Does time affect supervisees' level of involvement in supervisory conferences?
4. Does time affect supervisors' level of involvement in supervisory conferences?
5. Do agenda use and time interact to affect supervisees' level of involvement in supervisory conferences?
6. Do agenda use and time interact to affect supervisors' level of involvement in supervisory conferences?
7. Is there a relationship between supervisees' level of involvement and perceived level of supervisees' independence?

CHAPTER 3

METHODOLOGY

Subjects

Subjects were 23 volunteer student/supervisor pairs obtained through clinical coordinators at eight university training programs in speech-language pathology, three Canadian and five American. Student clinicians enrolled in clinical placements between January and August, 1993, were eligible to participate in this study. Participants were selected on the basis of their independent, mutual agreement to participate. Twenty-six pairs were assigned randomly either to the control or experimental group. Three pairs withdrew due to illness and other commitments, leaving a total of twenty-three pairs, 10 in the control group and 13 in the experimental group.

Supervisors were speech-language pathologists who had worked professionally for at least one year. The following types of clinical practicum sites were represented: 6 university clinics, 7 rehabilitation centres, 1 acute care hospital, 7 medical centres, and 2 children's centres. Supervisors' clinical experience ranged from 2 to 25 years ($\underline{M}$=10.2), and they had previously supervised between 0 and 185 students ($\underline{M}$=20.8). Nineteen of the twenty-three supervisors reported previous training in supervision. In order to quantify the training experience, the following values were assigned: 1 for inservice training, 2 for a workshop, and 3 for a university course. Supervisory training ranged between 0 and 23 ($\underline{M}$=5.8). Independent samples t-tests

were used to compare years of experience, number of previous students, and supervisory training between experimental and control groups. No significant differences were found (Table 1). On the basis of finding no difference in terms of years of experience, number of previous students, and supervisory training, supervisor groups were judged to be homogeneous.

Student clinicians ranged in age from 21 to 42 years ($\underline{M}$=25). Nineteen were graduate students and four were undergraduate students, with a range from 3 to 7 years of university experience ($\underline{M}$=5). The students had obtained from 0 to 360 clinical practicum hours ($\underline{M}$=156). Independent samples t-tests were used to compare age, years of university experience, and number of clinical practicum hours between experimental and control groups. No significant differences were found (Table 2). On the basis of finding no differences in terms of age, years of university experience, and number of clinical practicum hours, supervisee groups were judged to be homogeneous.

Table 1. Demographic data-supervisor

	Experimental Group Mean	Control Group Mean	t value	Probability
# yrs. as SLP	10.06	10.3	-.082	.935
# previous students	10.39	31.1	-1.32	.200
training	4.9	6.7	-.649	.523

Table 2. Demographic data-supervisee

	Experimental Group Mean	Control Group Mean	t value	Probability
age	25.4	25.0	.178	.860
# yrs. of university	5.6	5.4	.464	.648
# clinical hours	152.2	161.5	-.183	.857

Materials

Four different data collection tools were required in this experimental investigation. A supervisory process tool that analyzes the interaction between the supervisor and supervisee pair, materials required for calculating the percentage of talk time, conference outline, and responsibility index are described below.

Multidimensional Observational System for the Analysis of Interactions in Clinical Supervision (MOSAICS)

The MOSAICS system (Appendix A), as adapted by Smith and Anderson (1982b) for use in speech pathology, was used as the measurement device for analysis of supervisory conferences. Twenty-one of the forty-two verbal interaction/content variables coded using portions of Weller's MOSAICS (Weller, 1971) have been recommended for research. Reliability and validity have been established for this system (Smith & Anderson, 1982b).

The one critical ratio used in this study is described below:

1. *"The initiatory/reflexive ratio (I/R) is the extent to which each participant initiates or moves discourse forward (initiatory) as compared to previous moves, responses or reactions (reflexive).*

   This ratio is:

$$\frac{\text{structuring (STR)} + \text{soliciting (SOL)}}{\text{responding (RES)} + \text{reacting (REA)} + \text{summary reaction (RSM)}}$$

   (Weller, 1971, p. 46)

Scoring procedures followed those of Smith (1978) and are described in Appendix B.

Percentage of Talk Time

The percentage of talk time was calculated for each participant. A five-minute audio tape with a beep at five-second intervals was required.

Conference Outline

The Conference Outline (Appendix C) (McFarlane, 1992) as adapted from Mawdsley's (1989) Student initiated conference protocol was used. Suggestions for discussion both in the cognitive-behavioral area, interpersonal area, and affective areas such as motivation, interest, and enjoyment of session by clinician and client were included in this modified outline. A completed outline (Appendix D) was given to the supervisee to promote effective use of the outline.

Responsibility Index

The Responsibility Index (Appendix E) was developed by this experimenter to measure perceived clinical independence. Supervisors and supervisees were asked to independently judge the percentage of responsibility each assumed for eleven aspects of the supervisory process. These aspects included planning of assessment and treatment for clients, data collection, interpreting client performance, and planning for supervisory conferences. These were selected to represent areas that Anderson (1988) identified as important components of the supervision and clinical process.

Procedure

Coordinators of clinical placements at Canadian and American universities with speech-language pathology programs were asked in a letter (Appendix F) to assist with locating participants. Clinical coordinators agreeing to assist were asked to supply an estimate of the number of supervisor/supervisee pairs at their own institution who would be eligible to participate. Letters of invitation (Appendix G) and informed consent documents (Appendix H) were sent to the coordinators for distribution to eligible clinical supervisors. Clinical supervisors were asked to invite their respective students to participate in this study. These students received letters of invitation (Appendix I) and informed consent documents (Appendix J).

Supervisor and student clinician pairs mutually agreeing to participate were asked to follow instructions enclosed with the letters of invitation to the supervisors. Instructions for either the experimental group (Appendix K) or control group

(Appendix L) subjects were randomly distributed to the various supervisor/supervisee pairs. Participants were asked to forward a copy of their signed consent forms to the investigator and provide an agreed upon schedule indicating supervisory conference dates. Audio tapes were forwarded to the supervisor once consent forms were returned from both the supervisor and student clinician. Reminder cards were sent one week prior to the scheduled date for audio taping a supervisory conference.

Control group subjects (Agenda-No) were asked to audio tape a typical supervisory conference at the first quarter, midterm, and third quarter points of their current clinical placement. Both the supervisor and supervisee completed the Responsibility Index form at these three times.

Experimental group (Agenda-Yes) supervisors were instructed to give the supervisee a package which contained ten Conference Outlines and one Example Conference Outline. The supervisors were asked to allow their student an opportunity to complete the Conference Outline before every supervisory conference until after the midterm point of the clinical placement, at which time, use of the agenda was discontinued. Experimental group subjects were instructed to audio tape a supervisory conference at the first quarter, midterm, and third quarter points of their current clinical placement. Both the supervisor and supervisee completed the Responsibility Index form at these three times.

Audio tapes, the audio tape information forms (Appendix M), the Responsibility Index forms for all of the control and experimental group participants, and the completed Conference Outlines for the experimental group were returned to the

experimenter for analysis. All participating supervisor/supervisee pairs returned the required three audio tapes except one pair who returned only two audio tapes. This pair reported that the audio tapes had arrived too late, therefore, they only taped two conferences.

Independent Variables

A 2 x 3 two-factor mixed design was used. Agenda Use, having two levels: Yes (Experimental) and No (Control) was the first independent variable. Time, having three levels: First quarter, Midterm, and Third quarter points of the clinical placement, was the second independent variable.

Dependent and Descriptive Variables

Two different measures of involvement, initiatory/reflexive ratio and percentage of talk time, were calculated. Initiatory/reflexive ratio measured type of talk as a percentage of two types of talk, initiatory or reflexive moves, within one subject. This measurement allows for one participant to increase their initiations without affecting the other participants initiations. Percentage of talk time measured the amount each participant spoke during conferences. With this measurement, if one participants' talk time increases the other participants' talk time will decrease. Thus, initiatory/reflexive ratios data measure type of talk and the percentages of talk time data measure amount of talk. It was reasoned that use of two different measurements of the supervisory interaction may be valuable in case one was not sensitive to the independent variables (Agenda Use & Time).

Level of Involvement, as measured by the initiatory/reflexive (I/R) ratios for supervisees and supervisors and percentages of talk time for the supervisees and supervisors were the four dependent variables.

The first and second dependent variables were obtained from the pedagogical moves section of MOSAICS (Smith, 1978). Five-minute segments of the audio tapes were analyzed. Analysis of short conference segments with MOSAICS has been established as valid (Hagler & Fahey, 1986). The first minute of discussion was not included in the analysis, therefore, analysis began at the one-minute mark and ended at the six-minute mark. The critical ratio obtained from the pedagogical moves section of MOSAICS was calculated by "dividing the sum of the categories for the first variable by the sum of the categories for the first and second variables" (Roberts & Smith, 1982, p.430). The initiatory/reflexive ratio (I/R) was calculated in the following manner:

$$\frac{\text{structuring} + \text{soliciting}}{\text{structuring} + \text{soliciting} + \text{responding} + \text{reacting} + \text{summary reaction}}$$

The third and fourth dependent variables were obtained by calculating the percentage of talk time for supervisees and supervisors. A five-minute audio tape with a beep at five-second intervals was played simultaneously with the supervisory conference tape. At every five-second interval, the judge recorded who the speaker was at that moment, either the clinical supervisor or student clinician. The percentage of talk time was calculated by adding the number of five-second intervals for either speaker and dividing the number by the total time intervals.

The descriptive variables, perceived Level of Independence, were calculated from the Responsibility Index. An average of the supervisees' responsibility perceived by both supervisor and supervisee was calculated. Thus, Level of Independence had two indices, supervisee perception of supervisee independence and supervisor perception of supervisee independence.

Reliability

MOSAICS (I/R ratio)

Audio tapes were coded by the experimenter using the MOSAICS system (Smith & Anderson, 1982b).

Intra-rater reliability was calculated using a point-to-point agreement rating of the initiatory and reflexive moves of twenty percent of the audio tapes. The experimenter re-scored the audio tapes and an intra-rater reliability rating of 92% was obtained. Inter-rater reliability was calculated using a point-to-point agreement rating of the initiatory and reflexive moves. A colleague familiar with the MOSAICS provided inter-rater reliability measurements on a different randomly selected twenty percent of the audio tapes. Point-to-point agreement was 86% across the one level of MOSAICS. Both coders were blind to the group assignment for each tape.

Percentage of Talk Time (TT)

Two individuals were trained to score the talk time for each tape. Inter-rater reliability between the two raters was obtained by randomly selecting and re-scoring twenty percent of the audio tapes. An overall agreement of 95% was calculated.

Data Entry and Mathematics

The dependent variable values, initiatory/reflexive ratio, percentage of talk time, and level of independence, for each subject were stored in a computer database file. All computer data entries for both supervisor and supervisee groups were cross-checked with original values to ensure that the computer entries were accurate. All of the mathematical computations for level of independence from the Responsibility index were re-calculated and any errors in calculation were corrected and re-entered into the database file to ensure accuracy.

Data Analysis

The dependent variables consisted of the initiatory/reflexive ratios for supervisors and supervisees, the percentages of talk time for supervisors and supervisees, and two indices of supervisees' independence.

The test for homogeneity of independent variances (Bruning & Kintz, 1977) was calculated for all dependent variables to determine whether a two-way analysis of variance could be used to test for main effects and interaction between the independent variables. The initiatory/reflexive ratio (I/R) obtained from the pedagogical moves of the MOSAICS was a proportion, and Winer (1971) recommends that an arcsine transformation be performed in order to stabilize the variances in observations of proportions. Kirk (1968) described three reasons for using transformations in analysis of variance: (1) to achieve homogeneity of error variance, (2) to achieve normality of treatment-level distributions (or within-cell distributions), and (3) to obtain additivity of treatment effects. Kirk went on to

explain that the F distribution is robust and relatively unaffected by lack of normality and heterogeneity of variance. Thus, the first two reasons for performing a transformation seemed less than compelling. The third reason, to reveal additivity of treatment effects, certainly applied to the current study, but the decision not to transform the proportions was judged to be a more conservative test of differences among treatment effects over time.

To answer questions 1, 3, and 5, the mean I/R ratios and mean percentages of talk time for supervisees were compared across the control and experimental conditions and over time with two 2-factor mixed analyses of variance (Feldman, Gagnon, Hofmann, & Simpson, 1988).

To answer questions 2, 4, and 6, the mean I/R ratios and mean percentages of talk time for supervisors were compared across the control and experimental conditions and over time with two 2-factor mixed analyses of variance (Feldman, Gagnon, Hofmann, & Simpson, 1988).

Two comparisons are made on the same subjects in this study, therefore, it is recommended that a more stringent level of significance be established in order to compensate for increased experiment-wise error rate (Kirk, 1968). The error rate would be calculated as: Error rate (per comparison) = .05/2 (number of comparisons) and .025 would then be the critical level of alpha for the 2-factor mixed analyses of variance on supervisee and supervisor data. However, Huberty (1987) suggests that no alpha level is "sacred" and encourages researchers to consider carefully which of the two types of errors, I or II, is more consequential before pre-

determining the critical value of alpha. Huberty indicates that the .05 level of significance is commonly used when it is difficult to determine if a researcher needs to be conservative or liberal. Huberty suggests that, if the research is preliminary or exploratory work, perhaps an alpha of .10 or .15 would be acceptable. Whereas, if the research question has been studied before, an alpha level of .01 may be preferable. This study was considered to be preliminary work in the area of supervision. It was decided that the critical level of alpha for the 2-factor mixed analyses of variance on supervisee and supervisor data would be .05. The chance of committing a Type II error, failing to reject the null hypothesis when it should be rejected, was also thought to be of greater consequence than committing a Type I error, rejecting a null hypothesis when it should not have been rejected. Thus .05 was used as the critical value of alpha.

Question number 7 was answered by looking for relationships between the two indices of supervisee independence and the supervisees' and supervisors' levels of involvement using Pearson product moment correlation coefficients (Feldman, Gagnon, Hofmann, Simpson, 1988).

CHAPTER 4

RESULTS

Descriptive, comparative, and correlational analyses conducted with the critical ratio from MOSAICS, percentage of talk time, and perceived level of independence will be presented. Preliminary analysis of responsibility index comments will also be presented.

Analysis of Level of Involvement Data (I/R & Talk Time)

Descriptive Statistics

Descriptive statistics for the initiatory/reflexive ratio (I/R) and percentage of talk time (TT) of supervisors and supervisees were calculated across the time periods (first quarter, midterm, & third quarter) and are presented in Tables 3 to 6.

Table 3. Descriptive statistics: control group supervisees

	I/R(1)	I/R(2)	I/R(3)	TT(1)	TT(2)	TT(3)
Mean	.254	.19	.325	36	41	49
Std.Dev.	.187	.116	.108	17.8	17.6	15.0
Minimum	0	0	.167	13	5	25
Maximum	.500	.333	.500	63	62	78

Table 4. Descriptive statistics: control group supervisors

	I/R(1)	I/R(2)	I/R(3)	TT(1)	TT(2)	TT(3)
Mean	.510	.581	.46	55	50	42
Std.Dev.	.125	.12	.17	17.5	15.3	19.1
Minimum	.250	.440	.333	25	33	8
Maximum	.700	.773	.85	85	78	72

Table 5. Descriptive statistics: experimental group supervisees

	I/R(1)	I/R(2)	I/R(3)	TT(1)	TT(2)	TT(3)
Mean	.367	.348	.358	45	47	56
Std.Dev.	.172	.129	.137	19.2	23.0	20.4
Minimum	.100	.059	.185	25	17	20
Maximum	.700	.556	.688	98	88	95

Table 6. Descriptive statistics: experimental group supervisors

	I/R(1)	I/R(2)	I/R(3)	TT(1)	TT(2)	TT(3)
Mean	.385	.415	.411	53	50	42
Std.Dev.	.190	.145	.157	18.4	21.9	20.0
Minimum	0	.250	.158	2	12	5
Maximum	.625	.769	.714	73	83	75

I/R = initiatory/reflexive ratio TT = percentage of talk time
1 = first quarter 2 = midterm 3 = third quarter

Comparison of Group Means

Tests for homogeneity of independent variances for supervisees' I/R ratios $F(12, 9) = 1.33$, $p > .20$ and supervisees' percentages of talk time $F(12, 9) = 1.50$, $p > .20$ indicated that analysis of variance could be applied to the data. As described in an earlier section, .05 was chosen as the critical level for alpha. Results of the analysis of variance (Table 7) comparing the mean control group supervisees' I/R ratio with the mean experimental group supervisees' I/R ratio were significant $F(1, 40) = 4.92$, $p = .038$. When the mean I/R ratios were compared across time, there were no significant differences $F(2, 40) = 1.99$, $p = .150$. Agenda use and time did not interact to affect the I/R ratio $F(2, 40) = 1.15$, $p = .328$.

Table 7. Anova table for 2-factor mixed analysis I/R ratio data for supervisees

Source	df	Sum of squares	Mean square	F-test	p value
Group(A)	1	.160	.160	4.92	.038*
Repeated measure(B)	2	.062	.031	1.99	.150
AB	2	.036	.018	1.15	.328

(*=significant difference)

Results of the analysis of variance (Table 8) comparing the mean control group supervisees' percentage of talk time with the mean experimental group supervisees' percentage of talk time were not significant $F(1, 40) = 1.02$, $p = .326$. When the mean percentages of talk time were compared across time, there were significant differences $F(2, 40) = 5.81$, $p = .006$. The Scheffe F-test post hoc analysis (Table 9) revealed that the only significant difference was between the first quarter interval and the third quarter interval. Agenda use and time did not interact to affect the percentage of talk time $F(2, 40) = .041$, $p = .960$.

Table 8. Anova table for 2-factor mixed analysis TT data for supervisees

Source	df	Sum of squares	Mean square	F-test	p value
Group(A)	1	858.80	858.80	1.02	.326
Repeated measure(B)	2	1776.4	888.20	5.81	.006*
AB	2	12.60	6.30	.041	.960

Table 9. Post hoc analysis of TT for supervisees

Comparison	Mean difference	Scheffe F-test
First vs. midterm	-3.46	.45
First vs. third	-12.32	*5.72
Midterm vs. third	-8.86	2.96

(*=significant difference)

Tests for homogeneity of independent variances for supervisors' I/R ratios $F(9, 12) = 1.67$, $p > .20$ and supervisors' percentages of talk time $F(12, 9) = 1.37$, $p > .20$ indicated that analysis of variance could be applied to the data. The critical level for alpha was .05. Results of the analysis of variance (Table 10) comparing the mean control group supervisors' I/R ratio with the mean experimental group supervisors' I/R ratio were significant $F(1, 40) = 18.16$, $p = .0004$. When the mean I/R ratios were compared across time, there were no significant differences $F(2, 40) = 1.09$, $p = .345$. Agenda use and time did not interact to affect the I/R ratio $F(2, 40) = .376$, $p = .689$.

Table 10. Anova table for 2-factor mixed analysis I/R ratio data for supervisors

Source	df	Sum of squares	Mean square	F-test	p value
Group(A)	1	.217	.217	18.16	.0004*
Repeated measure(B)	2	.063	.032	1.09	.345
AB	2	.022	.011	.376	.689

(*=significant difference)

Results of the analysis of variance (Table 11) comparing the mean control group supervisors' percentage of talk time with the mean experimental group supervisors' percentage of talk time were not significant $F(1, 40) = .004$, $p = .953$. When the mean percentages of talk time were compared across time, there were significant differences $F(2, 40) = 5.05$, $p = .011$. The Scheffe F-test post hoc analysis (Table 12) revealed that the only significant difference was between the first quarter interval and the third quarter interval. Agenda use and time did not interact to affect the percentage of talk time $F(2, 40) = .022$, $p = .978$.

Table 11. Anova table for 2-factor mixed analysis TT data for supervisors

Source	df	Sum of squares	Mean square	F-test	p value
Group(A)	1	2.92	2.92	.004	.953
Repeated measure(B)	2	1598.8	799.41	5.05	.011*
AB	2	7.04	3.52	.022	.978

Table 12. Post hoc analysis of TT for supervisors

Comparison	Mean difference	Scheffe F-test
First vs. midterm	3.64	.482
First vs. third	11.77	*5.05
Midterm vs. third	8.14	2.41

(*=significant difference)

Analysis of Relationship between Level of Involvement and Level of Independence

Descriptive Statistics

Descriptive statistics for the responsibility index (RI) for supervisees and supervisors were calculated across the time periods (first quarter, midterm, & third quarter) and are presented in Tables 13 to 16.

Table 13. Descriptive statistics: control group supervisees

	RI (1)	RI (2)	RI (3)
Mean	54.47	67.58	76.00
Std.Dev.	13.01	10.98	18.60
Minimum	29.09	53.64	33.64
Maximum	78.18	83.00	92.73

Table 14. Descriptive statistics: control group supervisors

	RI (1)	RI (2)	RI (3)
Mean	52.87	69.15	82.72
Std.Dev.	16.15	14.20	9.03
Minimum	24.55	51.36	62.72
Maximum	80.00	93.33	92.78

Table 15. Descriptive statistics: experimental group supervisees

	RI (1)	RI (2)	RI (3)
Mean	62.36	70.26	73.81
Std.Dev.	15.52	13.64	12.90
Minimum	35.00	48.18	57.27
Maximum	89.36	95.09	93.91

Table 16. Descriptive statistics: experimental group supervisors

	RI (1)	RI (2)	RI (3)
Mean	50.23	67.05	76.36
Std.Dev.	19.01	17.22	16.53
Minimum	14.50	29.09	39.09
Maximum	82.27	84.55	96.36

Correlational Analysis

To determine the relationship between the level of involvement, expressed as the initiatory/reflexive ratios and percentages of talk time, and level of independence, expressed as perceptions of supervisee level of responsibility from supervisors and supervisees, Pearson product-moment correlation coefficients were used. The relationship between supervisors' perception of supervisee independence and supervisees' perception of supervisee independence was also measured.

Control group. With degrees of freedom equal to 8, an r greater than or equal to .632 was required for significance at a probability level of .05 (Glass & Stanley, 1970). One significant positive correlation ($r=.836$, $p < .05$) was observed between

supervisees' perception of supervisee independence and supervisors' perception of supervisee independence at the third quarter (Table 17).

Experimental group. With degrees of freedom equal to 11, an r greater than or equal to .553 was required for significance at a probability level of .05 (Glass & Stanley, 1970). Two significant correlations were found among the data for experimental group subjects. A significant negative correlation ($r=-.548$, $p < .05$) was found between supervisees' initiatory/reflexive ratios and supervisees' perception of supervisee independence at the third quarter. As in the control group, a significant positive correlation ($r=.604$, $p < .05$) was observed between supervisees' perception of supervisee independence and supervisors' perception of supervisee independence, however unlike the control group, this relationship was observed at the midterm interval (Table 18).

Table 17. Correlation matrix - control group

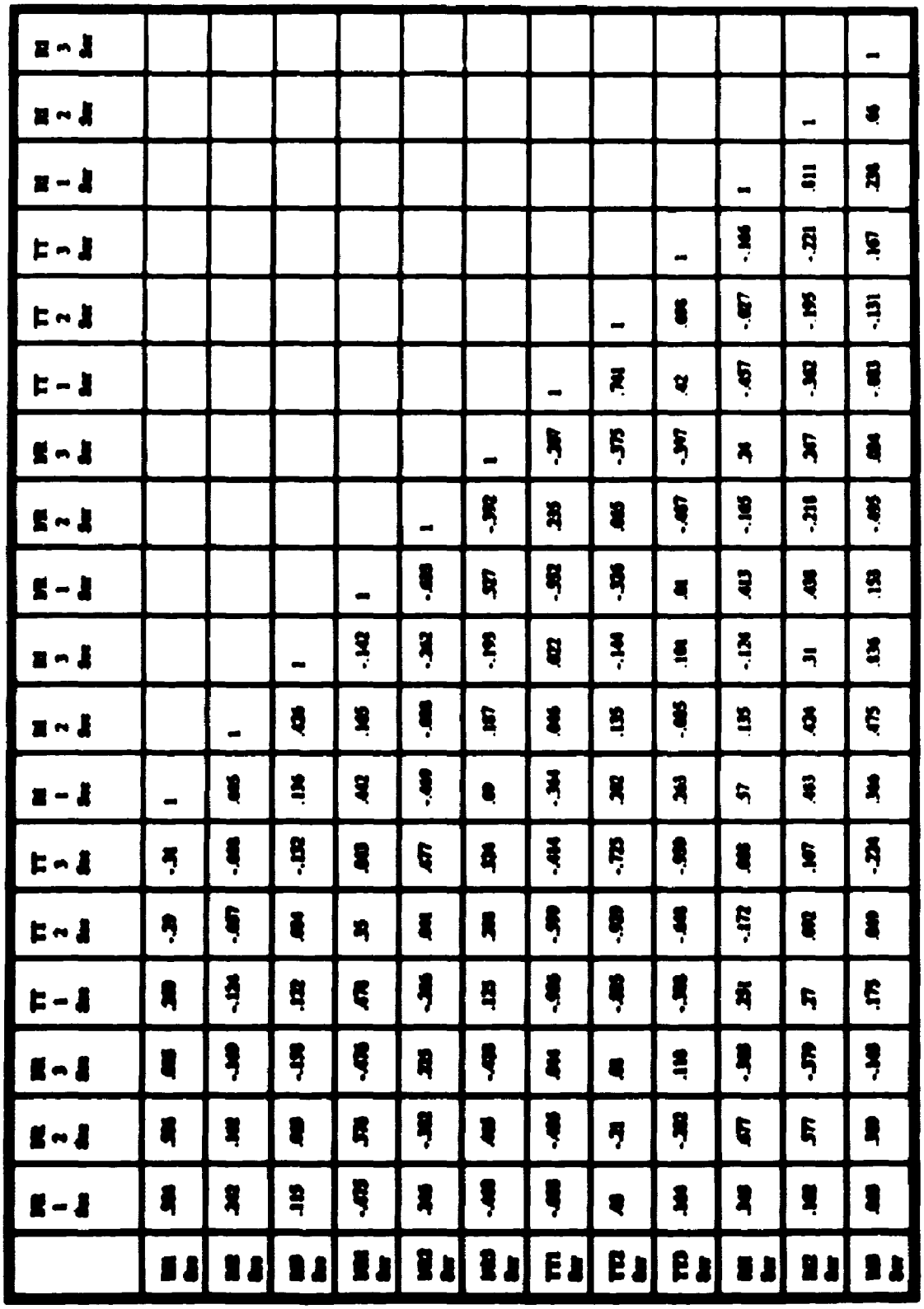
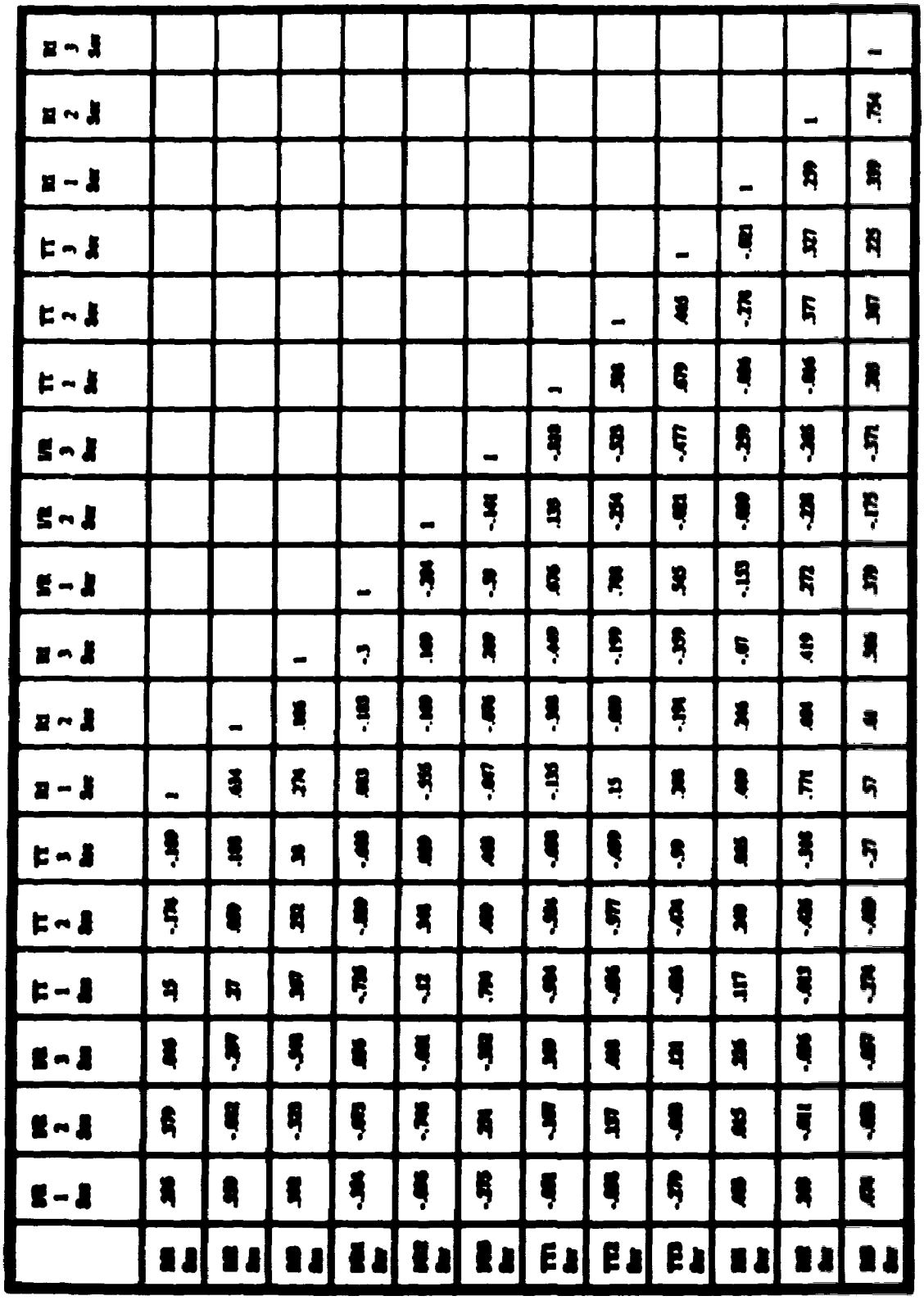


Table 18. Correlation matrix - experimental group



Preliminary Analysis of Responsibility Index Comments

Two types of data were collected from the Responsibility Index. First, the Responsibility Index form was used to quantitatively determine percentage of responsibility each participant assumed for eleven indicators of the supervisory process. The second type of data was qualitative in nature. Supervisors and supervisees were asked to use the comment section at the end of the Responsibility Index form to explain any circumstances that would help the experimenter interpret the results. A total of 52 comments were submitted. These were examined for recurring themes which seemed to fall into four categories: form, clinical interaction, supervisee independence, and other. Refer to Table 19 for the number of comments in each category and relevant examples.

Table 19. Preliminary analysis of responsibility index comments

Category	Definition of Category	Number of comments per category	Relevant examples
Form	-comments referring to difficulty with filling out form -comments regarding suggested changes to format of form	8	"With no guidelines to go on it is very hard to give percentages a guideline like on the WPACC would result in more accurately perceived percentages ie. supervisor gives suggestions on 3 or more sessions 70-100% 30-70% 0-30%" (Control group supervisee-first quarter) "Again it is difficult to state the above because things change weekly. Indicator #3 - in terms of preparation not deciding what to do." (Experimental group supervisee-third quarter)
Clinical interaction	-comments regarding interactions between supervisor and supervisee -comments regarding who initiates discussion about issues -comments regarding the process	14	"For indicators #1 and #2 - This is not formal planning on my part but I do provide lots of suggestions." (Experimental group supervisor-first quarter) "Supervisor said what she thought then discussed." (Control group supervisee-midterm) "11. Planning for supervisory conference content is basically a given-ie. we either talk about what happened that day or if either one of us has a concern we bring it up-it's quite informal, in general." (Control group supervisee-third quarter)
Supervisee independence	-comments regarding how independent the supervisee was according to supervisor's expectations -comments regarding how confident or independent student clinician was according to their own expectations	17	"The supervisee lacks self-confidence which contributes to the imbalances on items 6 to 10." (Control group supervisor-midterm) "Although opportunity for student to take on more responsibility was attempted student seemed to require much direct feedback (coaching) in order to be effective." (Experimental group supervisor-third quarter) "I am in the second semester of my first year of graduate school; thus, only second semester of clinic. I still feel like I need guidance or approval." (Experimental group supervisee-first quarter) "Planned independently and discussed before implementation." (Control group supervisee-midterm)
Other	-comments regarding clients, when assessments occurred, etc.	13	"This was a difficult stuttering case-they had missed for 2 times. We were trying something new." (Control group supervisor-third quarter) "Student has not done an assessment this 1/4." (Experimental group supervisor-midterm) "Tape recorded conferences are so distracting." (Experimental group supervisee-third quarter)

CHAPTER 5

DISCUSSION

Previous research found that a supervisee-prepared agenda actively increased supervisee involvement in the supervisory conference (McFarlane & Hagler, 1992b). This study investigated the impact of a supervisee-prepared agenda on supervisees' level of involvement over time. It was anticipated that use of the agenda would result in an increase in supervisee initiations within the supervisory conference and that this more active involvement would be lasting. Corresponding with this expected increase in participation in the supervisory conference, it was thought that the level of supervisee independence would increase. This chapter focuses on the involvement of supervisees and supervisors in the conference dependent upon the experimental condition. Discussion about observed relationships between perceived level of independence for supervisees and their level of involvement in conferences follows.

Level of Involvement

Discussions of the effects of the agenda and the effects of time on level of involvement follow.

Control Group Conferences

Inspection of the control group's descriptive statistics for initiatory/reflexive ratios at the first quarter and midterm intervals (Figure 1) revealed conferences much like ones described in previous studies (Culatta & Seltzer, 1976; McFarlane, 1992; Roberts & Smith, 1982; Smith & Anderson, 1982a). There were observable

differences between supervisors' initiatory/reflexive (I/R) ratios and supervisees' initiatory/reflexive ratios. The difference between supervisors' I/R ratios and supervisees' I/R ratios were not statistically tested, however, it appeared that supervisors initiated more than supervisees. While at the third quarter interval supervisors still appeared to initiate topics more often than supervisees, there was an apparent increase in supervisees' initiatory behavior. This change may have occurred because the student clinicians became familiar with their clients and the treatment process enabling them to feel more comfortable with initiating discussions rather than just responding to topics initiated by their supervisors. The still inflated supervisors' initiatory/reflexive behaviors are incongruent with the colleagueship supervision model (Anderson, 1988). Supervisors and supervisees were not participating equally, indicating that supervisees were primarily passive partners who mostly responded and reacted to the supervisor. Passive behavior displayed by the supervisee minimizes opportunity for independent problem-solving or self-analysis which is the primary goal of supervision.

Inspection of the control group's descriptive statistics for percentages of talk time at the first quarter and midterm intervals for the supervisors and supervisees (Figure 2) appeared to be similar to percentages of talk time described in previous research (Culatta & Seltzer, 1976). Culatta and Seltzer (1976) reported that supervisors spoke 55% of the time, as compared to student clinicians who spoke 43% of the time. Therefore, supervisors spoke 12% more than supervisees. In this study, supervisors spoke 55% at the first quarter of the time and 50% of the time at the midterm

interval, as compared to the supervisees who spoke 36% of the time at the first quarter and 41% of the time at the midterm interval. At the third quarter, supervisees were observed to talk 49% of the time in comparison to supervisors who spoke 42% of the time. Therefore, at the last time interval, supervisees were observed to talk more during supervisory conferences than the supervisors. This shift of dominant speaker from supervisor to supervisee represents an interesting contrast to trends in earlier related research. In traditional supervisory conferences supervisors typically spoke more than supervisees, however, in this study, there was an observable shift of speaker dominance which may be partly attributed to supervisees' experience obtained during the practicum. Previous research has not indicated change in the amount of supervisees' talk over time (Culatta & Seltzer, 1976).

In summary, the initiatory/reflexive behavior described above indicated that the conferences were dominated by the supervisors. It appeared that the supervisors structured the discussion or solicited responses from the supervisees and the supervisees primarily responded and reacted to the supervisors. This observation is similar to findings already reported in the literature (Culatta & Seltzer, 1976; McFarlane, 1992; Roberts & Smith, 1982; Smith & Anderson, 1982a). The percentages of talk time for supervisors and supervisees at the first and midterm intervals were also similar to previous literature. An interesting contrast occurred at the third quarter interval because the supervisees appeared to talk more than the supervisors during conferences.

Figure 1. Mean I/R ratios for control group

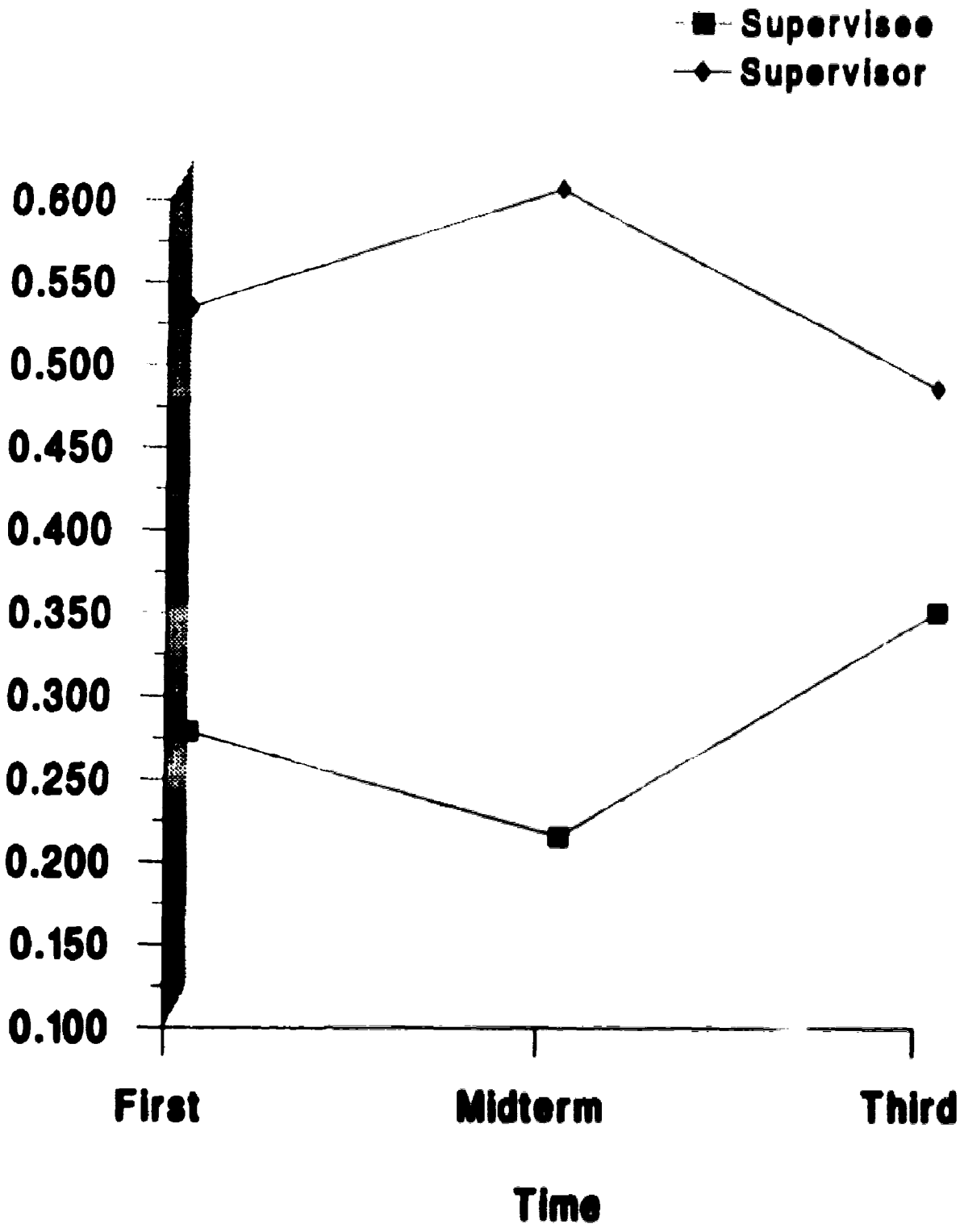
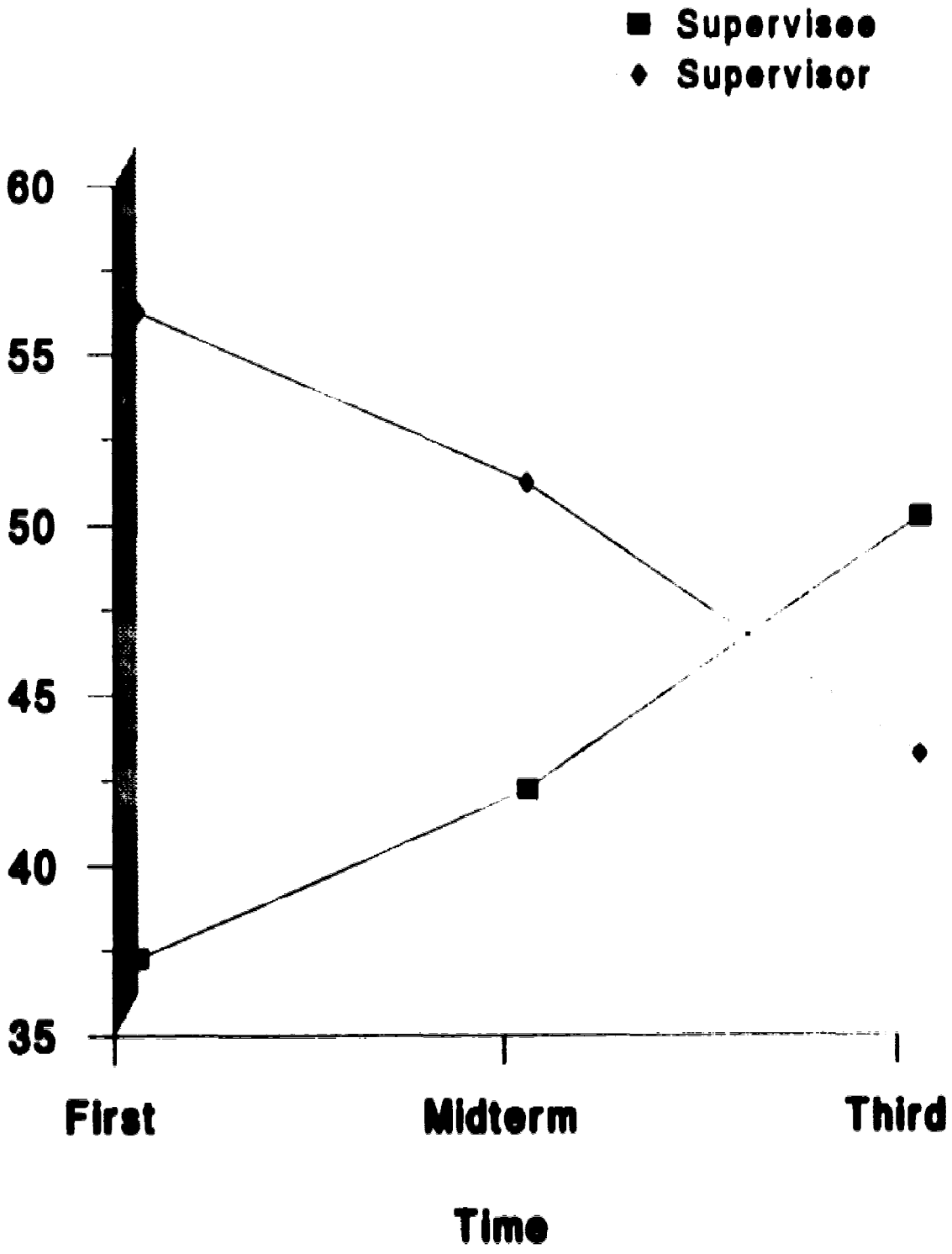


Figure 2. Mean TT for control group



Experimental Group Conferences

Inspection of the experimental group's descriptive statistics for initiatory/reflexive ratios across the three time intervals (Figure 3) revealed conferences somewhat different from the ones described in the literature (Culatta & Seltzer, 1976; McFarlane, 1992; Roberts & Smith, 1982; Smith & Anderson, 1982a). The difference between the supervisors' initiatory/reflexive (I/R) ratios and the supervisees' initiatory/reflexive ratios was not statistically tested. Supervisors seemed to initiate more than supervisees during conferences, but supervisors' initiatory/reflexive ratios and supervisees' initiatory/reflexive ratios appeared to be more balanced. Supervisors in this study seemed to have a lower initiatory/reflexive ratio than those reported in previous research and supervisees seemed to be more balanced in terms of initiatory and reflexive moves (I/R=.349, .349, .350) than those reported in previous research (McFarlane, 1992; Roberts & Smith, 1992). The I/R ratios for both supervisors and supervisees were compared across conditions and will be covered in the discussion.

Another observation of interest is that supervisees' initiatory/reflexive behaviors were observed to remain consistent over time. The use of the agenda was discontinued after the midterm interval supervisory conference and yet the supervisees' initiatory behavior at the third quarter interval seemed to remain stable. This observation is encouraging, because it seems that the use of a supervisee-prepared agenda may result in increased supervisees' initiatory behaviors and the effects may be lasting. The goal of supervision is to promote an independent and

self-analytical professional, and it appears reasonable to assume that if a student clinician is more involved in the supervisory conference, the goal of supervision may be accomplished.

Inspection of the experimental group's descriptive statistics for percentages of talk time at the three intervals for the supervisors and supervisees (Figure 4) appeared to be somewhat different from the percentages of talk time described in previous research (Culatta & Seltzer, 1976). In this study, clinical supervisors at the first quarter spoke 53% of the time and at the midterm interval spoke 50% of the time, as compared to the supervisees who spoke 45% of the time at the first quarter and 47% of the time at the midterm interval. Supervisors at the first quarter seemed to talk more during conferences than supervisees. The difference between supervisor and supervisee talk time at the midterm level, although not statistically tested, seemed to decrease. Therefore, it appeared that both participants were sharing the amount of talk time. At the third quarter, supervisees were observed to talk 56% of the time in comparison to supervisors who spoke 42% of the time. Just as in the control group, there was a shift of dominant speaker from supervisor to supervisee which has not been evidenced in earlier related research. It seems logical that supervisors and supervisees would equally participate at the midterm level because both participants would likely be able to provide insightful information. Whereas, supervisees at the third quarter should probably be responsible for the day-to-day management of clients and would likely have more information to share with supervisors.

In summary, the initiatory behavior described above indicated that the supervisors continued to initiate more than the supervisees. However, it did appear that supervisors' initiatory behavior was decreased in comparison to relevant research. Supervisees' initiatory behavior appeared to increase in comparison to related research and this increased initiatory behavior remained consistent over time. Percentages of talk time presented some interesting observable differences. Supervisors seemed to dominate talk time only at the first quarter. At the midterm interval, supervisors and supervisees seemed to share the amount of talk time. There was an apparent shift of dominant speaker from supervisor to supervisee at the third quarter. Although not statistically tested, these findings seemed to describe conferences that differed from conferences represented in the literature.

In comparing the conference behaviors of the control group with those of the experimental group, some remarkable differences, although not statistically tested, were noted. Visual comparison of experimental and control group supervisee initiatory/reflexive ratios revealed apparently higher ratios for the experimental group. Supervisors initiatory/reflexive ratios seemed to be lower in the experimental group than they were in the control group. The difference between percentages of talk time at the first and midterm intervals in the experimental group appeared to be less than in the control group. An interesting similarity between groups was the obvious shift of dominant speaker at the third quarter.

Figure 3. Mean I/R ratios for experimental group

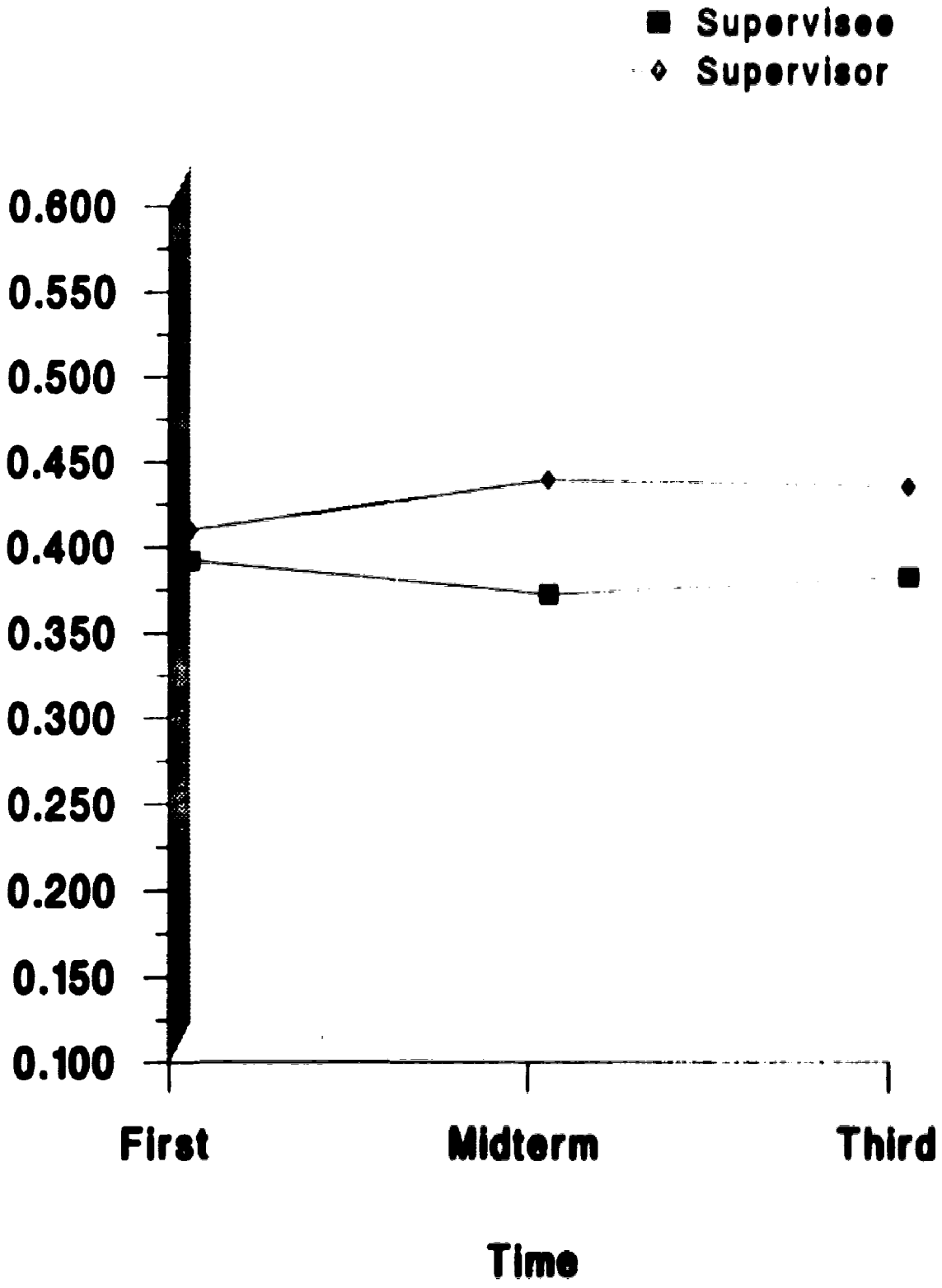
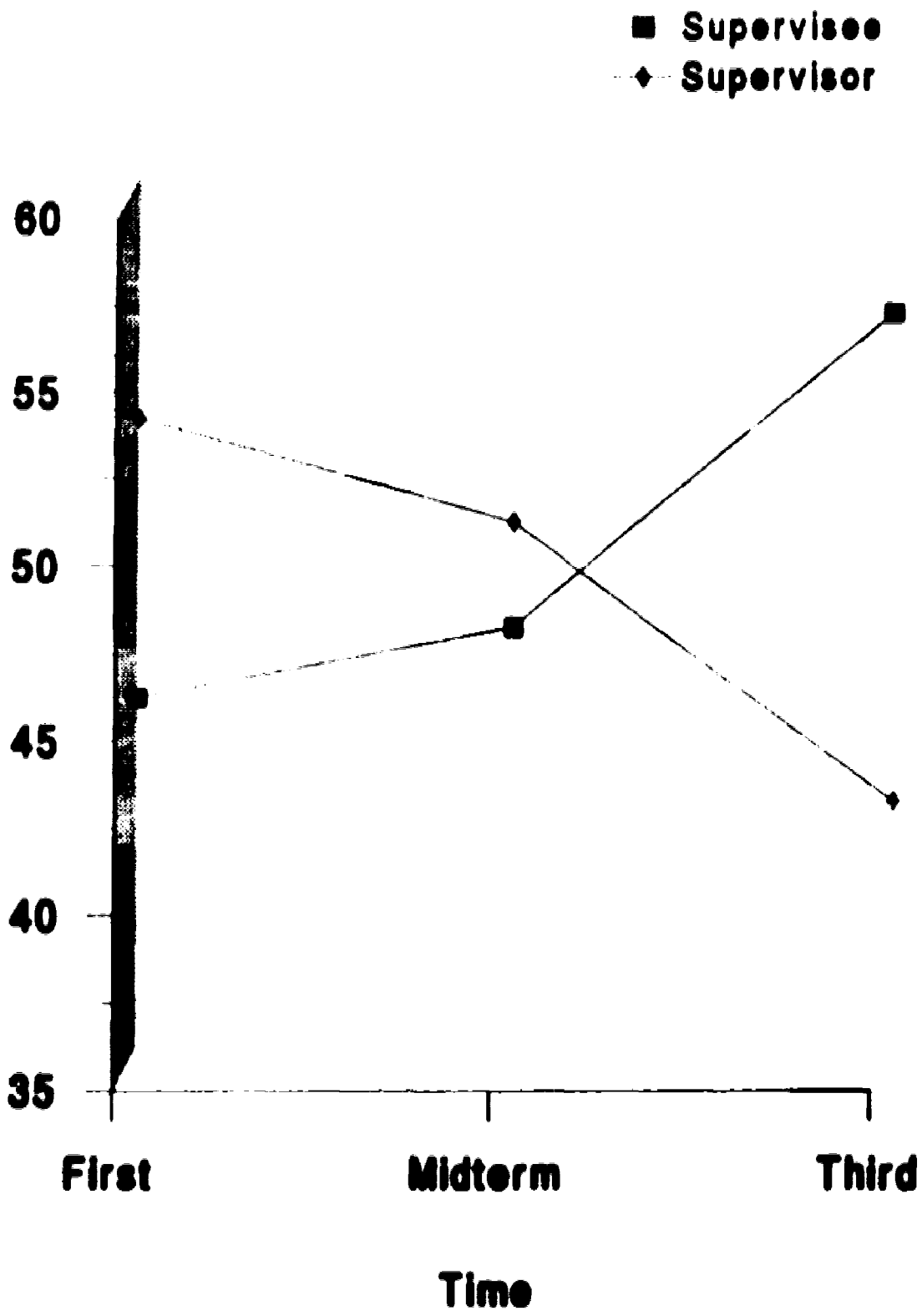


Figure 4. Mean TT for experimental group



Effect of Agenda

The effect of the agenda on level of involvement of supervisees and supervisors was examined. Two indices of level of involvement were used, initiatory/reflexive ratio (I/R) and percentage of talk time (TT).

Effect on supervisees. Research question 1 queried the effects of a supervisee-prepared agenda on supervisees' level of involvement in conferences. Results revealed a significant difference in supervisees' initiatory/reflexive ratios. It appeared that use of a supervisee-prepared agenda altered the initiatory behavior of the experimental group supervisees. Supervisees who prepared an agenda were more initiatory in conferences. This finding supports the use of a supervisee-prepared agenda to provide a framework for active supervisee participation in supervisory conferences. This study was methodologically similar to a study conducted by McFarlane (1992). McFarlane (1992) found a substantial and significant increase in supervisee initiations when supervisees prepared and used an agenda during a conference. The current study replicated and extended the findings of McFarlane (1992), confirming the effectiveness of agenda use as a tool for increasing supervisee conference involvement.

This study did not include analysis of content of supervisee initiatory moves. An increase in initiations is not a sufficient indicator of positive change. It is possible the increased initiations primarily represented statements of facts and requests for direction and evaluation. These simple behaviors would not promote self-analysis or problem-solving. Alternately, increased initiations may represent explanations of

events and justifications for opinions and suggestions. These complex behaviors would promote self-analysis and problem-solving. McFarlane (1992) found increased initiatory behaviors and increased complex behaviors as a result of agenda use, and concluded that agenda use positively affected the quality of supervisee initiations and responses. It is reasonable to assume that these two experiments would impact supervisees' moves in a similar fashion and the improved quality of supervisee talk noted by McFarlane would also be apparent in this study.

Results did not reveal a difference in supervisees' percentages of talk time across groups. The use of the agenda did not affect the amount supervisees spoke during conferences. There is no evidence in the literature to suggest that increasing the amount of supervisee talk time will, in fact, achieve the goal of supervision. It may be more relevant to focus on the type of verbalizations rather than the amount of verbalizations. However, it would seem necessary for supervisees to share talk time with supervisors in order to be active and contributing members of the process. Active involvement in conferences is intended to improve the student clinician's problem-solving abilities and lead to the development of an independent professional.

In summary, use of the supervisee-prepared agenda was expected to increase the active participation of supervisees during conferences. Results revealed a significant increase in supervisees' initiatory behavior which supports use of an agenda to promote involvement in conferences. These findings are similar to those of McFarlane (1992). Active involvement is a goal of the collegueship model (Anderson, 1988), however, it is not known whether increased involvement in

conferences had a positive effect on supervisees' ability to self-analyze or increase independent problem-solving. McFarlane (1992) found that agenda use had positively affected the quality of supervisees' initiations and responses. This provides evidence of improved quality of conference interaction concomitant with increased initiations. Results did not reveal a significant difference in supervisees' percentages of talk time. There is no evidence that indicates a need for supervisees to talk more in order to achieve independence. It seems reasonable to assume that supervisees and supervisors need to at least share talk time to encourage supervisee independence.

It is interesting to note that there was a significant difference obtained for one measurement of level of involvement, initiatory/reflexive ratio, and no significant difference was obtained for the other measurement of involvement, percentage of talk time. This is probably due to the fact that the agenda was used to encourage supervisees to structure the conference content, so it seems logical that the type of supervisee talk may change without affecting amount of supervisee talk time.

Effect on supervisors. Research question 2 queried the effects of a supervisee-prepared agenda on supervisors' level of involvement in conferences. Results revealed a significant difference in supervisors' initiatory/reflexive ratios. The mean I/R ratio for the control group supervisors was significantly higher than the mean I/R ratio for the experimental group supervisors. Roberts and Smith (1982) suggested that a possible target in supervisory intervention was to reduce supervisor initiations, however, McFarlane (1992) took issue with this suggestion. McFarlane suggested no data exist to indicate that the amount of supervisor initiations is inappropriate or that

modification of supervisor initiations will affect supervisee behavior. In McFarlane's study, there was no difference in supervisor initiations between the control group ($\underline{M}$ = .550) and the experimental group ($\underline{M}$ = .422), but there was a change between the control group supervisees ($\underline{M}$ = .244) and the experimental group supervisees ($\underline{M}$ = .507). It may not be necessary to decrease supervisor initiations in order to increase supervisee initiations. It may simply be as a consequence of increased supervisee initiations that one observes decreased supervisor initiations.

In this study, there was evidence to suggest that agenda use affected supervisors' initiatory behavior. A plausible reason for agenda use affecting supervisors' initiatory behavior is that the agenda may have served as a reminder that students were to be more responsible for the direction of the conference.

It can be argued that agenda use had a desirable effect on supervisors' behavior. Experimental group supervisors responded or reacted to topics of discussion initiated by the supervisee proportionally more than control group supervisors. This change in supervisors' pedagogical moves may have allowed the students an opportunity to set conference content and direct the focus of conferences. If supervisors' moves served to modify, expand, or clarify statements occasioned by supervisees, this type of behavior would likely help to promote the goal of supervision, supervisee independence. However, it is not known whether the supervisors' reflexive moves were highly suggestive or evaluative because the substantive-logical meanings portion of MOSAICS (Smith, 1978) was not coded for purposes of this current study. If supervisors' substantive-logical moves would have been coded, the supervisors'

comments may have been highly evaluative or used to provide suggestions which may have limited supervisees' ability to independently problem-solve or engage in self-analysis. Related research has demonstrated that supervisors do not typically engage in highly evaluative, complex, or prescriptive behaviors; instead supervisors structure and solicit primarily analytic, diagnostic, and simplistic moves (McFarlane, 1992; McFarlane & Hagler, 1992b; Roberts & Smith, 1992). Therefore, it is reasonable to believe that supervisors' moves in this study would likely have served to modify or expand student clinicians' moves rather than limiting supervisee problem-solving and self-analysis.

Results did not reveal a difference in supervisors' percentages of talk time across groups. The use of the agenda did not affect the amount supervisors spoke during conferences. There is no evidence in the literature to suggest that decreasing the amount of supervisor talk time will, in fact, encourage increased supervisee independence. However, it would seem that if supervisees are encouraged to be active, contributing members of the process, supervisors would need to share talk time with their supervisees. It does not seem likely that problem-solving skills or independence would be fostered in conferences where supervisors dominate the interactions.

In summary, use of a supervisee-prepared agenda seemed to have a significant positive effect on the level of supervisor involvement in terms of the initiatory/reflexive ratios. Experimental group supervisors were less initiatory than control group supervisors during conferences, perhaps due to the tangible reminder of

the agenda. The supervisee-prepared agenda may also have encouraged supervisors to react to moves occasioned by supervisees rather than initiating new topics. Results did not reveal a significant change in supervisors' percentages of talk time. There is no evidence that indicates a need for supervisors to decrease talk time in order to achieve the goal of supervision. However, it seems reasonable to assume that supervisees and supervisors need to at least share talk time when meeting the goal of supervision, supervisee independence.

Again, it is interesting to note that there was a significant difference obtained for one measurement of level of involvement, initiatory/reflexive ratio, and no significant difference was obtained for the other measurement of involvement, percentage of talk time. This is probably due to the fact that agenda use may influence the type of supervisor talk without affecting amount.

Effect of Time

Effect on supervisees. Question 3 looked at the effect of time on supervisees' involvement in supervisory conferences. Results did not reveal a change in supervisees' I/R ratios across the three time intervals, first quarter, midterm, and third quarter (Figure 5). The I/R ratios for both groups of supervisees combined remained static over time. These results seem to suggest that there is little variability in initiatory behavior from the onset of a clinical placement to the completion of a clinical placement. This finding is incongruent with the collegiateship model (Anderson, 1988) which promotes self-analysis and independence and suggests that supervisees should become increasingly analytic and independent during the course of

a placement. It seems questionable that supervisees will develop independence or self-analytical skills, if their level of involvement does not change over time. It may be that the supervisee level of involvement changed in ways that were not measurable in this study or that a change in supervisees' initiatory behavior occurred prior to the conferences taped for this study. The finding that supervisees' initiatory/reflexive ratios did not change over time seems less than desirable, but there is a positive aspect to the observation. The descriptive initiatory/reflexive ratios data for the experimental group supervisees seemed to indicate that withdrawal of the supervisee-prepared agenda after the midterm did not affect the supervisees' moves. The agenda altered the behavior of the experimental group supervisees and this increased initiatory behavior appeared to remain consistent over time and after agenda use was discontinued. This observation supports agenda use over time and seems to indicate that supervisees are capable of maintaining this increased level of involvement without direct intervention.

Results did, however, reveal a change in the mean percentage of talk time for supervisees across the time intervals. Over time, talk time for the combined groups increased (Figure 6). The student clinicians may be gaining more confidence with their skills. It may also be that, as the clinical placement progresses, the students simply have more to express during conferences, therefore, they vie for talk time and a more balanced interaction may occur. There did not appear to be any adverse effects when the supervisee-prepared agenda was withdrawn at the third quarter, in fact, talk time appeared to increase during this time. This finding is confirmed by

examination of the descriptive initiatory/reflexive data for the experimental group.

In summary, the supervisees' level of involvement, as measured by the initiatory/reflexive ratios, did not change significantly over time. There was minimal variability among the I/R ratios over time in the combined supervisory conditions. The supervisees' level of involvement, as measured by percentages of talk time, revealed a significant increase over time. It is extremely encouraging to have evidence indicating that supervisee talk time increased over time, because previous related research (Culatta & Seltzer, 1976) had indicated that supervisees' talk time may have varied from session to session, but essentially did not change over time. This observable contrast from previous studies may present evidence that differential supervisory interactions are occurring over time.

It is interesting to note that a significant change was obtained for one measurement of involvement, percentage of talk time, but no significant change was obtained for the other measurement of involvement, initiatory/reflexive ratio. It is probably due to the fact that over time supervisees would likely gain experience and feel increasingly comfortable with contributing to the supervisory conference, therefore, a natural increase in supervisee talk time may occur. It also may be that the initiatory/reflexive ratio increases with the increased frequency of initiations but remains proportionally the same. Although no significant change was observed over time for the mean initiatory/reflexive ratio, the means reflected a non-significant rising trend.

Figure 5. Supervisees' mean I/R ratios across time

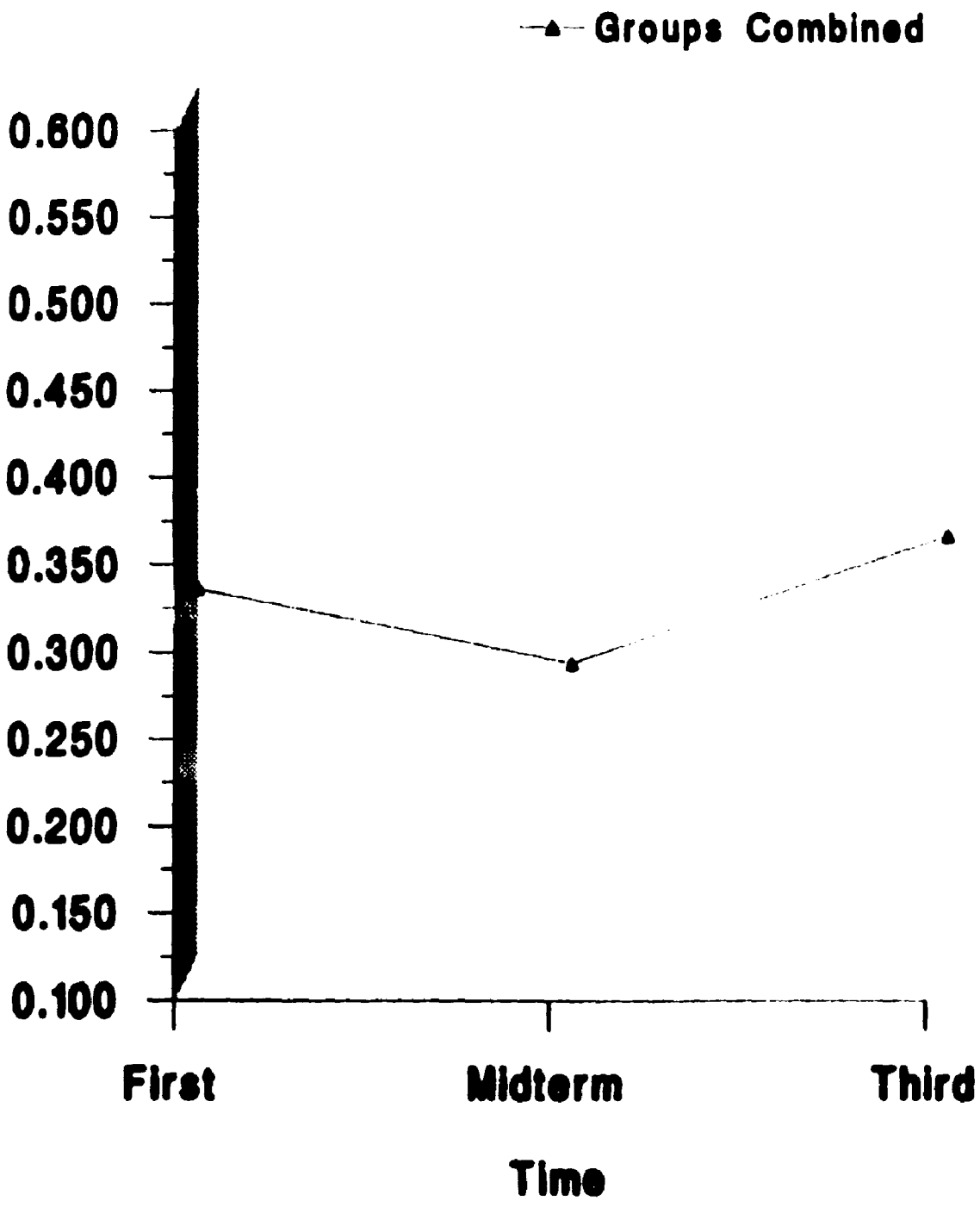
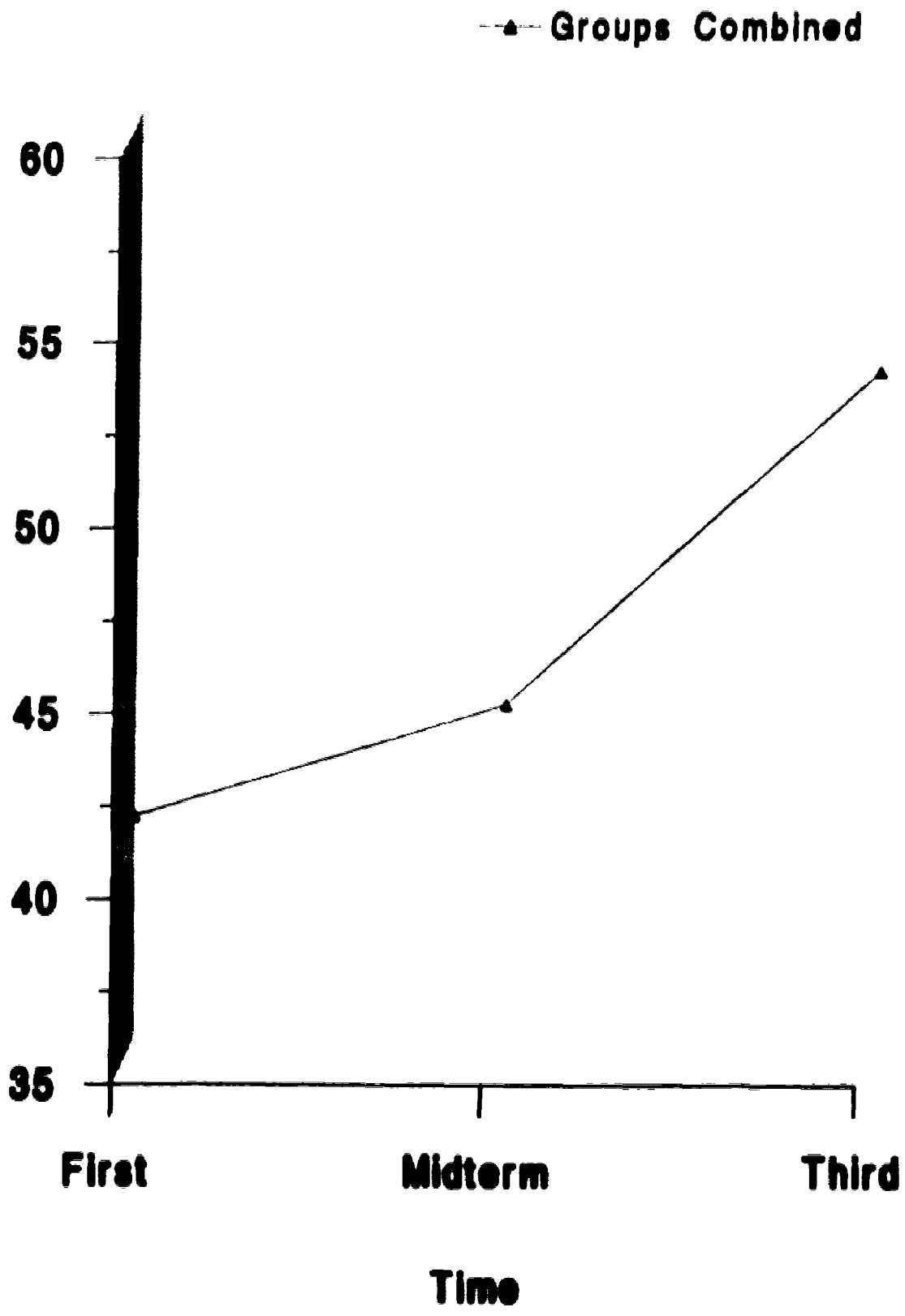


Figure 6. Supervisees' mean TT across time



Effect on supervisors. Question 4 looked at the effect of time on supervisors' level of involvement in supervisory conferences. Results did not reveal a change in supervisors' I/R ratios across the three time intervals, first quarter, midterm, and third quarter (Figure 7). The I/R ratios for both groups of supervisors combined remained essentially static over time. If the goal of supervision is to encourage the development of an independent and self-supervising student clinician, it seems reasonable that supervisors' initiatory/reflexive behavior should change across time,

Results did, however, reveal a change in the mean percentage of talk time for supervisors across the time intervals. Over time talk time for the combined groups decreased (Figure 8). As students become more involved in the clinical placement, supervisors may need to talk less and may allow increased opportunities for students to describe and discuss clinical events.

In summary, supervisors' level of involvement, as measured by the initiatory/reflexive ratio, did not change significantly over time. There was minimal variability among the I/R ratios over time for the combined supervisory conditions. The supervisors' level of involvement, as measured by percentages of talk time, revealed a significant decrease over time. It is extremely encouraging to have evidence indicating that supervisor talk time decreased over time because previous related research (Culatta & Seltzer, 1976) had indicated that supervisors' talk time may have varied from session to session, but essentially did not change over time. This is evidence that differential supervision may have occurred in both the experimental and control group conditions, because supervisors' talk time decreased

as supervisees' experience in that particular placement increased.

Again it is interesting to note that a significant change was obtained for one measurement of involvement, percentage of talk time, but no significant change was obtained for the other measurement of involvement, initiatory/reflexive ratio. It is probably due to the fact that, over time, supervisors' need for dominating conversational talk time decreases but supervisors type of talk is unaffected. Perhaps this is because supervisees are gaining experience and feel increasingly comfortable with contributing to the supervisory conference, therefore an increase in supervisee talk time and a decrease in supervisor talk time may occur. It also may be that the initiatory/reflexive ratio decreases with the decreased frequency of initiations but remains proportionally the same. Supervisors may continue to structure conference content and solicit responses.

Figure 7. Supervisors' mean I/R ratios across time

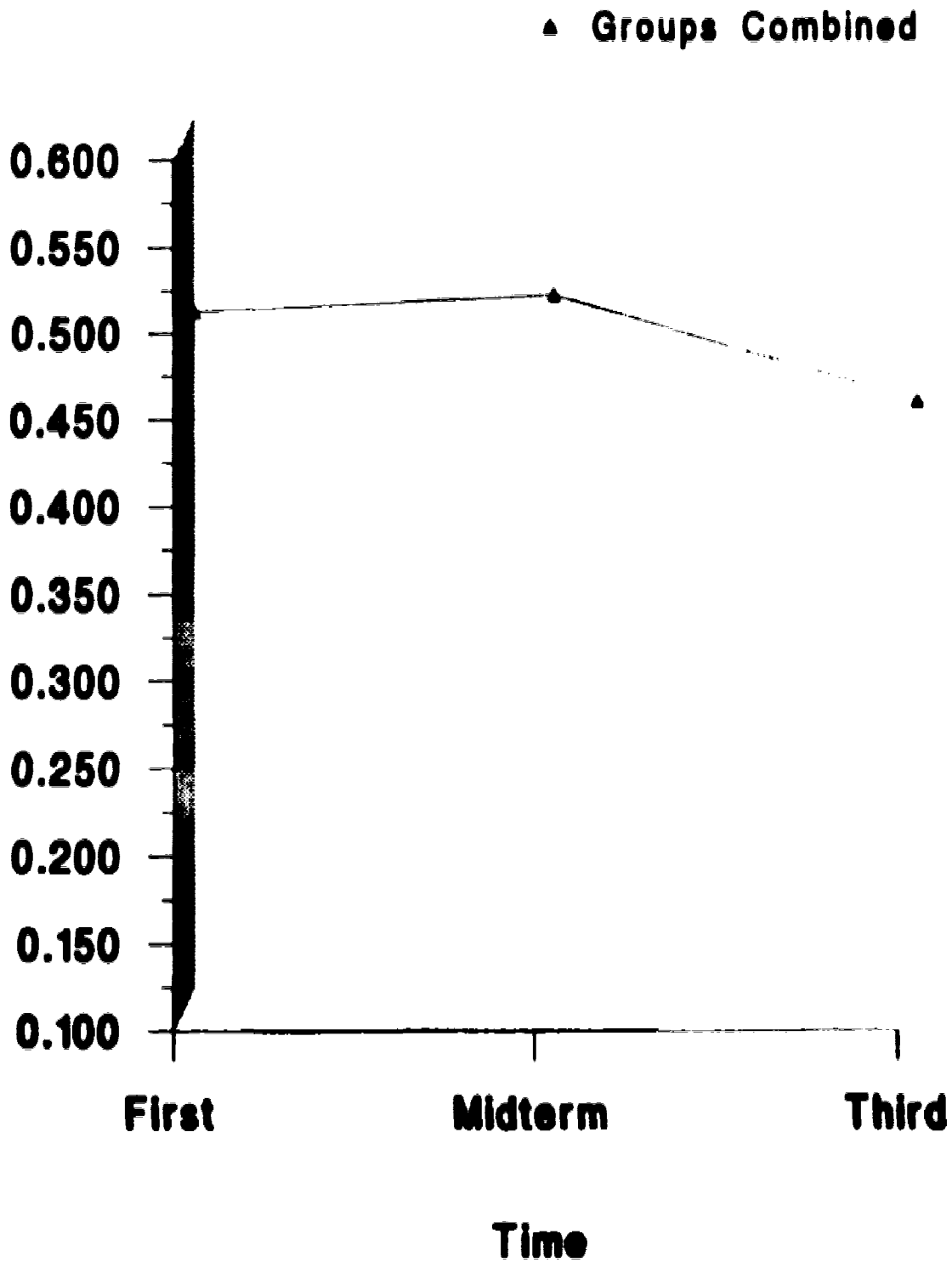
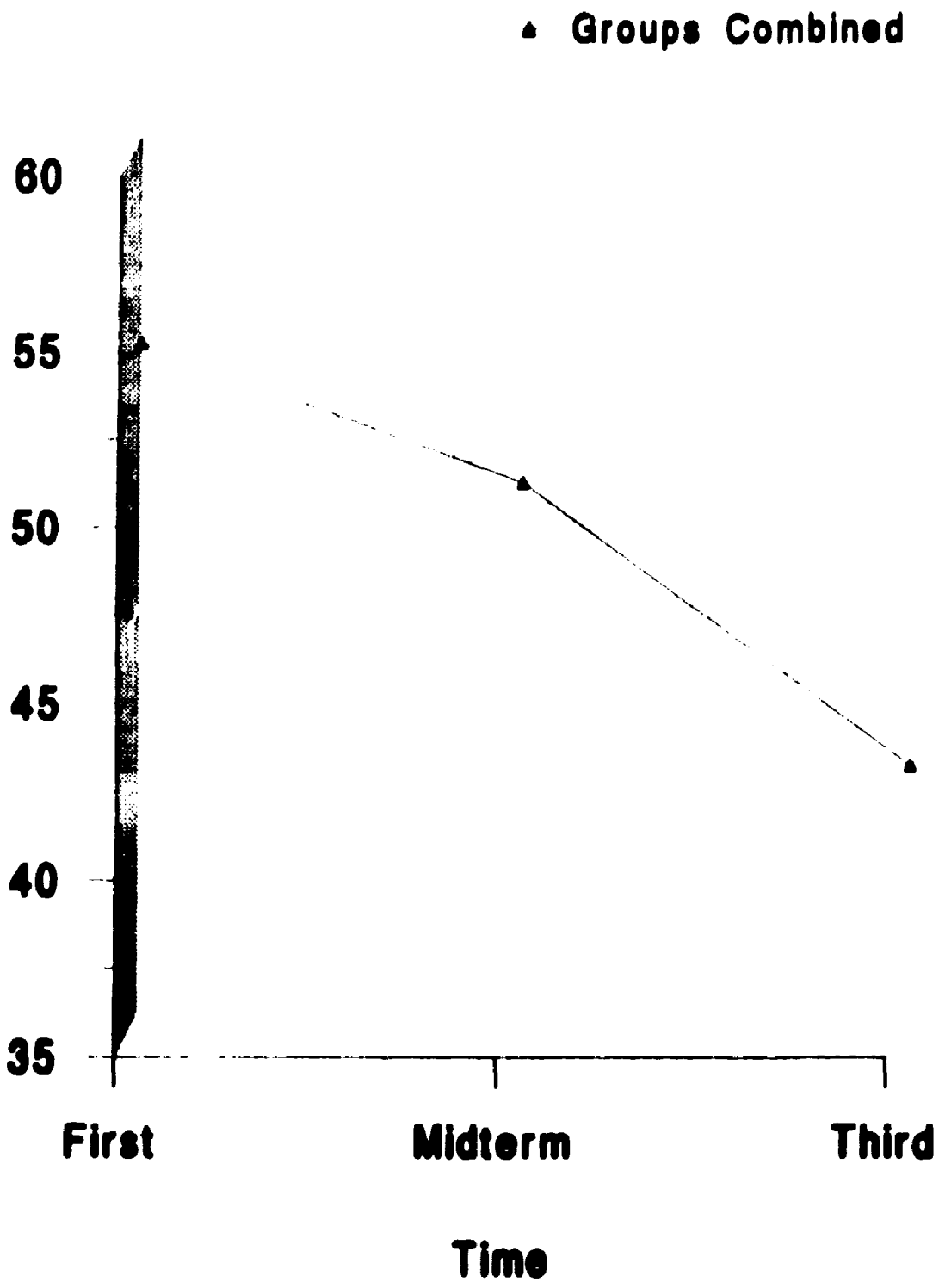


Figure 8. Supervisors' mean TT across time



Interaction between Agenda and Time

Interaction for supervisees. Research question 5 queried whether agenda use and time would interact to affect supervisees' level of involvement in conferences. Use of the supervisee-prepared agenda did not interact with time to affect the initiatory/reflexive ratios (Figure 9), nor did agenda use interact with time to affect percentages of talk time (Figure 10). There was a main effect for group and time but on different dependent variables, therefore, no interaction would be expected.

Interaction for supervisors. Research question 6 queried whether agenda use and time would interact to affect supervisors' level of involvement in conferences. There was no interaction between agenda use and time for either initiatory/reflexive ratios or talk time (Figures 11 & 12). There was a main effect for group and time but on different dependent variables, therefore, no interaction would be expected.

Figure 9. Supervisees' I/R ratios for experimental and control groups over time

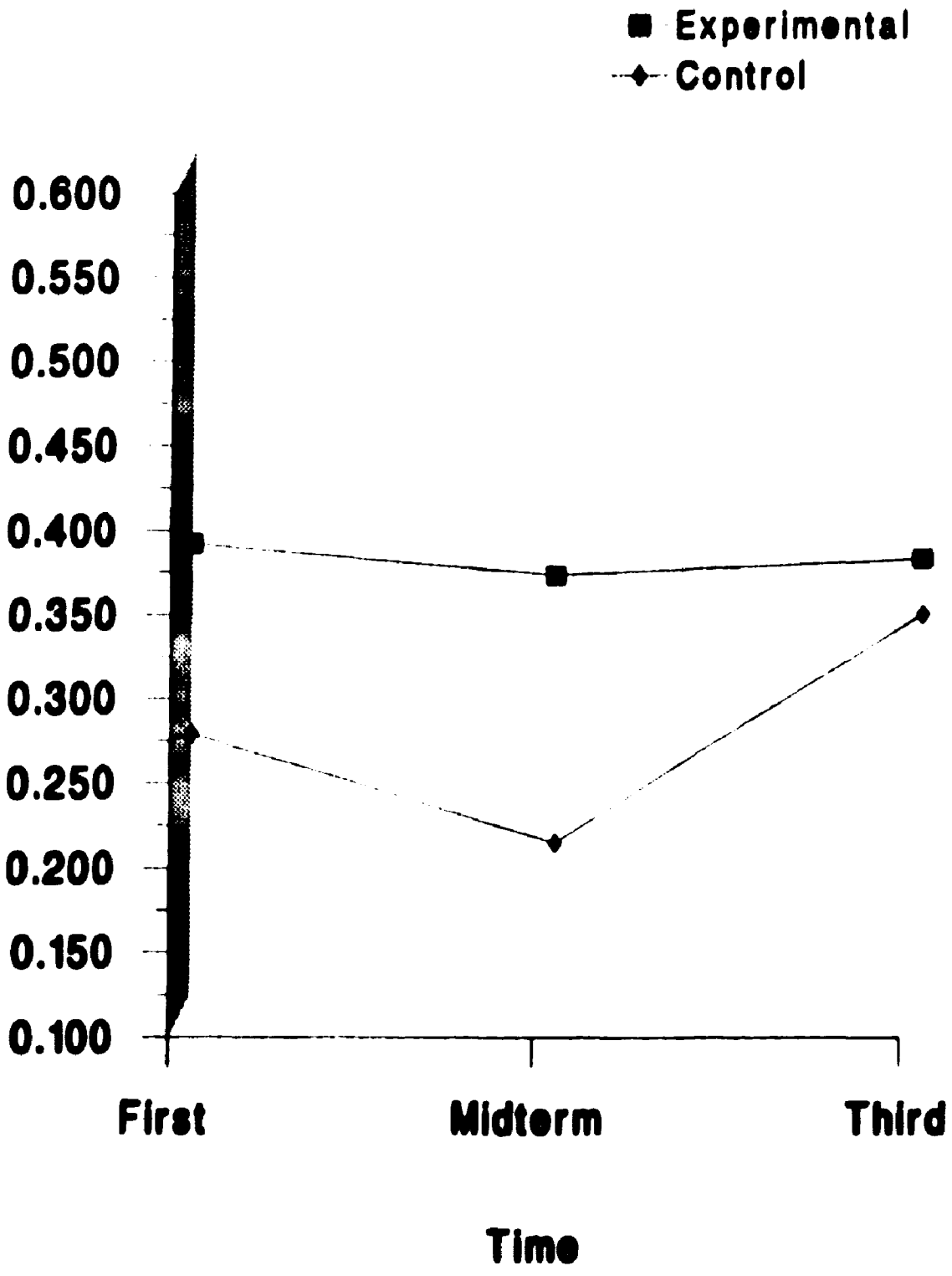


Figure 10. Supervisees' TT for experimental and control groups over time

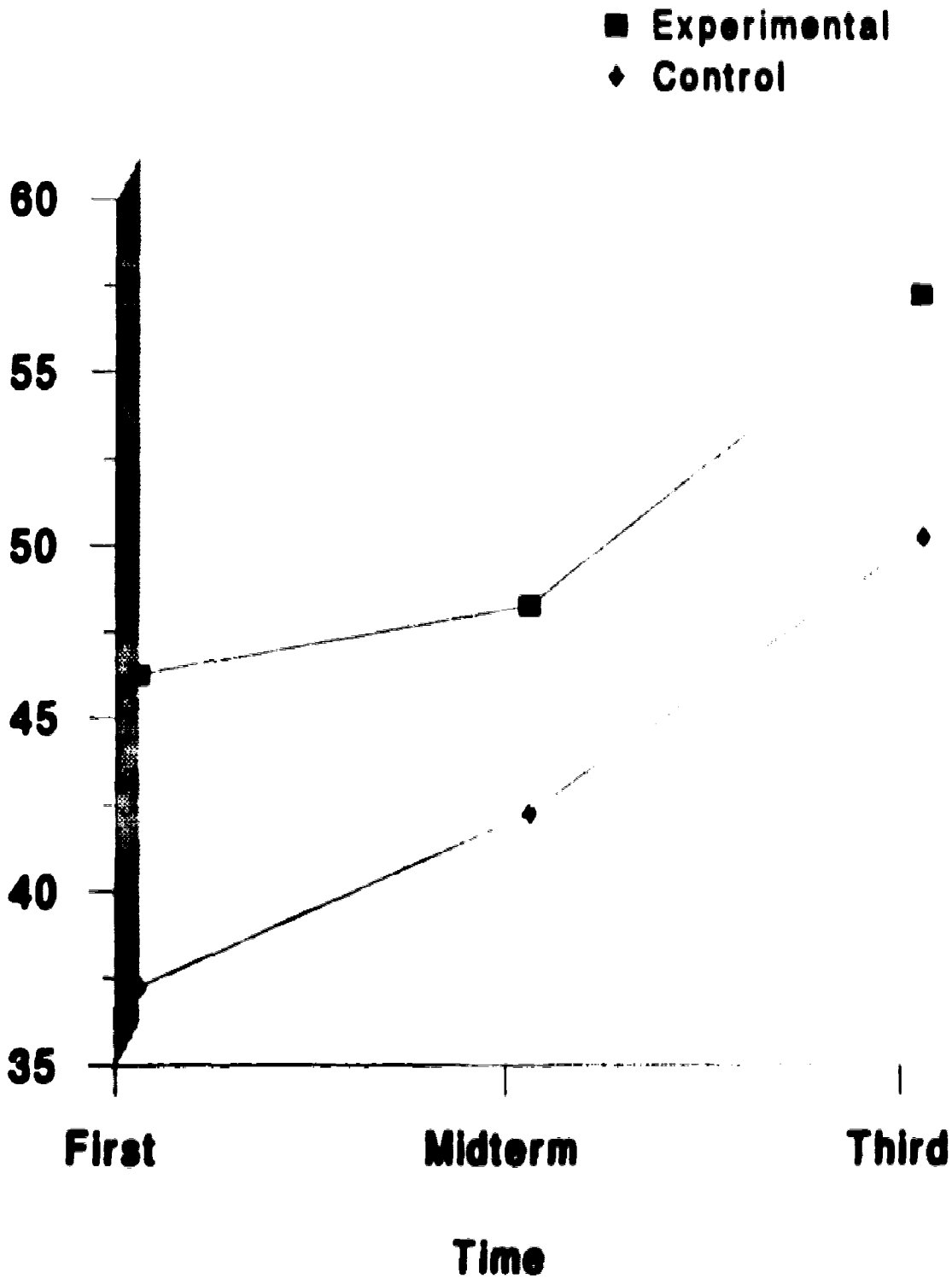


Figure 11. Supervisors' I/R ratios for experimental and control groups over time

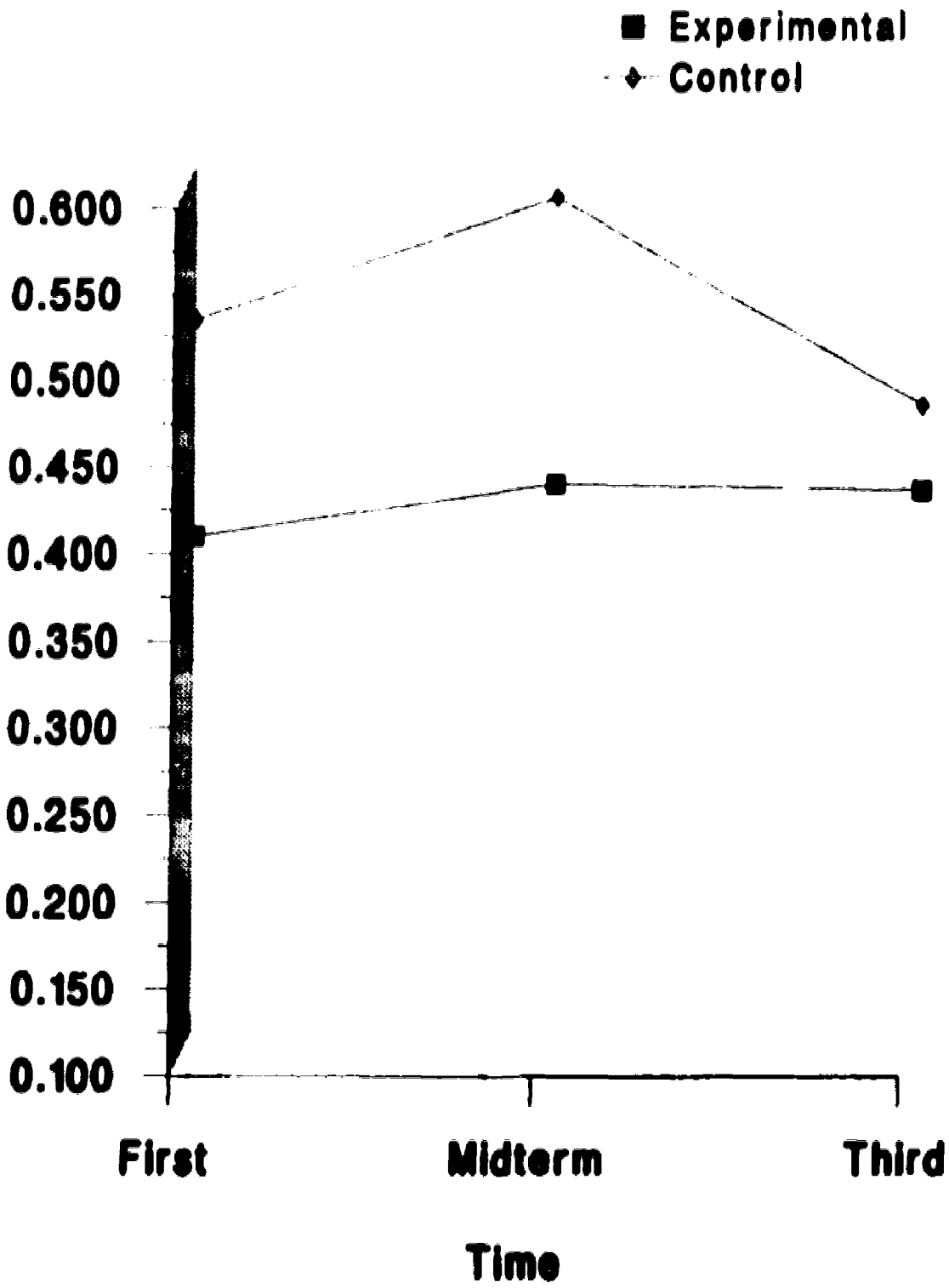
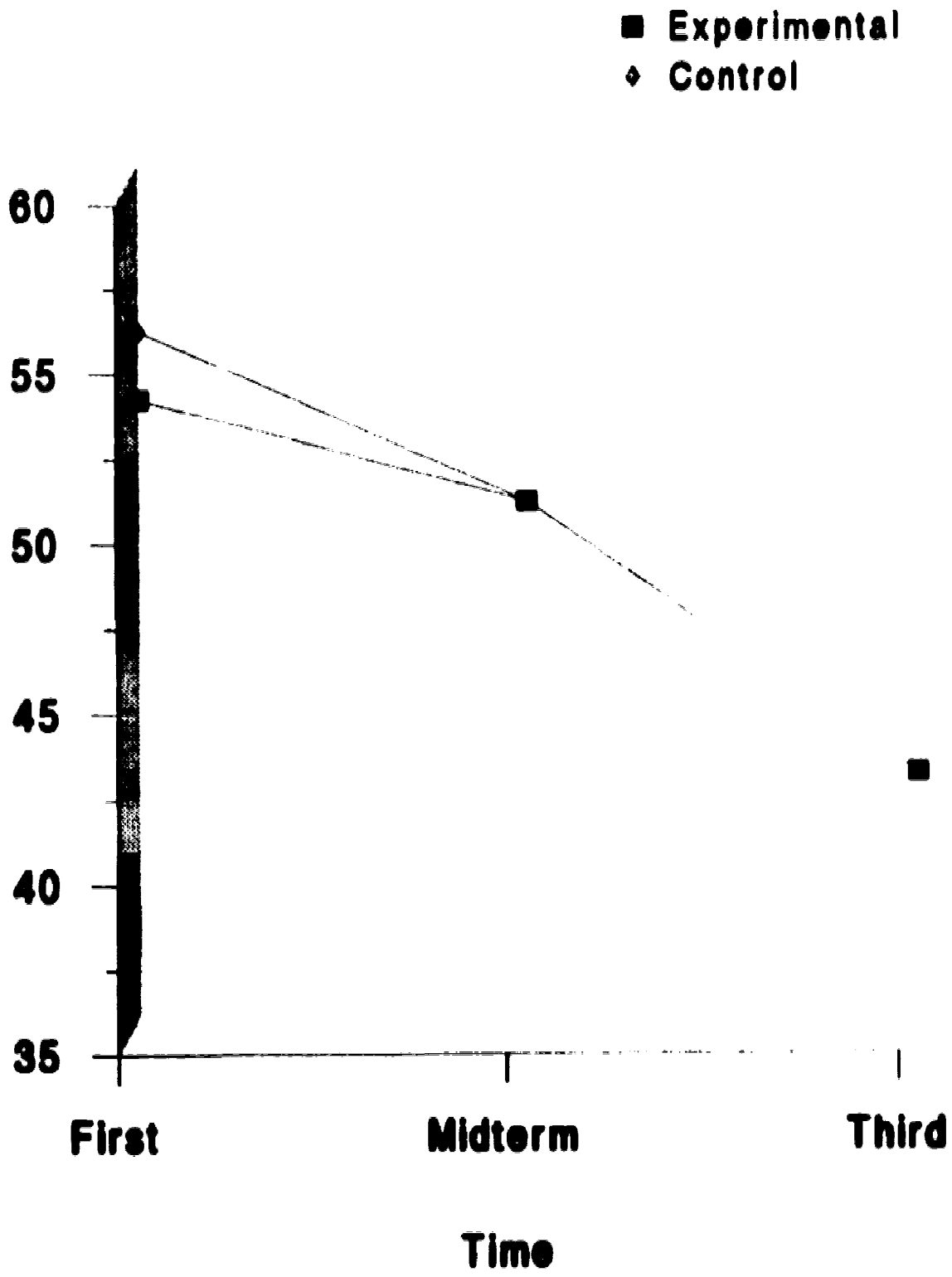


Figure 12. Supervisors' TT for experimental and control groups over time



Level of Independence

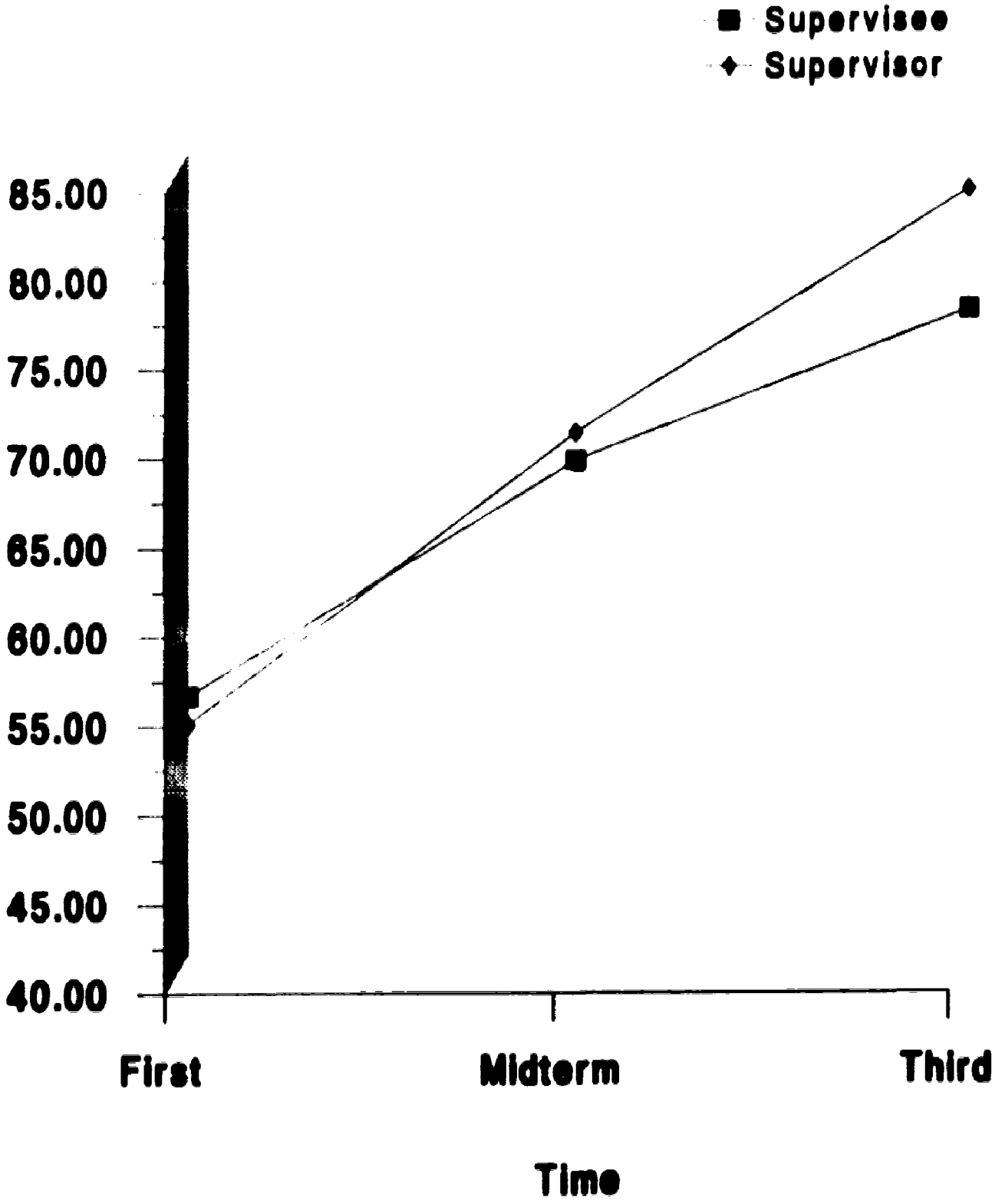
The reader will recall that level of independence was measured by the Responsibility Index. The Responsibility Index (RI) was used to provide a measure of the level of student responsibility as perceived by the supervisor and student clinician. Correlational analysis was used to determine the relationship between level of involvement and perceived level of independence for both supervisory conditions. It seemed logical to assume that type of talk and amount of talk would correspond with responsibility level, because it was reasonable to believe that, if supervisees were initiating and talking more during conferences, their perceived responsibility level would change. The correlation between the supervisor's perception of supervisee independence and supervisee's perception of independence was also investigated.

Control Group

Research question 7 looked at the relationship between supervisees' level of involvement and supervisors' and supervisees' perception of independence. The relationship between supervisors' perception of supervisees' independence and supervisees' perception of independence was not addressed as a research question, however, an interesting correlation was noted. At the third quarter interval, there was a positive correlation ($r=.836$, $p < .05$) between supervisors' perception of supervisee independence and supervisees' perception of independence. This relationship may have existed because the supervisees were nearing the conclusion of the clinical practicum and both participants would expect, and therefore perhaps report, increased supervisee independence.

In an effort to better understand supervisors' and supervisees' perceptions of supervisee independence the responsibility index averages were plotted across time (Figure 13). It appeared that supervisors and supervisees shared similar views about supervisee involvement in the supervisory and clinical processes. The descriptive data seemed to indicate that participants shared similar views across time and not just at the third quarter, as indicated by the correlation. Participants' corresponding perception of the students' involvement in the supervisory conference is a positive finding. Previous research (Blumberg, 1974; McFarlane, 1992; Smith & Anderson, 1982) indicated that supervisors and supervisees tend to have differing perceptions of the supervisory interaction.

Figure 13. Mean RI for control group



Experimental Group

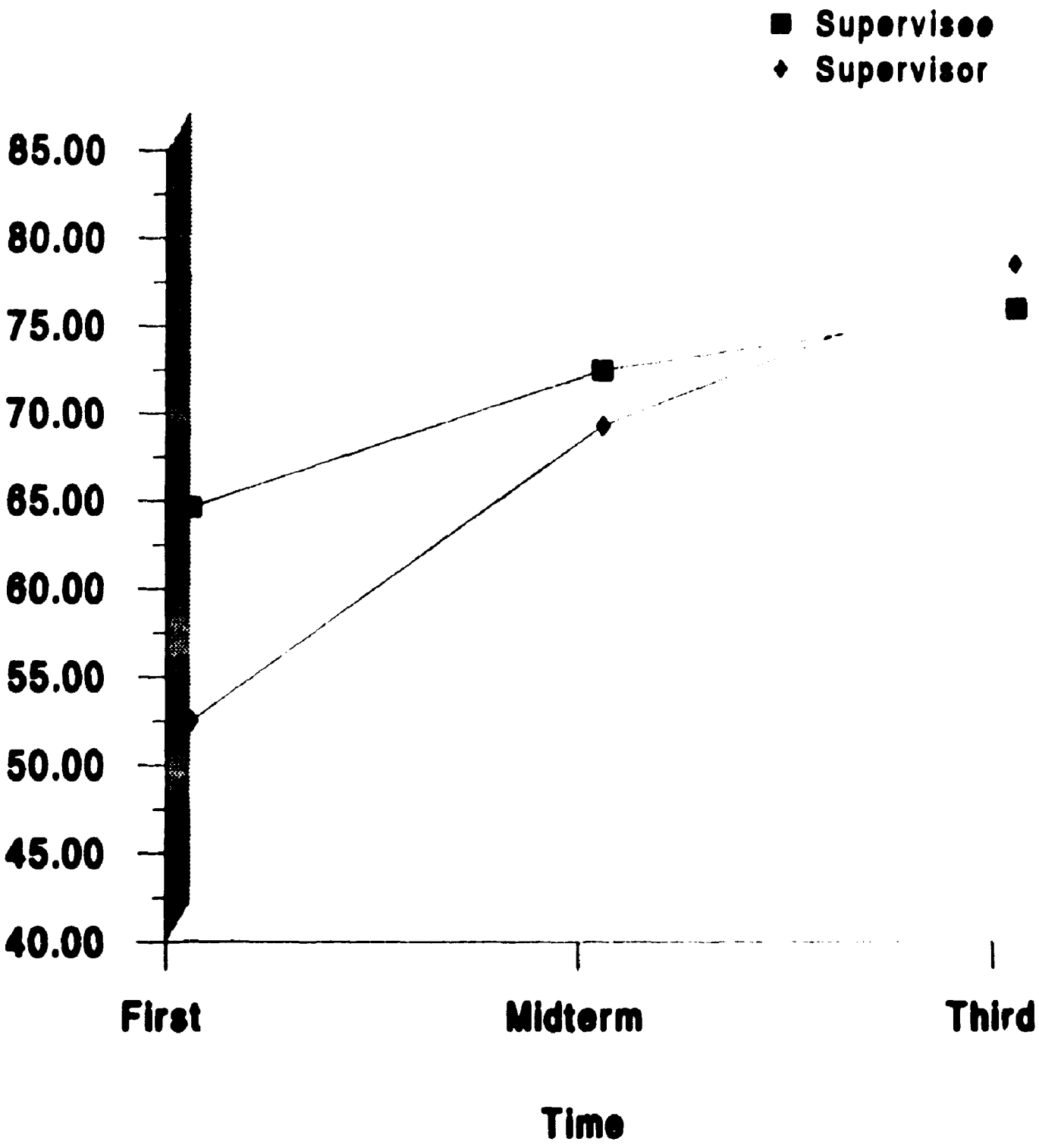
Two significant correlations were found for the experimental group subjects. A significant negative correlation was noted between supervisees' initiatory/reflexive ratio and their perceived level of independence at the third quarter interval. This relationship is contrary to that expected. It was anticipated that supervisees who were structuring and soliciting information during conferences would perceive themselves to be highly independent. Anderson (1988) indicated that supervisees would need to be active members in supervisory conferences in order to achieve the goal of supervision, however, according to these findings, as supervisees' initiatory behavior increased so did their feelings of dependence. This relationship is hard to explain within the colleagueship model of supervision (Anderson, 1988). It may be that the increased initiations by the supervisees were in the form of questions, requesting direction or feedback. An increase in this type of initiation might lead to feelings of increased dependence. It is also interesting to note that this relationship occurred at the third quarter interval which may have influenced supervisees' perception of independence. Supervisees probably feel a certain urgency to be highly independent near the end of a practicum placement, and if they were highly interactive in supervisory conferences, especially by questioning, this behavior may have seemed quite dependent rather than independent.

Just as in the control group, there was a correlation between supervisees' perception of independence and supervisors' perception of supervisee independence. A positive correlation ($r=.604$, $p < .05$) existed between the perceived level of

supervisee independence by both the supervisee and supervisor at the midterm. Typically, supervisors are completing evaluations of student performance at about the midterm. Thus student clinicians would be highly aware of supervisors' perceptions of their strengths and weaknesses, and this awareness may have enabled them to see themselves as their supervisors saw them. Having examined these possibilities, it is also worth noting that the correlations observed are conceivably attributable to chance.

In an effort to better understand supervisors' and supervisees' perceptions of supervisee independence, the responsibility index averages were plotted across time (Figure 14). It appeared that supervisors and supervisees shared similar views about supervisee involvement in the supervisory and clinical processes. The descriptive data seemed to indicate that participants shared similar views across time and not just at the midterm, as indicated by the correlation. Participants' corresponding perception of the students' involvement in the supervisory conference is a positive finding. Previous research (Blumberg, 1974; McFarlane, 1992; Smith & Anderson, 1982) indicated that supervisors and supervisees tend to have differing perceptions of the supervisory interaction.

Figure 14. Mean RI for experimental group



Preliminary Analysis of Responsibility Index Comments

In the previous chapter, the comments submitted by supervisors and supervisees at the end of the Responsibility Index form were examined for recurring themes. There were 8 comments about the form itself. It seemed that participants would have preferred guidelines or examples to assist in completing the form. One supervisee suggested that a "guideline like on the WPACC would result in more accurately perceived percentages". A total of 14 comments were submitted about the interaction between supervisees and supervisors. Supervisors typically indicated that their interactions were informal with students and that they provided mostly suggestions. For example, one supervisor reported, "For indicators #1 and #2 - this is not formal planning on my part but I do provide lots of suggestions". Supervisees indicated that they relied on supervisors' input and that planning was a joint effort. The following are examples submitted by supervisees: "#1 and #11 have been joint efforts and quite informal", "My supervisor is very capable of seeing the positive aspects in interactions, etc. and I rely on her for that". Comments were also submitted in regards to supervisee independence. It was not possible to compare comments according to supervisory condition or participants' role (ie. supervisee or supervisor) due to limited number of comments. There was definitely a general impression given by supervisors that supervisees need to be independent. One supervisor commented that, "M. was only a student for 9 weeks (observed first week). I think that if it would have been a typical 12-15 week session, she would have become more independent with self-evaluation". Supervisees also commented on their level of

independence. One supervisee commented, "I feel much more confident at this time planning/assessing treatment activities. Therefore I feel I need less support than in the past from my supervisor". Comments regarding clients and when assessments occurred or did not occur were categorized into a group entitled "other".

In summary, participants provided suggestions to improve the ease of completing the responsibility index. Clinical interaction comments provided insight into how supervisors and supervisees perceived their relationship and how both participants appeared to rely on one another during the placement. Level of independence was addressed by a few supervisors and supervisees.

CHAPTER 6

CONCLUSIONS

The intent of this study was to explore the impact of a supervisee-prepared agenda on supervisees' and supervisors' level of involvement in conferences over time. Another component of this study was to determine if there was a relationship between supervisees' level of involvement and perceived level of supervisee independence. This chapter summarizes the extent to which this investigation supported the research questions and discusses the findings in terms of the broader issues in the supervisory process. Limitations and implications for future research are presented.

Level of Involvement

Control Group Conferences

This study confirmed the findings of earlier related research (Culatta & Seltzer, 1976, 1977; McFarlane & Hagler, 1992b; Roberts & Smith, 1982; Smith & Anderson, 1982b), which described conferences in which supervisors generally structured and solicited supervisees primarily responded. Confirmation of earlier findings is, in a sense, confirmation of the validity of the current results. However, it is discouraging to note the continued tendency for students to play a passive role in conferences. The other measurement of level of involvement, percentages of talk time for supervisees and supervisors, revealed a shift of dominant speaker from supervisor to supervisee during the course of the placement period. This change in supervisee and supervisor talk time had not been documented previously. It is

encouraging to note that, on this one measure of involvement, there was an observable change over time.

In the control group, there appeared to be an increase in supervisee talk and decrease in supervisor talk at the third interval. This change in supervisees' talk time over time may have occurred because student clinicians became familiar with their clients and the treatment process enabling them to feel more comfortable with contributing to the conference discussion. Although there was an increase in amount of supervisee talk time, the type of supervisee talk did not appear to change. Supervisees continued to primarily play a passive role during the conference interaction and did not assume increased responsibility for conference content, as measured by the initiatory/reflexive ratio. Change in conference interactions among control group subjects was not anticipated, because there was no direct intervention.

In summary, it was disappointing that type of talk remained essentially static for both participant groups over time, however it was positive to observe a steadily increasing amount of talk even for control group supervisees. This could not have been an experimental effect. One is left to wonder whether all speech-language pathology participants' conference behaviors are beginning to change in comparison to those reported in previous supervisory studies.

Experimental Group Conferences

The reader will recall that the descriptive data for experimental group subjects' initiatory/reflexive ratios suggested balanced conferences between supervisor and supervisee. Increased initiatory/reflexive ratios among experimental group

supervisees means that they were more involved in conferences which is an important step toward achieving the goal of supervision. Active involvement in conferences is thought to promote self-analysis, problem-solving, and independence. The other measurement of involvement, percentages of talk time, revealed that supervisors only dominated at the first quarter interval, although the difference between supervisees' talk time and supervisors' talk time was not statistically tested. Again there was a shift of dominant speaker from supervisor to supervisee at the third quarter.

In the experimental group, there seemed to be a balance between supervisees' type of talk and supervisors' type of talk. The experimental group supervisees amount of talk seemed to increase over time. There was a corresponding decrease over time in the amount of supervisor talk. As in the control group, the increases over time in supervisees' talk time over time may have occurred, because they became familiar with their clients and the treatment process enabling them to feel more comfortable with contributing to conference discussion. More important was the increase in supervisees' structuring of topics and soliciting responses. This increase in type of talk is probably a direct result of experiment condition and is a positive indicator of active involvement. It is encouraging to find that one modification, as simple as the addition of an agenda to conference interaction, can enhance supervisee participation. Increased participation is a phenomenon that sets the stage for increased conference effectiveness and ultimately supervisee independence.

Effect of Agenda

Effect on supervisees. The results for supervisees replicated those of McFarlane (1992). Direct intervention with supervisees, use of a supervisee-prepared agenda, caused a significant difference in supervisees' initiatory behavior. In this study, as in previous studies (McFarlane, 1992; McFarlane & Hagler, 1992b), it was concluded that the agenda is an easily implemented and efficient strategy to achieve increased supervisee involvement. It is reasonable to believe that the agenda provided a framework for discussion by listing possible discussion topics and thus served to "legitimize" supervisees' perception of their role in conferences.

The agenda did not cause a difference in supervisees' percentages of talk time, however the descriptive statistics revealed that supervisee talk time was above 40%, except for the supervisee control group at the first quarter interval, which indicated that supervisee and supervisor were sharing the amount of talk time. It seems reasonable to assume that supervisees and supervisors need to share talk time almost equally to provide supervisees opportunities for self-analysis and problem-solving.

Effect on supervisors. Direct intervention with supervisees, use of a supervisee-prepared agenda, caused a significant difference not only in supervisees' initiatory behavior but also in supervisors' initiatory behavior. The agenda may have served as a tangible reminder to supervisors that supervisees need to be actively involved in conferences. It also may be that supervisors were simply responding to the greater level of supervisee initiatory behavior by decreasing their own initiatory behavior. This finding is very encouraging as it appears that direct intervention with supervisees

can have a desirable effect on supervisors' behavior. The fact that the agenda affects both supervisors' and supervisees' initiatory behavior is encouraging, because its use requires very little extra time and certainly does not impose extra demands on a supervisor's already demanding schedule.

In summary, use of a supervisee-prepared agenda is a simple and easily implemented tool to alter conference interactions. It seems when supervisees prepare or plan for the conference interaction, their level of involvement increases. If level of involvement increases, it can be assumed that supervisees are likely participating in problem-solving about their own clinical performance rather than expecting solutions from their supervisor. These types of behaviors theoretically increase the learning potential of the supervisory process and should lead to the development of an independent professional. Agenda use also had positive effects on supervisors' behavior. Even though supervisees were responsible for completing the agenda, supervisory initiatory level decreased. It can be concluded that agenda use provided the supervisee with a guideline which set the stage for active participation.

Effect of Time

Effect on supervisees. Supervisees' level of involvement, as measured by the initiatory/reflexive ratio, did not change significantly over time. This lack of change is probably undesirable, because supervisees who do not initiate are less likely to self-analyze and, therefore, less likely to achieve independence. It seems reasonable to believe that only if supervisees are contributing members during conference interactions, can learning potential improve. Supervisees' increased level of

involvement over time, as measured by percentage of talk time, may have bee attributable to their increasing comfort and confidence level which enabled them to talk more during conferences.

Effects on supervisors. Supervisors' level of involvement, as measured by the initiatory/reflexive ratios, did not change significantly over time. It is important to note that no data exist to suggest what amount of supervisors initiations is inappropriate or that modification of supervisor initiations will affect supervisee behavior. Supervisors' decreased level of involvement over time, as measured by the percentage of talk time, may have been an artifact of increased supervisee talk.

Level of Independence

Control Group

Supervisors and supervisees had a shared perception of supervisee independence at the third quarter interval. Descriptive data seemed to indicate that participants shared similar views access time as well. The existence of a relationship between these participants' perceptions might be considered a positive finding, because previous research (Smith & Anderson, 1982a) indicated that supervisors and supervisees had differing perceptions. If, in fact, participants are beginning to view certain features of the process similarly, it may be the result of a growing knowledge base among professionals and students. Similar impressions about the supervisees' level of independence likely would help participants focus on the clinical areas most pertinent to client care.

Experimental Group

A relationship was found betwee[illegible] upervisees' initiatory behavior and their perceived level o[illegible]ird quarter. Descriptive data seemed to indicate that particip[illegible]ared s[illegible] views across time as well. It seemed that supervisees whose initiatory behav[illegible] was low perceived themselves to be highly independent or that supervis[illegible]e initiatory behavior was high perceived themselves to be dependent. Possible explanations for this seeming but unusual relationship were explored in the previous chapter. No relationships were found between supervisees' initiatory/reflexive ratios or percentages of talk time and supervisors' perception of supervisee independence. It was surprising that supervisors would not perceive supervisees to be more independent if the supervisees were initiating during conferences especially late in their placements. In fact, this apparent inverse relationship is so illogical that the investigator is inclined to assume that it is attributable to chance.

Supervisory models have been based on the hypothesis that, if behavioral changes occur during conference interactions between supervisors and supervisees, positive changes will occur during clinical activities between supervisees and their clients. Theoretically, the ultimate index of improved conference interaction would be client improvement. In this study it was reasoned that supervisees who used the agenda would be perceived to be independent, self-analyze and problem-solve during the supervisory and clinical processes. Culatta (1982) reported that it is imperative to look beyond the conference and determine how supervisory strategies may affect

supervisee clinical skills. The principal intent of this study was to examine the first link in the chain of events to determine if intervention with supervisees would have a positive effect on conference interactions. A second intent of this study was to assess participants' perceptions of supervisee responsibility for clinical activities, but there was no attempt to assess actual supervisee performance with clients.

Just as in the control group, a corresponding perception of supervisee independence was found between supervisors and supervisees at the midterm interval. It seems positive that similar impressions of supervisees' level of independence existed, because shared impressions help participants stay on task in their efforts to offer improved client services.

Preliminary Analysis of Responsibility Index Comments

The comments submitted from the responsibility index form seemed to indicate that both supervisors and supervisees held certain expectations for the supervisory process. Supervisors certainly indicated in a limited fashion that they expected supervisees to achieve independence by a certain time frame and supervisees attempted to justify their need for their supervisors input or indicated how comfortable they felt about the supervisory experience.

No real conclusions can be drawn from this limited sample of comments, other than that participants appeared to have certain expectations about independence in the supervisory process. This expectation may have been realized due to the very nature of the responsibility index form.

Summary of Major Impressions

It can be concluded that the agenda had desirable effects on supervisees and supervisors' behavior. The agenda is not only an effective tool for initiating positive changes in both supervisees' and supervisors' involvement in supervisory conferences, it also seems to have a lasting impact on conference behavior. There was evidence indicating that supervisee talk time increased over time. This is in contrast to most previous related research and may indicate that differential supervisory interactions are occurring over time. The only recent research that corroborated the current findings was by McFarlane (1992) that found differential supervisory interactions. This was not documented in earlier research (Culatta & Seltzer, 1976; Roberts & Smith, 1982). It may be that active research in the area of supervision is pointing to new strategies for producing positive changes in conference interaction. Further exploration of conference interactions and ways of improving them is warranted. It seems that intervening with supervisees is a viable option for improving conference interactions.

Limitations of the Study

This study attempted to do two things. It quantitatively measured the effects of a supervisee-prepared agenda on supervisory conference content over time, and it attempted to measure the effects of change in conference interaction on supervisee independence. The internal validity of this study is assessed below to determine if the independent variables were responsible for the differences seen. A discussion of the external validity, or the degree to which results may be generalized, follows.

Threats to Internal Validity

Many factors may contaminate or confound the results of any study finding differences or showing relationships (Ventry & Schiavetti, 1986). The following factors are reviewed below: history, maturation, test-practice effects, instrumentation, differential selection of subjects, Hawthorne effect, and interaction of factors.

History is the first factor which may affect internal validity. The dependent variables in this study were measured over a period of time during which extraneous events unknown to the investigator may have occurred and may have influenced the results. For example, experimental group participants may have attended a workshop or inservice and received information on supervisory theory and strategies to improve the supervisory process. Although it is unlikely that enough subjects would have had such an experience to effect this particular study, the results of any experiment that cannot control human subjects exposure to external events. These types of events may confound experimental data.

Another factor which may affect internal validity is maturation. The effects may be similar to the effects associated with history. It is certainly reasonable to believe that changes occurred in the supervisees and supervisors as a result of the supervisory process itself rather than as a result of the agenda. In fact, the use of agenda produced changes in the dependent variable, percentage of talk time, over time for both groups which may imply that maturation occurred. Supervisees may have become more familiar with the clinical placement requirements over time which may

have increased the amount of time they spoke during conferences. Random assignment of subjects to the control or experimental condition should have minimized the effects of maturation of one group more than the other. It is believed that maturation effects will be similar for both the control and experimental groups.

Test-practice effects which may pose a threat to validity in some studies did not apply in this study, because no measures were used for pre-testing or post-testing. Ventry and Schiavetti (1986) also mention reactive measures, as a threat to validity. Tools such as rating scales or inventories may be considered reactive, because they may change the phenomenon being investigated. The responsibility index may have been a reactive measure, because it focussed participants' attention on the area of this investigation, supervisee independence. It is not believed that this threat to validity, reactive measures, adversely affected the results of this study. The responsibility index may have focussed participants' attention on supervisee independence, but the indicators of the responsibility index were typical aspects of the supervisory and clinical process.

Instrumentation may have posed a validity threat. Smith and Anderson (1982b) established reliability and validity for MOSAICS. In addition, Hagler and Fahey (1986) reported validity for using the MOSAICS for analyzing short segments of supervisory conference interaction. Inter-rater and intra-rater reliability measures for the initiatory/reflexive ratio from the MOSAICS were moderate, however, indicating a threat to validity. Reliability was not established for the responsibility index, because it was measure of subjects' perceptions. It may be argued that content

validity was established for the responsibility index. This investigator determined the eleven indicators for the responsibility index by first examining the behaviors Anderson (1988) had established as being important components in supervisory process.

Analysis of supervisory conferences with MOSAICS did not pose a validity threat. The two factors of concern are the moderate inter-rater and intra-rater reliability measures and use of the responsibility index measures. Inter-rater and intra-rater reliability measures compare favorably to other studies (McFarlane, 1992; Roberts & Smith, 1982; Smith & Anderson, 1982b) and, therefore, may have not posed a possible threat to validity.

Differential selection of subjects to form control or experimental groups can affect internal validity (Ventry & Schiavetti, 1986). This study randomly assigned subjects to the experimental or control condition. Both supervisors and supervisees were compared across groups on basic demographic variables and no significant differences were found. There was subject mortality. Twenty-six pairs had agreed to participate in the study but three pairs failed to complete the research protocol. One pair withdrew due to illness, and two pairs reportedly had other commitments that prevented them from remaining in the investigation. Two subjects were lost from the control group and one subject was lost from the experimental group. Group assignment did not appear to impact subject mortality. The fact that no significant differences were obtained between participants based on the demographic variables, which were thought to be the important variables, implies that systematic differences

were minimized. Thus, threat to validity was not substantial.

The Hawthorne effect can impact the internal validity of a study. The Hawthorne effect refers to changes in behavior that occur simply because subjects are aware that they are participants in a study (Ventry & Schiavetti, 1986). This effect was likely at play in the current study due to the audio taping requirement. Its effect should have been comparable across both groups and should not have resulted in any artificial differences between groups. There was a main effect over time found, however, and it may be that this systematic difference occurred due to the fact that supervisees and supervisors were aware that they were participating in a study that was investigating conference interactions.

The interaction of any of the jeopardizing factors is the final threat to internal validity mentioned by Ventry and Schiavetti (1986). It is not believed that any of the above threats interacted to significantly affect the results.

In summary, this study had various threats to internal validity, however, assignment to group was random and reliability and validity had been established for the MOSAICS. The one factor of concern was the moderate inter-rater reliability for the one critical ratio of MOSAICS, however, the inter-rater reliability level compares favorably with previously reported agreement rates (McFarlane, 1992; Roberts & Smith, 1982; Smith & Anderson, 1982b).

Threats to External Validity

The following threats to external validity will be discussed: reactive or interaction effects of pre-testing, subject selection, reactive arrangements, and

multiple-treatment interferences.

The first threat to external validity described by Ventry and Schiavetti (1986) was reactive or interaction effects of pre-testing. The effect of pre-testing may limit the generalizations that can be made to people who have not been pre-tested. However, this particular threat did not apply to this study, because no pre-experimental activity was conducted to sensitize participants to the experimental variable or condition.

The next threats to external validity are small sample size and subject selection. This factor deals with the extent to which the subjects in this study were representative of the group to which the results may be generalized. The relatively few number of subjects in this study may not adequately represent the group. Therefore, results of this study need to be interpreted with caution in terms of their applicability to all supervisors and supervisees. The results that need to be interpreted with particular caution are the limited number of correlations that existed in this study. It is interesting to note that there were very few relationships found among such variables as type of talk, amount of talk and perceived independence, when one would logically expect to find relationships among these variables. It may actually be that the few correlations found occurred due to chance alone. These correlations may not have actually represented real relationships.

Supervisors and student clinicians were selected dependent upon their independent and mutual agreement to participate which may have led to a subject group that was interested in research in general and supervisory research in particular. The small number of participants makes their representativeness of a larger population somewhat

questionable, however, the demographic information indicated a very rich sample. Supervisors had a wide range of experience and were employed in a variety of settings. Student clinicians had a wide range of academic and clinical experience. A total of eight university programs across the United States and Canada provided subjects for this project.

Reactive arrangements may operate to jeopardize the external validity of research (Ventry & Schiavetti, 1986). The audio taping requirement for this study may have affected the external validity by causing participants to behave in a different fashion than they would have if they were not audio taping the supervisory conference. However, both control group and experimental group participants were required to audio tape conferences so reactive arrangements should not have differentially affected the two groups. Ventry and Schiavetti (1986) describe reactive arrangements as "the Hawthorne effect operating as a threat to external validity" (p. 84). Reactive arrangements may also have occurred over time, because supervisees and supervisors were aware that they were participating in a study investigating conference interactions.

The final threat to external validity is multiple-treatment interferences (Ventry & Schiavetti, 1986). Only one experimental treatment was administered to the subjects in this study, therefore this threat did not apply.

In summary, the small sample size and subject selection seemed to have posed the greatest threats to external validity. It is not known what would have encouraged more clinicians to participate, because this research relies on the "interest and

concern" of colleagues. These results should be generalized to all supervisors and supervisees with caution.

Implications for Future Research

This study leads to the need for further investigation of the effects of the agenda. Future investigations could use two approaches. One might involve more detailed analysis with the MOSAICS comparing supervisees who use the agenda with supervisees who do not use the agenda and supervisors who allow the supervisee to use the agenda with supervisors who do not allow the supervisee to use the agenda. Another approach might investigate the impact of the agenda on the interaction balance between supervisee and supervisor participants. Such studies using a multivariate approach to data analysis might yield some as yet undiscovered effects of the agenda. It would be valuable to know if the observable descriptive differences noted in this study represented significant differences.

This investigation did not analyze the content of initiatory moves. It is not known if the increased supervisee initiations were primarily statements of facts and requests for direction and evaluation or if the initiatory moves represented explanations of events and justifications for opinions and suggestions. It is also not known if the experimental group supervisors, whose initiations decreased, used highly evaluative or suggestive comments rather than statements that would serve to modify or expand supervisees' initiations. To better understand all the phenomena at play, future research should probably code all aspects of the MOSAICS rather than just the initiatory/reflexive critical ratio.

Further exploration is needed to understand the effects of changes in conference interaction on supervisee learning and independence. The responsibility index provided limited information about the perceptions of independence. Future research leading to the development of a valid and reliable tool with which to measure student problem-solving skills will be valuable to all subsequent studies of the impact of conference changes. Research that investigates effects of changes in supervisory conference behavior and then looks beyond to resultant clinical behavioral changes and ultimately to client improvement is still a desirable but somewhat idealistic endeavor. If and when all these components are investigated and shown to be related, the impact of the supervisory process on client care will have been established.

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APPENDIX A
Smith Adapted MOSAICS Scale
Kathryn J. Smith

In Anderson, J. (1988). The supervisory process in speech-language pathology and audiology. Boston, MA: College-Hill Press.

SUMMARY OF MOSAICS SCORING

Speaker

S: Supervisor

C: Clinician

Pedagogical Moves

STR: Structuring, launching or halting move that directs the flow of discussion.

SOL: Soliciting, asking for a physical or verbal response.

RES: Responding, answering or fulfilling the expectation of a solicitation.

REA: Reacting, amplifying, qualifying, or making an unsolicited reaction.

RSM: Summary reaction to more than one move or a genuine summary or review.

From Smith, K. (1978). Identification of perceived effectiveness components in the individual supervisory conference in speech pathology and an evaluation of the relationship between ratings and content in the conference. (Doctoral dissertation, Indiana University, 1977). Dissertation Abstracts International, 39, 680B.

N.B. Only part of the MOSAICS scoring system is reported as only the pedagogical moves portion is required for the initiatory/reflexive ratio.

APPENDIX B
RULES FOR SCORING MOSAICS

General Rules

1. Listen to tape and score: speaker and first words.
2. As many as four passes through the tape are allowed.

Specific Rules

General Coding Instructions

A. Code from the viewpoint of an observer, with pedagogical meaning inferred from the speakers' verbal behaviors.
B. Grammatical form may give a clue, but it is not decisive in coding. For example, SOL may be found in declarative, interrogative, or imperative form. Likewise, RES may be in the form of a question, indicating a tentative answer on the part of the speaker.
C. Coding is done in the general context of the discussion. When two people are speaking at once, or when a person makes an interruption which is not acted upon (the interrupted party continues speaking on the original topic), the interruption is not counted and coding continues in the basic context.
D. When one individual is making an extended pedagogical move which is periodically encouraged by grunts and statements such as "uh huh" and "go on", without actually changing discourse or pausing for longer than two seconds, these interruptions are not counted as separate pedagogical moves.

Pedagogical Moves

A. STR moves form an implicit directive by launching discussion in specific directions and focusing on topics or procedures. The function of STR is either launching or halting-excluding, generally by the method of announcing or stating propositions. When a choice must be made between STR and REA, code STR for statements which move the discourse forward or bring it back on the track after a digression.
B. In general, internal or parenthetical shifts of topic or emphasis are not separately coded unless they constitute a relatively permanent change in the discourse. The discourse is coded in the overall context.
C. Checking statements (eg. "follow me?") are not coded as SOL within the context of another move unless some cue indicating a desired RES is present.
D. Implicit in any SOL is the concept of knowing. Therefore, code RES for any of the range of possible responses, including invalid ones and those indicating knowing or not knowing alone (eg. "I don't know").

E. A SOL which calls for a fact is coded FAC, but if the RES gives both a fact and an explanation, the response is coded RES/XPL.

F. A speaker cannot respond to his or her own solicitation. An immediate self-answer to a question indicates that it was a rhetorical question, which is not coded SOL in the first place. If a speaker answers his or her own question after an intervening incorrect answer, the correction is coded as a reaction to the incorrect answer. If the speaker answers his or her own question after a pause, the answer is coded as a reaction to the absence of an expected response.

G. When a reaction to a previous move is followed by a genuine summary reaction (RSM), both moves are scored for the same speaker.

H. RSM frequently occurs when a unit of discussion is concluded by a speaker, who then turns to a new topic. The coder must determine when RSM ends and STR begins.

I. A reaction to a solicitation occurs only when the reaction is about the solicitation and not a response to the SOL.

J. A reaction may follow the absence of other reactions to a move such as STR. For example, a speaker may make a proposal and then react to the absence of any positive reactions for the other participants.

APPENDIX C
CONFERENCE OUTLINE

Name: _____ Date: _____

(McFarlane and Hagler, 1992 adapted from Student initiated conference protocol, Mawdsley, 1989)

The student will use this as a guideline to select topics for discussion with the supervisor during each scheduled conference to the midterm interval. Check off items of interest, and summarize your evaluation of your clinical performance on that item as well as any questions or suggestions that come to mind. You may use the space to the right of the agenda items to record these reflections on the specific items of interest. Please refer to the completed outline as an example of use.

I. Session Evaluation
(with supervisor data if available)
___interaction techniques-rapport
___instructions
___materials
___cueing
___modelling
___feedback
-correct responses
-incorrect responses
-approximations
___response rate
___adaptability
___data collection
___behavior management

II. Interpersonal Areas
___client motivation, interest, involvement, enjoyment
___clinician motivation, comfort level, enjoyment

III. Client Progress
___graphs
___changes necessary in goals, materials, techniques?

IV. Parent Training and Home Programs

V. Supervisory Interaction
___questions regarding roles or expectations in the supervisory conference

VI. Other

I completed this prior to the supervisory conference and retained possession of this conference outline.

_____
Signature

APPENDIX D
CONFERENCE OUTLINE-EXAMPLE OF USE

Name:_____ Date:_____

(McFarlane and Hagler, 1992 adapted from Student initiated conference protocol, Mawdsley, 1989)

The student will use this as a guideline to select topics for discussion with the supervisor during each scheduled conference in the midterm interval. Check off items of interest, and summarize your evaluation of your clinical performance on that item as well as any questions or suggestions that come to mind. You may use the space to the right of the agenda items to record these reflections on the specific items of interest. Please refer to the completed outline as an example of use.

I. **Session Evaluation**
(with supervisor data if available)

___interaction techniques-rapport
✓instructions — It seemed that responses were better when my instructions included an example.
___materials
___cueing
___modelling
✓feedback
-correct responses
-incorrect responses — I'm not sure I'm giving explicit cueing when he's wrong!
-approximations
___response rate
___adaptability
___data collection
✓behavior management — I tend to coax rather than give clear expectations. I'd like to discuss alternate strategies.

II. **Interpersonal Areas**

✓client motivation, interest, involvement, enjoyment — I want him to enjoy it n
✓clinician motivation, comfort level, enjoyment
I'm still feeling nervous in therapy. I'd like to relax more!

III. **Client Progress**

___graphs
___changes necessary in goals, materials, techniques?

IV. **Parent Training and Home Programs**

V. **Supervisory Interaction**

✓questions regarding roles or expectations in the supervisory conference — I'm feeling quite dependent still- is this ok

VI. **Other**

I completed this prior to the supervisory conference and retained possession of this conference outline.

_____
Signature

APPENDIX E
RESPONSIBILITY INDEX

Name:_____

Interval:___ first quarter ___midterm ___third quarter

Group:___Control ___Experimental

This form is intended to reflect the actual distribution of clinical process responsibilities. Please read the indicator carefully and then determine the percentage that each participant has been responsible for the activity.
Please complete this form independently and when completed fold the form, staple it, and place in the provided envelope.

INDICATOR	SUPERVISOR RESPONSIBLE		SUPERVISEE RESPONSIBLE		TOTAL
1. Planning assessment for client	_____%	+	_____%	=	100%
2. Planning treatment goals	_____%	+	_____%	=	100%
3. Planning session activities	_____%	+	_____%	=	100%
4. Collecting information on client behaviors	_____%	+	_____%	=	100%
5. Interpreting client performance	_____%	+	_____%	=	100%
6. Interpreting supervisees' performance	_____%	+	_____%	=	100%
7. Identifying clinical successes	_____%	+	_____%	=	100%
8. Explaining clinical successes	_____%	+	_____%	=	100%
9. Identifying clinical problems	_____%	+	_____%	=	100%
10. Generating strategies to solve clinical problems	_____%	+	_____%	=	100%
11. Planning for supervisory conference content	_____%	+	_____%	=	100%

Please use comment section below to explain any circumstances that would help the experimenter interpret these results.
Comments: _____
_____
_____

APPENDIX F
LETTER TO CLINICAL COORDINATOR

Department of Speech Pathology and Audiology
University of Alberta
2-70, Corbett Hall
Edmonton, Alberta
Canada T6G 2G4

Dear ;

I am writing to request your assistance in obtaining subjects for a research project in supervision. The project will investigate the effects of an organizational tool on supervisory conference content.

Participants will be student speech-language pathologists and their clinical supervisors who are involved in practicum placements for most of the period from January, 1993, to April, 1993. Individuals agreeing to participate will be assigned randomly to a control or experimental group. Students in the experimental group will be asked to complete a conference agenda prior to supervisory conferences. The agenda can typically be completed within 15 minutes. All participating pairs will be required to audio tape a supervisory conference on three different occasions during the clinical placement. Audio tapes will be returned to the experimenter for analysis. The identity of all participants will remain confidential and audio tapes will be erased after completion of the project.

I would appreciate your completing the attached form by January 4, 1993, to provide an estimate of the number of potential supervisor/student clinician pairs. It is not necessary for you to obtain any form of agreement from the potential participants. I will send you packages of information in early January, 1993, for distribution to potential supervisor and student participants.

Thank you for considering this request. The time required of you will be absolutely minimal. If you have any questions, please feel free to contact me or Dr. Paul Hagler, my thesis supervisor, at (403) 492-5990 or fax number (403) 492-1623.

Sincerely,

Lynette Jans, B.Sc.
Graduate Student

ESTIMATION OF POTENTIAL PARTICIPANTS

Please complete this form before **January 4, 1993**, indicating the number of potential clinical supervisors involved in practicum from January to April, 1993. Send the completed form to the address at the bottom of this form in the enclosed envelope.

Number of potential supervisors:_____

Please make any necessary corrections to the following information.

Name:

Position:

University:

Address:

Phone number:

Fax number:

Comments:

Thank you for taking the time to complete this form. I look forward to hearing from you.

Lynette Jans
Department of Speech Pathology and Audiology
University of Alberta
2-70, Corbett Hall
Edmonton, Alberta
Canada T6G 2G4

APPENDIX G
LETTER TO SUPERVISOR

Dear Clinical Supervisor;

We are writing to invite your participation in a research project investigating components of the supervisory conference in speech-language pathology. Participants will be student clinicians and their clinical supervisors. Participation of both individuals is voluntary. Student clinicians in the experimental condition will be using an organizational tool designed to make certain supervisory activities easier, less time consuming, and more satisfying for both the supervisor and student clinician. Additional information can be found in the enclosed Informed Consent document. As a supervisor, your time commitment to this project will not exceed the time you are already investing in the supervisory process. Your commitment to this project will be your participation in your "regularly" scheduled supervisory conferences with the student clinician, and the completion of the one-page Responsibility Index form at three intervals during the term.

If you are willing to participate in this study, please sign and return one copy of the Informed Consent in the envelope provided as soon as possible. The other copy is for your records. Also, please give your student the enclosed letter of invitation and Informed Consent document. Your mutual but independent agreement is required. If both you and your student agree to participate, please refer to the envelope marked "Instructions for Supervision Study". If you do not wish to participate, please return the envelope.

We would like you to participate in this study with only one student, however, if you are supervising more than one student, please feel free to ask all your students in order to find one student that may be willing to participate in this study.

If you are interested in participating in this study, please take a moment to consult with your student. If there is independent and mutual agreement to participate, please return your signed consent as soon as possible. Your participation will be greatly appreciated. Thank you in advance for considering this request.

Sincerely,

Lynette Jans, B.Sc.
Graduate Student

Paul Hagler, Ph.D.
Associate Professor

APPENDIX H
INFORMED CONSENT: SUPERVISOR

Project title: Supervisory conference content

Background Information:

Name:_____
Address:_____
Practicum site:_____
Name of student clinician:_____
Number of years FTE as S-LP:_____
Approximate total number of students supervised:_____
Previous training in supervision?_____
If "yes", how many of each of the following?

inservice_____ university credit course_____
workshop_____

I understand that my participation is being requested in a research project investigating supervisor and supervisee interaction during conferencing. Participants will be speech-language pathologist supervisors and their student clinicians. Assignment to control and experimental groups will be random.

If assigned to a control group, an audio tape of a typical supervisory conference at the first quarter, midterm, and third quarter intervals of the placement will be recorded and submitted to the investigator.

If assigned to the experimental group, my student clinician will use an organizational tool in the supervisory conference beginning early in the clinical placement and continuing until after midterm. I will allow my student 15 minutes for completion of the organizational tool prior to conferencing. Audio tapes of typical supervisory conferences will be recorded at the first quarter, midterm, and third quarter intervals of the placement and submitted to the investigator.

As a supervisor for either the control or experimental group, I will be asked to complete a Responsibility Index form about the distribution of responsibilities across three time periods (first quarter, midterm, third quarter).

All audio tapes will be erased upon completion of the project. All audio tapes and response forms will be secured in a locked area with access restricted to the principal investigator.

My participation is voluntary, and I have the right to withdraw at any time without any consequences. My name will be known only by the principal investigator.

To the best of my knowledge, the information I have provided is accurate, and I have retained a copy of this document for my records.

Date:_____ _____

Signature

_____ _____

Witness Investigator

Please direct any questions pertaining to this project to:

Lynette Jans, B.Sc.
Department of Speech Pathology and Audiology
University of Alberta
2-70, Corbett Hall
Edmonton, AB
Canada T6G 2G4
(403)492-5990

or

Paul Hagler, Ph.D.
Associate Professor
Department of Speech Pathology and Audiology
University of Alberta
2-70, Corbett Hall
Edmonton, AB
Canada T6G 2G4
(403) 492-5990

APPENDIX I
LETTER TO SUPERVISEE

Dear Student Clinician;

We are writing to invite your participation in a research project investigating components of the supervisory conference in speech-language pathology. Participants will be student clinicians and their clinical supervisors. Participation of both individuals is voluntary. Student clinicians and their respective supervisors in both the control group and experimental group will be asked to audio tape selected supervisory conferences between January to April, 1993. Student clinicians in the experimental condition will be using an organizational tool designed to make certain supervisory activities easier, less time consuming, and more satisfying for both the supervisor and student clinician. This organizational tool only takes about 15 minutes to complete. Additional information can be found in the enclosed Informed Consent document. Participants will also be asked to complete a one-page Responsibility Index form at three intervals during the term.

If you are willing to participate in this study, please sign and return one copy of the Informed Consent in the envelope provided as soon as possible. The other copy is for your records. Your participation, as well as your clinical supervisor's participation, is voluntary. Your mutual but independent agreement is required. If both you and your clinical supervisor agree to participate, please refer to the envelope marked "Instructions for Supervision Study" that was with your supervisor's materials.

If you are willing to participate in this study, please take a moment to consult with your clinical supervisor and send your consent as soon as possible. Your participation will be greatly appreciated. Thank you in advance for considering this request.

Sincerely,

Lynette Jans, B.Sc.
Graduate Student

Paul Hagler, Ph.D.
Associate Professor

APPENDIX J
INFORMED CONSENT: SUPERVISEE

Project title: Supervisory conference content

Background Information:

Name:_____
Address:_____
Age:_____
Number of years of university training:_____
Practicum site:_____
Name of supervisor:_____
Number of practicum hours acquired prior to this placement:_____

I understand that my participation is being requested in a research project investigating supervisor and supervisee interaction during conferencing. Participants will be speech-language pathologist supervisors and their student clinicians. Assignment to control and experimental groups will be random.

If assigned to a control group, an audio tape of a typical supervisory conference at the first quarter, midterm, and third quarter intervals of the placement will be recorded and submitted to the investigator.

If assigned to the experimental group, my participation will require me to use an organizational tool from the beginning of the clinical placement and continuing until after midterm. The organizational tool will need to be completed each time I meet with my clinical supervisor for a conference. The organizational tool typically requires 15 minutes to complete. Audio tapes of typical supervisory conferences will be recorded at the first quarter, midterm, and third quarter intervals of the placement and submitted to the investigator.

As a student clinician for either the control or experimental group, I will be asked to complete a Responsibility Index form about the distribution of responsibilities across three time periods (first quarter, midterm, third quarter).

All audio tapes will be erased upon completion of the project.

All audio tapes and response forms will be secured in a locked area with access restricted to the principal investigator.

My participation is voluntary, and I have the right to withdraw at any time without any consequences. My name will be known only to the principal investigator.

To the best of my knowledge, the information I have provided is accurate, and I have retained a copy of this document for my records.

Date:_____ _____

Signature

_____ _____

Witness Investigator

Please direct any questions pertaining to this project to:

Lynette Jans, B.Sc.
Department of Speech Pathology and Audiology
University of Alberta
2-70, Corbett Hall
Edmonton, AB
Canada T6G 2G4
(403)492-5990

or

Paul Hagler, Ph.D.
Associate Professor
Department of Speech Pathology and Audiology
University of Alberta
2-70, Corbett Hall
Edmonton, AB
Canada T6G 2G4
(403)492-5990

APPENDIX K
INSTRUCTIONS TO EXPERIMENTAL GROUP

Thank you for agreeing to participate in this project. You will be in the **Experimental group.**

1. Ensure that each of you have signed an informed consent document and retain copies for your records.

2. Select tentative dates for the first quarter, midterm, and third quarter intervals of the clinical placement to audio tape supervisory conferences. The number of weeks of the clinical placement will determine when you will be recording a conference. Whenever possible, recordings should be at least three weeks apart but not more than five weeks apart. Please submit these tentative dates on the enclosed calendar and mark them on your own calendar. Post-it notes are enclosed as a reminder.

3. Please return both informed consent documents and the calendar together in the enclosed envelope as soon as possible.

4. On receipt of the above, I will forward three audio tape cassettes to you.

5. Please audio tape only typical supervisory conferences, such as those used for analysis or discussion of client-related assessment or treatment activities. Do not record a conference in which you are reviewing a midterm or final placement evaluation.

6. Check to ensure that both speakers are easily and clearly heard on the audio tape. Tapes will be transcribed and, therefore, must be intelligible.

7. Ten Conference Outlines and one Example Outline have been included for **STUDENT USE ONLY.** If more outlines are required, feel free to make more copies.

8. Supervisors are asked to insist that students use the Conference Outline during each and every supervisory conference to the midterm interval. Students will need approximately 15 minutes between the end of their treatment session and the beginning of the conference to prepare the Conference Outline. **IT IS IMPORTANT THAT THE CONFERENCE OUTLINE BE USED CONSISTENTLY THROUGH TO THE MIDTERM.**

9. **Students must retain possession of the outline throughout the conference.**

10. The use of the Conference Outline is to be **discontinued after the midterm interval**.

11. You should complete the Responsibility Index provided at the first quarter, midterm, and third quarter points in the clinical placement. Responsibility Index forms must be completed independently. Put the completed Responsibility Index forms in the envelope provided.

12. Collect the three audio tapes, three Responsibility Index forms for the supervisor, and three Responsibility Index forms for the student clinician, and the completed Conference Outlines and return all to the investigator in the envelope provided.

Thank you for your participation in this project. If you have any questions please leave a message for either of us at 492-5990.

Lynette Jans, B.Sc.
Graduate Student

Paul Hagler, Ph.D.
Associate Professor

APPENDIX L
INSTRUCTIONS TO CONTROL GROUP

Thank you for agreeing to participate in this project. You will be in the Control group.

1. Ensure that each of you have signed an informed consent document and retained copies for your records.

2. Select tentative dates for the first quarter, midterm, and third quarter intervals of the clinical placement to audio tape supervisory conferences. The number of weeks of the clinical placement will determine when you will be recording a conference. Whenever possible, recordings should be at least three weeks apart but not more than five weeks apart. Please submit these tentative dates on the enclosed calendar and mark them on your own calendar. Post-it notes are enclosed as a reminder.

3. Please return both informed consent documents and the calendar together in the enclosed envelope as soon as possible.

4. On receipt of the above, I will forward three audio tape cassettes to you.

5. Please audio tape only typical supervisory conferences, such as those used for analysis or discussion of client-related assessment or treatment activities. Do not record a conference in which you are reviewing a midterm or final placement evaluation.

6. Check to ensure that both speakers are easily and clearly heard on the audio tape. Tapes will be transcribed and, therefore, must be intelligible.

7. You should complete the Responsibility Index provided at the first quarter, midterm, and third quarter points in the clinical placement. Responsibility Index forms must be completed independently. Put the completed Responsibility Index forms in the envelope provided.

8. Collect the three audio tapes, three Responsibility Index forms for the supervisor, and three Responsibility Index forms for the student clinician and return all to the investigator in the envelope provided.

Thank you for your participation in this project. If you have any questions, please leave a message for either of us at 492-5990.

Lynette Jans, B.Sc.
Graduate Student

Paul Hagler, Ph.D.
Associate Professor

APPENDIX M
INSTRUCTIONS FOR AUDIO TAPING SUPERVISORY CONFERENCES

1. Please audio tape typical supervisory conferences at the agreed upon dates for the first quarter, midterm, and third quarter intervals.

2. Do not record a conference in which you are reviewing a midterm or final placement evaluation.

3. Participants in the experimental group should remember to complete a Conference Outline prior to every supervisory conference. The Conference Outline needs to be used from the onset of the clinical placement through midterm.

4. Check to ensure that both speakers are clearly heard on the tape.

5. Complete the following attached form for each audio tape and submit the form and audio tape to the investigator in the envelope provided. Experimental group subjects are asked to submit the Conference Outlines as well.

AUDIO TAPE FORM

1. Please circle which interval this audio tape is for:

   first quarter midterm third quarter

2. Please indicate how many supervisory conferences you have participated in to date:_____

3. Please complete the following:

   Name of student:_____

   Name of supervisor:_____

   Date of audio taped conference:_____

   Approximate length of conference:_____