Occupational Therapy Education in Bosnia and Herzegovina: An Implementation Evaluation

by

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ABSTRACT

This study was undertaken to investigate the implementation of occupational therapy in Bosnia and Herzegovina (BiH) by graduates of the Occupational Therapy Educational Program. A premise of this study is that programs designed to train allied health workers exist only because there is a need for the service. Education, as one component of community development, arises in response to an identified community need. Consequently, evaluating the effectiveness of an educational program requires consideration of outcomes, which extend beyond student learning, to the transfer and impact of student learning on the community. Educational accountability is conceptualized within a model which describes the accountability process at three stages of educational development and implementation. These stages are presented within a framework of learning, transfer and impact.

Using the framework presented in the Model of Educational Accountability, this study sought to identify client outcomes and organizational impacts, which resulted from the graduates' work with clients. In addition, description of the occupational therapy process and identification of contextual factors were used to discern influences on implementation outcomes. Qualitative inquiry was used to collect information regarding graduate and supervisor perceptions of the application of the occupational therapy process, contextual influences affecting implementation of occupational therapy with clients and insights regarding organizational impacts. A within-groups design, involving a convenience sample of clients receiving services from graduates was used to obtain information on client outcomes following a period of occupational therapy intervention.

Findings showed that positive client outcomes were evident in the area of occupational performance following the graduates' application of the occupational therapy process with clients. Significant improvement in person-environment fit was not evident. Graduate and supervisor reports supported findings regarding client outcomes. These two groups of respondents found that clients experienced increased performance in the area of self-care, while restrictions to obtaining adequate finances and equipment limited the potential for actual changes in person-environment fit.

Results of this study also showed that the organizations employing graduates changed their methods of service delivery by: increasing home visiting; assuming psychosocial support as a new service offered by the organizations: and altering the frequency and duration of therapy to accommodate the need for longer term involvement in occupational therapy. Increasing supervisors' knowledge of occupational therapy was an essential step in the implementation process since supervisors held direct responsibility for the ultimate application of occupational therapy within each organization.

While contextual factors had a predominantly limiting effect on the implementation of occupational therapy in BiH. role change and problem solving processes were two conditions which mediated contextual influences. Findings from this study lend support to the social system perspective offered by M. Scheirer (1981) which proposed that implementation is contingent upon both organizational and individual factors. This study demonstrates that the identification of contextual influences is essential for understanding the degree of implementation of innovative programs. Recommendations for improved educational development and implementation are made to enhance the process of educational accountability.

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CHAPTER 1

INTRODUCTION

Fundamental to outcome evaluation in health service education is the premise that the educational program exists to serve the needs of consumers of health services. Consequently, evaluating the effectiveness of an educational program requires consideration of outcomes which extend beyond student learning to the transfer and impact of student learning on the community.

Summative evaluations reported in allied health education present great diversity in terms of methods and design. Despite this diversity, two categories of research designs can be delineated: 1) those which emphasize evaluation of student learning as the primary method for determining whether a curriculum achieved its educational objectives; and 2) those which emphasize student appraisal of the usefulness of the learning experience. The first approach follows a traditional model of evaluation, grounded in psychometric methods of testing, based on the measurement of predetermined objectives which the learner is able to achieve at the end of the learning experience (Crotty & Bignell, 1988). The second approach has been supported by many qualitative researchers who advocate the use of subjective information to provide insights about educational outcomes from the perspective of how participants judge the learning experience (Chambers, 1988; Whiteley, 1992).

Both of these approaches emphasize the accountability of educational programs to students enrolled for the purpose of increasing the students' knowledge, skills and attitudes throughout their professional development. However, there remains a gap in the literature which addresses the accountability of educational programs to consumers of services provided by graduates.

Accountability is usually defined in relation to the direct responsibility of practitioners to their clients. Outcome research developed out of the quality assurance movement in the field of medicine, which sought to ensure a relationship between structure, process and outcomes of interventions (Donabedian, 1969; Egan, Dubouloz, von Zweck, Vallerand, 1998). Applied to educational evaluation,

accountability asks educators to reflect upon the relationship between program goals, teaching methods and results.

In a report detailing an evaluation framework for the nursing profession, Allen (1977) identified accountability as an essential criterion upon which to judge educational programs. Allen illustrated that in order to demonstrate accountability to consumers, summative evaluations in education require information on the actual effect of the performance of nurses on community health (p.16). Despite this persuasive report, there has been little effort to utilize accountability to consumers as criteria for evaluating the impact of health service education.

While there is recognition of the need to design educational evaluations which tap consumers as a source of data on the effectiveness of services provided by graduates, methodological issues inherent in the design of summative evaluations have been cited as the primary reason for the lack of such educational evaluation studies. Obstacles identified include difficulty tracking large numbers of graduates and their clients and logistical problems in data collection (Watson & Herbener, 1990). Elemental in solving this problem is the need for a conceptual framework for understanding educational accountability within health service education. Moreover, there is a need to understand the relationship between learning transfer beyond graduation, and the organizational context in which the graduates' work takes place.

BACKGROUND INFORMATION

The International Centre for the Advancement of Community Based Rehabilitation (ICACBR) has been involved in the restructuring of rehabilitation services in Bosnia and Herzegovina (BiH) since 1993. This involvement began with the introduction of Community Based Rehabilitation (CBR) as a service delivery model, which stemmed from the priority for injured civilians to access rehabilitation services safely, during the conflict in BiH. The violence that injured approximately 175,000 civilians created an urgent need for rehabilitation services in BiH. The war had an enormous impact on the infrastructure throughout BiH. With communication and transportation cut off and destruction of many

hospitals and health care institutions, access to medical care and rehabilitation services was extremely problematic. The need for accessible rehabilitation services became a priority (ICACBR, 1996). CBR models support a shift in rehabilitation services from institutional care into a network of accessible, cost-effective community services. For these reasons, the Ministry of Health for BiH adopted CBR as model for the re-establishment of rehabilitation services throughout the Federation. The transfer of rehabilitation from institution to community, however, created the necessity of training professionals to work within a CBR model of practice. Training programs, led by ICACBR, began with educational programs for physiotherapists, and extended to the development of training programs in occupational therapy. The lack of an established profession of occupational therapy in BiH created a gap in service delivery for the community based rehabilitation of persons with physical and mental disabilities. The urgent need for occupational therapy within the developing CBR framework in BiH prompted a pilot program designed to train six physiotherapists in a condensed course in occupational therapy theory and practice.

Michelle Villeneuve, Raymonde Hachey and Beth ten Hove, Canadian occupational therapists, developed the Occupational Therapy Educational Program for BiH. The program was conceptually based on CBR as a service delivery model (Peat,1997) and the Person-Environment-Occupation Model as a theoretical framework for occupational therapy practice (Law, Cooper, Strong, Stewart, Rigby, & Letts, 1996). CBR promotes a holistic approach to rehabilitation of persons with physical and/or mental problems by focusing services within the context of daily life. CBR initiatives are specific to each community and facilitate the integration of persons with disabilities into social, economic, political and cultural life (Peat, 1997). The philosophy and principles of occupational therapy are consistent with the goals and objectives of CBR since occupational therapists support persons with mental and/or physical problems in their performance of daily activities where they live, work and play.

Essential to the development of an educational program for BiH was the introduction of a theoretical model, which could be used to explain occupational therapy within CBR and provide a framework for the clinical application of occupational therapy concepts. The short time frame for training required the selection of an appropriate model for preparing individuals who had limited prior knowledge

of occupational therapy. The Person-Environment-Occupation Model (PEO Model) is a recently developed framework for understanding occupational therapy which allows the therapist to give equal consideration to the person, their activities and the context of their daily lives (Law et al., 1996). The complementary nature of the PEO Model and CBR formed the basis for designing a training program in occupational therapy.

A five month pilot program took place between February-June, 1997. The training program was divided into three units. Unit one included a course which introduced the students to occupational therapy theory. This course was held in BiH between February and March, 1997. It was taught by Michelle Villeneuve with guest lectures by four Canadian professors. Unit two was organized in Canada in April-May, 1997. This component provided a link between theory and practice through seminars and fieldwork placements led by a number of Canadian occupational therapy clinicians. Unit three occurred in BiH and involved clinical fieldwork experiences within CBR practice. Supervision was provided by Anne O'Riordan and Michelle Villeneuve, occupational therapists. Students were selected to participate in this program, based on their physiotherapy training and a demonstrated skill in the English language.

STATEMENT OF THE PROBLEM

Both theory and practice of occupational therapy were new for clinicians from BiH. The Occupational Therapy Educational Program was an innovative curriculum, designed to quickly train six individuals to practice occupational therapy in a country recovering from the formidable effects of war. The overall goal of the program was to teach participants to apply the PEO Model to improve occupational performance and person-environment fit in clients receiving their services. A summative evaluation is necessary to determine the effectiveness of the curriculum in achieving this goal.

Prerequisite to conducting a summative evaluation based on transfer of learning, was the need to conduct an implementation evaluation in order to: 1) identify stakeholders and assess their concerns regarding the application of occupational therapy in BiH; and 2) to analyze factors influencing the implementation of occupational therapy. The premise of this study is that transfer of learning is

dependent upon the degree of implementation, which is in turn affected by the contextual factors operating within the workplace of the graduate. Understanding the implementation of occupational therapy in BiH, broadens understanding of the contextual influences on the program under study and provides insights necessary for planning summative evaluation of the educational program based on the concept of transfer.

STUDY PURPOSE AND QUESTIONS

The purpose of the current study was:

1. To describe the degree of implementation of occupational therapy within CBR and rehabilitation centres in BiH, post graduation.

2. To identify contextual factors, within the workplace of the graduates, which affect implementation of occupational therapy with clients.

The study sought to answer the questions: What conditions help to mediate contextual influences; and how can these conditions be shaped through the educational accountability process? These questions were answered using both quantitative and qualitative methods of inquiry to explore the implementation of occupational therapy in BiH.

STUDY OBJECTIVES

In order to address the study purpose and questions, specific objectives of this implementation evaluation included:

1. To describe the occupational therapy process as implemented by graduates of the Occupational Therapy Educational Program, in terms of: referral; assessment; intervention; and discharge.

2. To identify contextual factors within the workplace of the graduates, which influenced the implementation of occupational therapy in BiH.

3. To describe client outcomes following a period of occupational therapy intervention provided by graduates of the Occupational Therapy Educational Program.

4. To describe organizational impacts resulting from the work of the graduates of the Occupational Therapy Educational Program.

CHAPTER 2

LITERATURE REVIEW

ACCOUNTABILITY

This chapter a) describes three discrete domains of accountability surrounding educational programs, b) discusses the factors influencing the process of educational accountability, and c) presents a model of educational accountability. A premise of this study is that programs designed to train allied health workers exist only because there is a need for the service. Education, as one component of community development, arises in response to an identified community need. Consequently, educational programs have a clear responsibility to all potential clients of such services. Evaluating the effectiveness of an educational program requires consideration of outcomes, which extend beyond student learning to the transfer and impact of student learning on the community.

Conceptualizing Educational Accountability

Evaluation models provide an analytical plan or framework which guides evaluation planning (Ediger, Snyder, & Corcoran, 1983). The literature is replete with models for program evaluation (Anderson, Ball, & Murphy, 1975; Chambers, 1988; Clark, Goodwin, Mariani, Marshall, & Moore, 1983; Donabedian, 1969; Fields, 1984; Guba & Lincoln, 1994; Patton, 1982; Scriven, 1972; Worthen & Sanders, 1987), many, emanating from the field of sociology have been applied to educational evaluation (Chavasse, 1994). Using available models to conceptualize a problem presents a number of advantages because they provide direction, define parameters for the evaluation and indicate relationships among various components (Ediger et al., 1983; Patton, 1982). However, the uniqueness inherent in every educational program requires flexibility to which a previously developed evaluation framework may not yield (Patton, 1982). Broadening conventional concepts to fit new situations has been recommended as an appropriate, even preferred approach to planning evaluation (Patton, 1982; Worthen & Sanders, 1987). The remainder of this review will illuminate thinking related to educational accountability and propose a

framework for conceptualizing educational evaluation in a way that keeps accountability at the forefront of the evaluation.

A review of evaluation models was completed in an effort to identify evaluation philosophies congruent with both adult education and allied health disciplines. A number of authors identified accountability as an issue, recognizing the need to understand impacts of educational programs through the work of their graduates (Allen, 1977; Chavasse, 1994; Stenhouse, 1975; Vella, Berardinelli, & Burrow 1998; Watson & Herbener, 1990). In particular, Vella et al. (1998) identified three domains of accountability and presented a systematic approach to applying their accountability process to the evaluation of adult education programs. Vella's model identifies educational accountability within three domains: 1) *learning*, which refers to changes in the learners' knowledge, skills and attitudes that result from the program; 2) *transfer*, defined as the effective application of learning in the graduates' work, after completing the education program; and 3) *impact*, or improvements in the performance of the graduate's organization which can be attributed to the work of the graduate (p.22). Vella's model utilizes the educational planning process (Structure; Process; Outcomes) to construct appropriate evaluation goals in any or all three domains. Evaluation results in any one area may raise questions about the effectiveness of the educational experience.

The applicability of Vella's model within allied health training becomes apparent when we consider that the ultimate goal of allied health education is to teach professional care of clients (Allen, 1977; Chavasse, 1994; Watson & Herbener, 1990).

Learning

In professional disciplines, evaluation of student learning is the primary method for determining whether a curriculum achieved its educational objectives. The use of evaluation to make judgments about changes in knowledge, skills and attitudes is one component of the instructional process (Cranton, 1989; Torres & Stanton, 1982; Vella et al., 1998). Examples of evaluations include both informal or structured observations, tests, self-evaluation, discussion and anecdotal records. Consequently, evaluation serves the purpose of providing ongoing feedback to the learner and to the teacher (Cranton, 1989). Entry level

exams, common to allied health professions, are also utilized as a measure of student learning (Stern & Kramer, 1992). These exams provide the profession with some assurance that graduates have attained a standard of knowledge, skills or attitudes relevant to that profession (Schemm, Corcoran, Kolodner, & Schaaf, 1993).

Transfer or Application

Although entry level exams are used as an assessment of professional competence, they rarely provide information on whether the graduate can apply learning to a work environment. Questioning the safe practice of nursing graduates within the field, the accurate assessment of shoulder pain by a physiotherapist, or the decision to discharge a client after a short term of occupational therapy intervention are all questions of transfer. Although the need to understand graduates' application of learning to their work with clients has been identified in the allied health literature, there remains a gap in the development of an evaluation framework which looks at transfer as a component of educational accountability (Chavasse, 1994; Watson & Herbener, 1990).

Impact

Examples of the impact of an educational program on the organization employing its graduates may include events that affect the structure and processes from which an organization functions. Such events may include: a reduction in wait lists because of improved efficiency of treatment approaches applied by the graduate; the development of related services or programs within the organization which fulfill a service need; an increase in referrals to the graduate for providing service to a larger consumer group; or changes in attitudes of the organization's team members. While identifying organizational impacts, which are attributable to the educational program, is challenging, it is not an impossible task (Vella et al., 1998). Determining outcomes, which have an impact on the structure and processes from which an organizations functions, provides evidence regarding the usefulness of the educational design.

RELATIONSHIP BETWEEN LEARNING, TRANSFER AND IMPACT

These three domains of educational accountability, as proposed by Vella et al., suggest an interdependency such that learning must take place for transfer to occur and transfer is a condition of long term impacts (Vella et al., 1998). Despite this interdependence, evaluation within each of these domains results in a discrete measure of educational accountability.

Inherent, although not explicitly stated, in Vella's model is the influence of time on evaluations of educational effectiveness. The duration between graduation, the application of learning within the work environment and organizational change is a significant factor in the development of evaluative criteria. Consequently, with each domain, evaluation becomes further removed such that it is difficult to identify the relationship between outcomes and the educational program itself (Vella et al., 1998). This challenge lends credence to the need for a framework for understanding the educational accountability process in practice.

The importance of educational accountability in allied health education is evident in the accreditation literature where outcome assessments are utilized as a method of quality assurance by promoting consistent educational standards (Christiansen, 1994; Pagliarulo, 1986; Taylor, 1996). However important to allied health educators, evaluation continues to focus on educational effectiveness as measured by student learning with little mention of transfer or impact (Chavasse, 1994; Watson & Herbener, 1990).

Employing evaluations of transfer and impact, as part of the accountability process, presents a host of pragmatic concerns requiring consideration of factors outside the realm of the educational program itself. Identifying the factors influencing transfer and impact is essential for a comprehensive understanding of educational accountability in allied health programs. The following will demonstrate the complexity surrounding evaluations of transfer and impact.

FACTORS INFLUENCING TRANSFER AND IMPACT

This review provides insight into the factors influencing transfer and impact as identified in the adult education, evaluation, accreditation and organizational-training literature. Factors were identified which chiefly concern: (1) the design of the educational program such that it facilitates generalization and maintenance of learning; (2) the complex nature of competence: and (3) the opportunities and limitations within the workplace so that adequate conditions for transfer prevail (Baldwin & Ford, 1988; Chavasse, 1994; Spencer & Spencer, 1993; Stenhouse, 1975; Watson & Herbener, 1990). This section will explore each of these factors separately.

The Design of Educational Programs: Objectives and Methods

Generalization and maintenance were identified in the organizational-training literature as two conditions of transfer (Baldwin & Ford, 1988). While generalization refers to the extent to which knowledge, skills and attitudes, gained through education and training, are exhibited in the work setting, maintenance concerns the length of time that knowledge, skills and attitudes continue to be used on the job (Baldwin & Ford, 1988). The structure and process components of educational planning requires the systematic planning of learning objectives and teaching methods, both of which directly influence generalization and maintenance.

Learning Objectives

Learning objectives can be considered in relation to the three domains of learning defined by Bloom, Englehart, Furst, Hill, and Krathwohl, (1957). These include: the cognitive, affective and psychomotor domains. Taxonomies, which present a hierarchy of learning within each of these domains, are prevalent in the education literature (Bloom et al., 1957; Krathwohl, Bloom, & Masia, 1964; Simpson, 1989). These taxonomies illustrate levels or types of learning to which educational objectives correspond.

Within the cognitive domain, types of learning include knowledge and comprehension such as the recall, recognition and understanding of facts. These types of learning represent the most basic levels of the taxonomy proceeding through analysis, synthesis and judgment. Manipulating knowledge for making

comparisons, producing new theories and objectively evaluating ideas or arguments are considered higher level skills within this classification. Understanding levels of cognitive learning allows educational planners to identify the appropriate type of learning required, facilitating a match between teaching methods and learning objectives (Cranton, 1989).

A similar taxonomy was proposed for the affective domain (Krathwohl et al., 1964). Developing values or beliefs is an integral component of many professional programs. Lawyers, for example, must not only value the principal of client confidence, but confidentiality must be a characteristic of all professional interactions. The affective taxonomy suggests a hierarchy from an awareness and willingness to listen to attitudes, through to offering opinions, establishment of a set of beliefs and ultimately identifying oneself by certain attitudes or values (Cranton, 1989). Although more abstract in nature, this taxonomy increases the scope for identifying learning objectives which is significant for the education of helping professionals. For example, in occupational therapy, valuing the client as a partner in goal setting and acting on that value has consequences for the methods of assessment and intervention proposed in the therapy process.

The psychomotor domain is the third domain of learning, which comprises perceptual and manual skills (Marshall, 1993; Simpson, 1989). This taxonomy of learning differentiates a series of skills which progress from perceiving that action is required through to preparedness for action, responding and adjusting skills through feedback, developing motor proficiency and eventually adapting to unanticipated situational demands and creating new actions based on previously developed skills. Again, the psychomotor taxonomy of learning provides essential criteria for the development of learning objectives which may be as diverse as identifying the steps involved in taking blood, constructing an orthosis or facilitating adaptive responses during balance training.

The higher levels of learning, within each of these taxonomies, present challenges in planning educational opportunities which facilitate more complex forms of learning. These higher levels reflect an association between knowing and doing which is reflected in the adult education literature (Cafarella, 1994; Cranton, 1989; Diamond, 1998). Although the lower levels such as recall of knowledge, openness

to receiving values and identifying a set of actions to perform are essential for learning, it is the higher level skills such as formulating plans from information, originating new actions and choosing an appropriate situational response from a set of values, which reflect a generalization of learning to the work environment.

Teaching Methods

Instructional methods and materials used to facilitate learning flow from educational objectives (Cranton, 1989; Torres & Stanton, 1982; Vella et al., 1998). Five factors which reflect the influence of teaching strategies on learning include: 1) *identical features* which predicts that transfer will be maximized to the degree that there are identical elements in the education and work settings; 2) *stimulus variety* which assumes that generalization and maintenance are maximized when a variety of teaching methods are employed; 3) *overlearning* which assumes that maintenance is maximized with repeated practice such that the skills become second nature; 4) *feedback* which improves application of learning by cueing appropriate behavioural responses; and 5) *sequencing* of the educational program which improves application when there is a logical progression of learning such that more complex skills build on more basic knowledge (Baldwin & Ford, 1988; Chavasse, 1994; Cranton, 1989; Torres & Stanton, 1982; Watson & Herbener, 1990). While an association between these teaching methods and learning has been reported, there remains a lack of studies exploring the relationship between these strategies and transfer or application (Baldwin & Ford, 1988).

In summary, generalization and maintenance are considered conditions of transfer. The educational design influences generalization and maintenance in two ways (1) through the development of learning objectives which are relevant to the work environment and which reflect complex forms of learning found at the higher end of the learning taxonomies and (2) through instructional methods which, because of their relationship to learning principles, may increase potential for the application of learning to the work environment. Although much work has been done on the relationship between educational designs and learning, there remain gaps in the literature which examine the relationship between educational objectives, instructional methods and transfer (Watson & Herbener, 1990).

The Complex Nature of Competence

A second factor, which has considerable influence on transfer, concerns graduate competence to practice. The occupational therapy literature has recently emphasized the concept of competence with respect to the practitioner's role of ensuring quality service for clients (Evert, 1993; Fawcett & Strickland, 1998; Youngstrom, 1998). When students enter an educational program, they bring with them knowledge, attitudes and skills gained from past experiences. They also carry with them inherent traits such as self-concept, physical characteristics and motivation, the composite of which is competence (Fawcett & Strickland, 1998; Spencer & Spencer, 1993; Youngstrom, 1998). Inherent traits are somewhat intangible, yet significantly predict job performance, outside of any specific training (Spencer & Spencer, 1993). In contrast, education and training develops proficiencies (Fawcett & Strickland, 1998; Spencer & Spencer, 1993; Youngstrom, 1998). Without a doubt, ensuring student competence in discipline specific tasks is a critical factor in transfer. However, the diverse nature of competence creates enormous scope for subjectivity in evaluation depending on the criteria used for judging competence. This has prompted criticism from some authors (Ashworth & Morrison, 1991; Aslop & Ryan, 1996). Nevertheless, methods such as entry-level certification exams, evaluation of specific clinical fieldwork competencies, peer review and graduate self report have been utilized as outcome evaluations of student and graduate competence within medical and allied health fields (Missiuna et al., 1992; Nash, Markson, Howell, & Hildreth, 1993). At best, these evaluations fall within the domain which assesses learning, rather than that of transfer.

The influence of competence on transfer creates two problems: (1) measuring competencies gained through education and (2) determining a causal relationship between an educational program and competence (Watson & Herbener, 1990). In addition, the concept of continuing competence, which takes place beyond graduation, has a context component which requires consideration of the social, economic and political climate as factors which constantly influence the maintenance of competence (Aslop & Ryan, 1996).

Contextual Factors: Workplace Conditions

Stenhouse (1975) emphasized the influence of context on curricula (Chavasse, 1994). He identified educational outcomes as being conditional upon the sum of opportunities and limitations provided both within the context of the program itself, and the circumstances within the field where the graduates work (Chavasse, 1994). The work milieu was also identified in the organizational-training and professional education literature as having a significant influence on transfer (Baldwin & Ford, 1988; Curry & Wergin, 1993). Within the field of occupational therapy, the work environment was identified as a significant factor that influences continuing competence of practitioners (Fawcett & Strickland, 1998; Law & Baum, 1998; Youngstrom, 1998).

Studies of the work environment suggest that the work climate and supervisory support influence the application of learning (Fleishman, 1953; House, 1968). The multidimensional nature of these constructs is consistent with the field of environment-behaviour studies which broadly regards the environment as interactions between a situation and an individual or group (Law et al., 1996; Shalinsky, 1983). Considering context as a factor of the interaction between the physical, legal, social, political, cultural and economic components within the environment has implications for designing evaluations which address application of learning. Continued research is required to identify and operationalize contextual factors which significantly promote or inhibit transfer (Baldwin & Ford, 1988).

Scheirer (1981) developed an analytical framework to facilitate the identification of contextual factors affecting the implementation of a new program within the workplace setting. By examining organizational processes at three levels of analysis (macro, micro and meso-level processes), Scheirer (1981) has developed an integrated approach for viewing implementation issues involving the whole organizational social system.

Although macro-level influences usually refer to broader societal factors influencing implementation and include the social, political and economic influences, Scheirer's definition of macro-level analysis focuses on the organization or implementing system considered as a whole and refers to the decisions reached by organizational authorities that direct employees toward specific actions. Such

decisions ensure that adequate conditions exist to support implementation within the organization, such as obtaining adequate resources as well as management backing to support implementation. At the opposite end of the spectrum, Scheirer defines micro-level processes as those that focus on the understanding, commitment and behavioural change necessary from individuals involved in implementation. Individual-level variables include behavioural skills, incentives and cognitive supports. The composite of these, as discussed earlier in the discussion on transfer, was referred to as competence.

Scheirer conceptualized meso-level processes as those that mediate the enactment of macro and micro-level processes within organizations. At the intermediate-level attention is paid to supervisory expectations, communication flow, and techniques or routines required to implement a new program. Where innovative programs are concerned, intermediate processes influence the extent to which old practices influence new roles based on their degree of congruence with the innovation. These meso-level processes then, control the day-to-day operation of work activities surrounding the introduction of an innovation.

Scheirer's central hypothesis is that differential degrees of program implementation are best explained by the organizational context in which the implementers work. Her framework establishes a conceptual foundation for understanding the contextual influences on the implementation of innovative programs. Scheirer's approach to evaluating innovative programs presents her theory of implementation as a dynamic process which includes five stages: 1) adoption of the program; 2) assembling necessary resources to support implementation activities; 3) role change required on the part of program participants to implement the innovation effectively; 4) problem solving strategies which provide feedback on the implementation process; and 5) institutionalization of the program into normal operating routines. Scheirer (1981) proposed that while these stages are roughly sequential, assembling resources, role change and problem solving are likely mutually contingent processes which affect ultimate institutionalization of a program. Scheirer (1981) speculated that role change is central to any implementation evaluation, since the reciprocal nature of role change required of program participants makes it a "key linking concept" between each macro, micro and meso level of analysis (p. 67).

This approach, which views the organizational context as an interrelated system, provides a framework for discussing variability among the organizational components influencing implementation, decreasing the potential for isolating any one aspect and neglecting others. This framework is useful for applied research, addressing real implementation problems as it incorporates consideration of influences from a review of previous theoretical and research perspectives on implementation (Scheirer, 1981). The usefulness of this framework within a process which examines educational accountability of allied health programs becomes evident when considering the need to operationalize the multifaceted conditions influencing transfer of learning.

Summary of Factors Influencing Transfer and Impact

The educational design, competence and work context are all factors which present challenges to an evaluation of educational accountability. The present study explores implementation from the perspective of the interaction between graduate competence and workplace conditions. Consequently, the following will present these constructs in a model of educational accountability. This is a necessary step in defining parameters for a study of educational accountability in allied health education.

A MODEL OF EDUCATIONAL ACCOUNTABILITY

The accountability process, proposed by Vella et al. (1998), was adapted to draw attention to the above factors which influence educational accountability. Figure 1 illustrates the scope of the educational accountability process as it is shaped by the educational design, competence and contextual factors.

This model depicts learning, transfer and impact within a systems framework which highlights input, throughput and output processes in educational development, and implementation. The development of the educational program as a response to an identified community need is a significant component of the input processes, since it provides the impetus for the educational accountability process in all three domains of learning, transfer and impact. Responsiveness of educational programs to community need magnifies the accountability of allied health education programs to consumers of

services provided by graduates (Allen. 1977). In addition. student competence is identified as a significant input process within educational development.

Graduate competence, is represented as the primary outcome of the throughput processes which Vella (1998) labeled as learning. Learning, and hence graduate competence, is influenced by the competence of students entering the program and the educational design itself, while client outcomes and organizational impacts are the primary outputs of the implementation of learning within the workplace. The graduates' work with clients (application of the occupational therapy process) cannot be isolated from the organizational context in which their work takes place. Consequently, transfer and impact must be viewed together as elements of program implementation, which transpire in the field where the

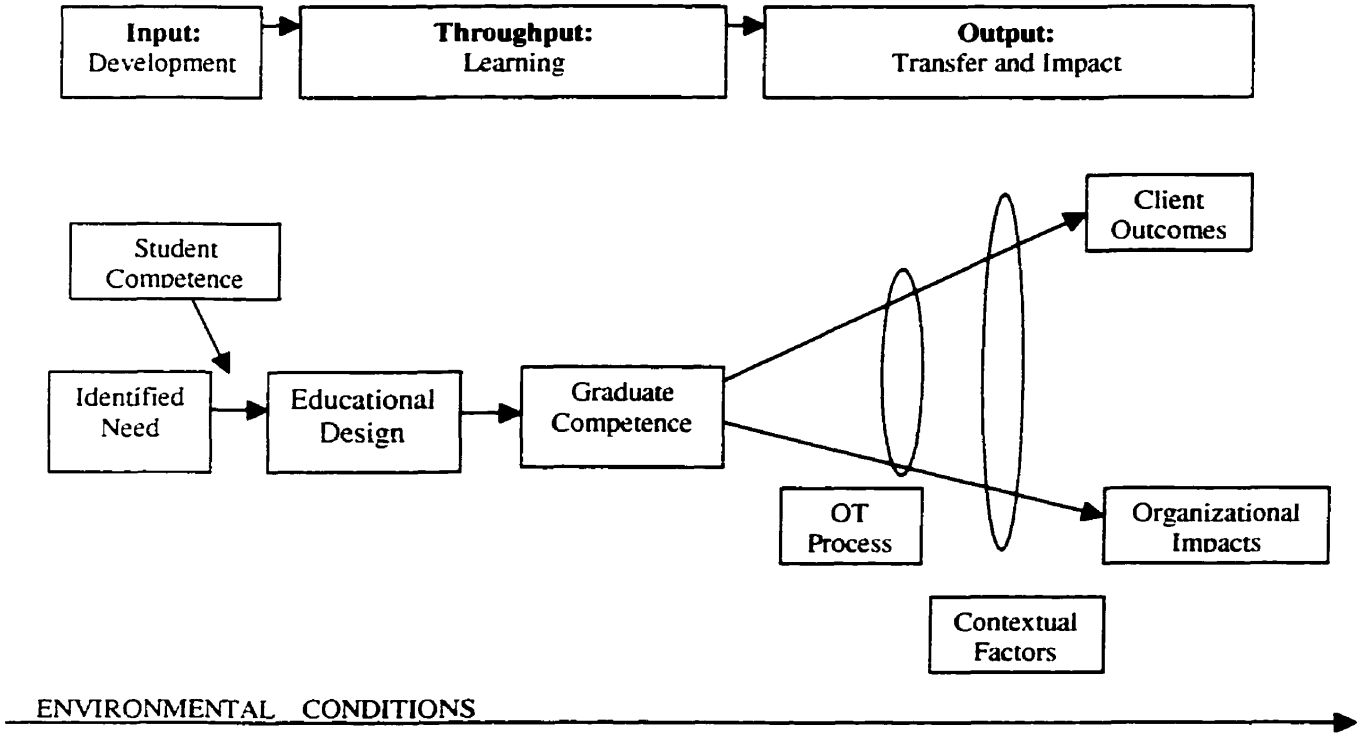

Figure 1. The Educational Accountability Process

graduates go to practice. This dynamic process has been represented by the concentric circles in the model and labeled as the OT process and contextual factors.

Environmental conditions exert influence at every stage of educational development, and is represented at the bottom of the diagram. The context of the learning environment will differ from the work environment where the graduate is expected to perform. Consequently, the unique relationship between context or environmental conditions and educational accountability, throughout the accountability process, becomes a necessary consideration in an evaluation of educational effectiveness.

The usefulness of this model is that the educational accountability process can be used to identify essential features of educational evaluation within each phase (input, throughput and output) of educational development and implementation. The model can assist in identifying both short and long term outcomes and demonstrates the link between the three domains of learning, transfer and impact through a consideration of significant constructs and highlighting specific areas for educational evaluation.

IMPLEMENTATION: RELATIONSHIP TO TRANSFER AND IMPACT

Implementation represents the range of activities which take place from the adoption of a tool, technique or method, to its institutionalization within an organization (Tornatzky & Johnson, 1983). Implementation is shaped by stakeholders who participate in activities aimed at adoption of the program, assembling resources, role change, problem solving and organizational change (Scheirer, 1981).

For the purpose of this study, outcomes which result from the application of occupational therapy with clients were identified as: client outcomes and organizational impacts and reflect both the transfer and impact within educational accountability. Output processes which influence these outcomes were also identified to include: the occupational therapy process and contextual factors. Implementation then refers not only to the transfer of learning by the graduate but to the composite activities which facilitate this. Consequently, transfer of learning and organizational impacts are dependent upon the degree of implementation.

Evaluating Implementation

Evaluation of implementation, although similar to process or formative evaluations, can be distinguished by its focus on innovations, emphasizing the developmental aspects of programs (Leithwood & Montgomery, 1980; Patton, 1978). Implementation evaluation is used to identify problems or conditions supporting program implementation and to assess the extent to which the innovation has been put into practice. The goal is to determine the feasibility of institutionalization of the innovation and to make recommendations which enhance the utility of the new program (Scheirer, 1981). Implementation evaluation is essential where questions of program sustainability arise, such is the case with many international programs which develop as a reaction to crisis or needs identified within a host country (Krefting, 1992).

Implementation occurs within organizations. Consequently, adequate assessment of program implementation requires understanding of the relationship between the innovation and environmental conditions (Patton, 1978). This study evaluates the implementation of occupational therapy in BiH through an examination of the interaction between graduate competence and situational variables, within the workplace.

CHAPTER 3

PROGRAM DESCRIPTION

THE OCCUPATIONAL THERAPY EDUCATIONAL PROGRAM

The Educational Accountability Process was used to describe the Occupational Therapy Educational Program in BiH, based on the constructs identified in the first part of this conceptual framework: identified need; student competence; educational design; and graduate competence. Following this, the output constructs are discussed in terms of their applicability to the present study which sought to evaluate the implementation of occupational therapy in BiH through an analysis of transfer and impact.

Identified Need

Due to the hostilities in BiH, which took place between 1992 and 1995, there was a significant increase in the population of persons with disability. This included not only those injured directly by the conflict, but also the population of disabled created by the absence of effective medical and rehabilitation services. The most common war related injuries causing disability included fractures causing severe movement problems, peripheral nerve injuries, amputations, spinal cord injuries and head injuries (Peat, Edmonds, Boyce, Ballantyne, Smith, & Koros, 1997). Precise information on the number of persons with mental health problems was not available, however, the incidence of post traumatic stress disorder was identified as a profound problem following the war (Peat et al., 1997). Secondary disabilities resulted from the lack of rehabilitation support for persons with disabilities existing prior to the war. This included children with developmental disabilities, adults with physical and mental health problems and the elderly with common impairments related to the aging process (ie: hearing, vision and memory loss, arthritis, hypertension, diabetes, osteoporosis, depression). These at risk groups suffered during the war from lack of services to meet their needs (Peat et al., 1997).

The development of community based rehabilitation (CBR) nationally in BiH, was the result of the initiative between the World Bank and the Ministry of Health for the Federation of BiH. Queen's University provided professional and technical support in the delivery of educational program objectives through its role as the Project Implementation Unit (PIU). The shift from delivering institutional based rehabilitation services to a CBR model provided the impetus for decision makers, namely the PIU guided by the Ministry of Health for the Federation, to ensure an adequate level of care for consumers of rehabilitation services. The overall goal of the War Victims Rehabilitation Project was to implement a national CBR program which would facilitate the re-integration of persons with disabilities into economically productive activities and normal social life (Peat, 1997). The major beneficiaries were identified as the disabled population and their families.

Three primary needs were identified by the PIU: 1) the need for increased participation of persons with disabilities in home and community activities, paid and unpaid work activities and school; 2) long term success of a CBR program would impact on the need to return hospitals and long term care facilities to their tertiary care status; and 3) fundamental to the success of a community based rehabilitation approach was the obligation to address both the health and social needs of persons with physical and/or mental health problems.

Occupational Therapy was identified as an essential feature of CBR. Consequently, the development and implementation of an educational program to establish pioneers in the field of Occupational Therapy was one of the primary objectives of the Project. The scope of Occupational Therapy practice was appealing, as it illustrated the potential for Occupational Therapy practitioners to link the health and social rehabilitation needs of persons with disability. This was necessary for increased participation of the disabled in BiH through the prevention of handicap and the promotion, restoration and maintenance of health through daily occupations of self-care, productivity and leisure. Implementing a pilot program, designed to train Occupational Therapy pioneers, was the strategy adopted by the PIU under guidance from the Ministry of Health for the Federation BiH to fulfill the need of introducing this perspective within the CBR framework.

Student Competence

Six clinicians participated in the Occupational Therapy Educational Program. Invitations were sent by the PIU to the developing CBR Centres and Rehabilitation programs in BiH. Initial criteria for student selection included University training in the field of Physiotherapy, clinical practice greater than two years duration and fluency in the English language. Difficulties finding candidates who fulfilled all of the above criteria led to the actual participants who included two University graduates of Physiotherapy and four graduates of technical high schools of Physiotherapy. All had clinical practice experience of three years or more. Although the students demonstrated varied proficiency with English as a second language, all understood both spoken and written English and were prepared to participate in an educational program taught in their second language.

The rationale for training Physiotherapy clinicians was that they would have the prerequisite knowledge and skills necessary for participation in a condensed program of Occupational Therapy Education. This decision was made by Bosnian partners working with the PIU.

The students ranged in age from 22 - 33 years with a mean age of 26.5 years. The years of experience as physiotherapists, prior to entering this educational program, ranged from 3 - 10 years with a mean of 5.6 years of clinical practice. Two students worked in CBR centres developed during the war. Two worked in emerging/developing CBR centres. One worked in a rehabilitation setting in a hospital. One worked in an inpatient/outpatient rehabilitation clinic. Students came from three different Cantons or regions in the Federation of BiH: one from Mostar Canton, two from Tuzla Canton and three from Sarajevo Canton.

All of the students had varied experiences in the field of rehabilitation and emergency services as volunteers during the war. One student worked as a nurse, assisting with emergency surgery, one participated in emergency medical support for individuals injured in shelling, the remaining students worked as physiotherapists primarily providing services for civilians and soldiers injured during the war. In general, the most recent experience for each of these clinicians was providing interventions at the level of the impairment, under the supervision of a specialist in Physiatry.

Five students were supported financially by the War Victims Rehabilitation Project through the assistance of the Canadian International Development Agency. Financial support for the sixth student came from the World Health Organization. Students from outside the Sarajevo Canton were provided with funding for accommodation, living expenses and transportation. The Occupational Therapy Educational Program was supported by the student's employers who provided them with a leave of absence for the duration of the educational program. The expectation was that the students would return to their work and apply the new knowledge, skills and attitudes gained from the educational program with their clients.

The Occupational Therapy Educational Program did not include formal testing of the students' knowledge and skills upon entry to the program.

Educational Design

The Occupational Therapy Educational Program originated to fulfill the need for trained clinicians to work within a CBR service delivery model with the aim of facilitating the re-integration of persons with physical and/or mental health problems into their homes, schools, work and communities. Developing a pilot program to educate a small group of clinicians was identified as the first step toward pioneering Occupational Therapy services within BiH.

The overall goal of the educational program was to teach participants to apply the Person-Environment-Occupation Model (PEO Model) to increase occupational performance and person-environment fit in clients receiving their services. This was congruent with the identified need of increasing participation for persons with disabilities in their activities of daily living. In order to achieve this goal, a systems approach was used to describe the Occupational Therapy process of service delivery, highlighting the distinct steps taken by Occupational Therapists from initial contact with the client to the termination of services. Therefore, upon completion of the educational program, the graduate was expected to apply the occupational therapy process with their clients.

The educational program was developed based on the framework outlined in the World Federation of Occupational Therapy Minimum Educational Standards for the Education of Occupational Therapists (World Federation of Occupational Therapists, 1990). The program was divided into three units: 1) Introduction to Occupational Therapy Theory; 2) Application of the Occupational Therapy Process; 3) Consolidation of Occupational Therapy Theory and Practice. Specific learning objectives were directly related to the various steps in the occupational therapy process of service delivery to clients. In Unit 1, objectives required students to demonstrate adequate knowledge and comprehension of the occupational therapy process. Educational objectives for Unit 2 demanded that students begin to apply their learning within supervised settings in Canada. Finally, Unit 3 provided an opportunity to integrate both knowledge and practice within the students' own culture and language. Learning objectives were structured such that each unit of the program built upon prior learned skills. Consequently, while the demands on student learning at commencement of the program focused on the acquisition and comprehension of knowledge, by completion, learning objectives required students to demonstrate independence in the application of prior learned knowledge skills and attitudes (Villeneuve et al., 1997).

Diverse teaching methods were used to facilitate the students' ability to apply occupational therapy principles and practices within the culture and language of BiH. Typical client histories, presenting a range of problems found in the context of community care in BiH, were used to facilitate learning. This represented the inclusion of identical elements found in both the educational and work settings. In addition, volunteer clients were used to practice interviewing. These clients presented with common problems found in clients of occupational therapy. During both the Introduction and Application phases, a variety of stimuli were used in the teaching process. Teaching methods identified in the student manual illustrated the variety of teaching strategies utilized in Unit 1 including: group work; lecture; problem based learning with client histories; oral presentations; guest speakers; role playing; debating; written assignments; class activities and poster presentations. During Unit 2, six components were identified in which teaching methods ranged from skill development seminars to

community fieldwork experiences, clinical learning, conference participation, and a consumer tutor program.

The use of the PEO Model throughout each Unit of the program reflected a degree of overlearning present within the design of the teaching methods since graduates were expected to apply the PEO Model to each analysis of client problems. Opportunities for feedback on knowledge, skills and attitudes was also present throughout the program. Feedback was structured in Units 2 and 3 of the program where weekly meetings and reflective journalling were used to ensure that supervision of the students included opportunity to cue the appropriate behavioural responses and encouraged students to reflect and give feedback on their learning process.

Finally, sequencing of the educational program was evident in two respects. First, the progression of learning throughout Unit 1 provided students opportunities to learn sequentially through each step in the occupational therapy process. Second, the educational program itself was organized from Introduction to Application to Consolidation, allowing students to work through successive learning objectives from lower to higher levels of the learning hierarchies.

Graduate Competence (Evaluation of Learning)

As defined in Chapter 2, learning refers to changes in the learners' knowledge, skills and attitudes that result from the educational program (Vella et al., 1998). Evaluating graduate competence, based on the educational objectives is essential to ensure educational accountability to all stakeholders. At this level, evaluation of learning, the primary responsibility of the educational program is to the student.

Evaluation of student learning took place within each Unit of the Educational Program. In Unit I, evaluation was divided into: participation which included in class participation and regular oral presentations; two assignments; and three written examinations. Successful completion of Unit I required students to achieve a minimum of 65% or greater, allowing them to proceed to Unit II of the program.

Throughout Unit II, methods of evaluation were on a pass/fail basis and included: completion of a learning contract; self-reflective journalling; four interviews recorded on videotape; completion of two

self-directed learning modules: one client presentation; and a Student Performance Report completed on each of two community fieldwork experiences in collaboration with the student and their supervisor. Again, participation in Unit III of the program was dependent upon successful passing of Unit II. Supervisors for fieldwork experiences consisted of an on-site supervisor and an educator involved directly in the educational program. These educators also continued supervising students in fieldwork education in Unit III of the program.

Evaluation in Unit III was on a pass/fail basis and included: instructor evaluation of performance during Community Fieldwork Experiences; client presentations; individual and team assignments; and a Student Performance Report completed in collaboration with the student and their supervisor. Learning contracts in Unit III were considered optional methods of evaluation to be used at the discretion of the student.

The above methods reflect the evaluation within each of the cognitive, affective and psychomotor domains of learning. For example, self-reflective journalling and the self-directed learning modules required students to reflect on the affective components of their learning, providing the educators with an indication of the attainment of learning objectives within the affective domain. Videotaped interviews and community fieldwork experiences provided students with opportunities to apply their learning in practice and demonstrated learning within the psychomotor domain. Examinations and client presentations were examples of evaluation of learning within the cognitive domain.

All six students received certificates of completion of the Occupational Therapy Educational Program, based on their fulfilling the program objectives as designed on the requirements for pioneer programs outlined in the World Federation of Occupational Therapy Minimum Standards for the Education of Occupational Therapists (World Federation of Occupational Therapists, 1990). This study assumes competence of all six graduates as gained through the Occupational Therapy Educational design.

Transfer and Impact of Learning

With graduate competence assumed, the output component of the educational accountability process provided the basis for an implementation evaluation of the Occupational Therapy Educational Program. Implementation incorporates both the transfer and impact of learning within the workplace of the graduates, providing insight into the remaining constructs in the Model of Educational Accountability presented in Chapter 2. These constructs include the results of graduate application of learning within the workplace (client outcomes and organizational impact) and the variables influencing these outcomes (occupational therapy process and contextual factors).

CHAPTER 4

METHODOLOGY

This study employed quantitative and qualitative methods of inquiry to explore the implementation of Occupational Therapy, by graduates of the Occupational Therapy Educational Program in BiH. This study utilized the Model of Educational Accountability, presented in Chapter 2, to explore the degree of implementation of Occupational Therapy in BiH. The objectives of this study were:

1. To describe the occupational therapy process as implemented by graduates of the Occupational Therapy Educational Program, in terms of: referral; assessment; intervention; and discharge.
2. To identify contextual factors within the workplace of the graduates, which influenced the implementation of occupational therapy in BiH.
3. To describe client outcomes following a period of occupational therapy intervention provided by graduates of the Occupational Therapy Educational Program.
4. To describe organizational impacts resulting from the work of the graduates of the Occupational Therapy Educational Program.

DESIGN

Qualitative inquiry was used to collect information regarding the implementation of occupational therapy from the perspective of two groups of stakeholders: 1) the graduates; and 2) their supervisors. Group interview with the graduates and key informant interviews with each of their supervisors were the methods used to collect non-numeric data.

Quantitative methods were utilized to obtain data on client outcomes following occupational therapy intervention. This study employed a within-groups design, involving a convenience sample of clients receiving services from graduates of the Occupational Therapy Educational Program. Graduates collected data from pretest and posttest evaluations of occupational performance and person-environment fit for each client recruited to the study.

SAMPLE

The sample consisted of three groups: 1) six graduates: 2) six supervisors and one advisor; 3) fourteen clients. Each group is described below.

Graduates

All six graduates of the Occupational Therapy Educational Program were recruited to participate in the study and all six initially agreed. An information session was held in October, 1997 to provide details of their role in the study which included the collection of data from their work with clients and participation in a focus group. Graduates were considered to be primary stakeholders since they were responsible for the direct application of occupational therapy with clients.

Supervisors

Six supervisors and one advisor were recruited to participate in an individual interview, as key informants to this study. Each supervisor held direct responsibility for the employment and supervision of one graduate of the Occupational Therapy Educational Program. The advisor was a co-supervisor of one graduate and also an advisor to the Project Implementation Unit, working on behalf of the Ministry of Health for BiH on the development of Occupational Therapy services. Supervisors were considered to be primary stakeholders with expert information on the implementation of Occupational Therapy in BiH since they were responsible for decision making regarding the adoption and implementation of Occupational Therapy within the workplace.

Clients

As recipients of occupational therapy services provided by graduates of the Occupational Therapy Educational Program, clients were also considered to be stakeholders in the implementation of occupational therapy. All clients were referred to occupational therapy by clinicians or physiatrists working in CBR and rehabilitation centres in BiH. Inclusion criteria required that clients be over 18 years of age in order to facilitate the administration of the same measurement tools with the entire sample. Clients referred for occupational therapy between November 1, 1997 and May 30, 1998 were included if they presented with two or more problems in occupational performance as identified by the Canadian

Occupational Performance Measure (COPM) 2nd Edition (Law, Baptiste, Carswell, McColl, Polatajko, & Pollock, 1994). This criterion ensured that clients included in the study were in fact appropriate for occupational therapy intervention. Clients were invited to participate by the graduate and confirmed their participation by signing a consent form (see Appendix A). A total of 20 clients were recruited to the study. Six of these individuals dropped out prior to completion of data collection, leaving a sample of 14 clients. Clients ranged in age from 23 – 75 years, with a mean age of 44 years. Nine of the clients were male and five were female.

DATA COLLECTION

Data collection was guided by three measures: 1) a semi-structured interview guide, developed to collect interview data from graduates and their supervisors; 2) the COPM; and 3) the revised instrument to measure P-E Fit. The COPM and P-E Fit were used to collect quantitative information on client outcomes. They were chosen based on their congruence with the PEO Model and their ability to represent the client outcomes achieved in occupational therapy: occupational performance and person-environment fit.

Interview Guide

A semi-structured interview guide was developed which addressed the implementation of Occupational Therapy in BiH (Objectives 1 through 4) (see Appendix B). An interview guide helps researchers to make interviewing across a number of different people more systematic and comprehensive, delimiting issues, while maintaining enough flexibility to explore and probe areas to elucidate a particular subject (Patton, 1982). The interview guide requested both groups of respondents (therapists & supervisors) to describe the occupational therapy process, as implemented by graduates with clients. Questions requested respondents to comment on client referral, assessment, and intervention. In addition, questions asked respondents to identify any challenges they faced within their organization while implementing occupational therapy with clients and to describe why the challenges exist.

Occupational Performance

Changes in occupational performance were measured using the Canadian Occupational Performance Measure (COPM) 2nd Edition (Law et al., 1994). The COPM is an internationally known measure of occupational performance which results in two scores (performance in occupation and satisfaction with occupation). In this semi-structured interview, the client identifies problems in the performance of their daily activities. Clients are then asked to rate their present performance and satisfaction with identified activities on a 10 point scale. A mean score for performance and satisfaction is calculated from the identified activities.

Test-retest reliability for the COPM was found to be 0.63 for performance and 0.84 for satisfaction. Validity has been established through studies examining whether client scores change significantly over time during occupational therapy and determining if these changes are similar to overall changes in function as perceived by others. Results of these studies indicate that the COPM is responsive to changes in global function as perceived by clients, families and therapists (Law et al., 1994).

Person-Environment Fit

Person-environment fit was measured using Coulton's (1979) Revised Instrument to Measure Person-Environment Fit (P-E Fit). The P-E Fit is a multidimensional instrument with 13 subscales, each measuring a separate dimension of person-environment fit. The P-E Fit was chosen because it incorporates the social, physical, cultural, economic and institutional attributes of the environment, which is congruent with the theoretical framework of the PEO Model.

The P-E Fit is a self-administered questionnaire which utilizes a Likert type scoring format in which a low score is an indication of good fit and a high score is an indication of poor fit. For each scale, the client is asked to judge the degree to which he or she is able to meet environmental demands, receive sufficient resources or have adequate opportunities for participation (Coulton, 1979). The resulting scores give information about the degree of fit between the client and the demands of the environment. For example, scores indicate how often the client perceives to meet the demands of his or her physical environment or the amount of acceptance the client feels in his or her social environment.

Reliability for each scale ranged between 0.61 and 0.94, with 12 of the 13 scales demonstrating appropriate reliability. The P-E Fit has also demonstrated beginning evidence of construct validity. At the permission of the author, the format of the P-E Fit was revised to increase legibility and facilitate ease of administration. The revised P-E Fit was reorganized to enable clients to answer all questions by checking their responses in a box next to each statement.

PROCEDURES

The research, which took place in the Federation of Bosnia and Herzegovina, was conducted in three Cantons within the Federation including Sarajevo, Tuzla, and Mostar. These Cantons represented the geographic regions where graduates returned to work following completion of the Occupational Therapy Educational Program. Quantitative data collection took place in CBR centres, clients' homes, and the communities where the graduates work. Interviews were conducted in CBR centres, rehabilitation clinics, offices and classrooms, according to the respondents' preference and feasibility for travel.

Data collection took place between November 1, 1997 and May 30, 1998. The COPM and P-E Fit were administered to clients by the graduates of the Occupational Therapy Educational Program. These individuals had past training with interviewing and using questionnaires and were familiar with the COPM. Training in the administration of the P-E Fit was provided by the researcher during a three hour training session which included instructions for data collection, client consent to participation and provision of the data collection records.

Both the COPM and P-E Fit were translated by a competent, independent translator and examined by three additional translators, who confirmed accuracy of interpretation. The COPM was utilized by graduates throughout their educational program providing them with experience administering the tool in both English and Bosnian. The semi-structured nature of the COPM allows the tool to be easily adapted to assess individual problems in the global areas of self-care, productivity and leisure, ensuring greater

cross-cultural transferability. As an internationally known measure of occupational performance, the COPM has been translated into over 10 different languages for use within other cultures.

To ensure cultural applicability of the P-E Fit, the translated tool was pilot tested by administering it to four Bosnian individuals, competent in both Bosnian and English. This allowed for an assessment of the time required for administration of the questionnaire and provided opportunity for feedback to this researcher on the accuracy of interpretation. The time to complete the questionnaire ranged from 20 – 40 minutes for the four individuals on whom it was pilot tested. As a part of the training session, the questionnaire was also administered to each of the graduates who provided their feedback on the tool. During the training session, graduates completed the questionnaire within 30 minutes. Feedback from the four individuals on whom the P-E Fit was pilot tested and the graduates who completed the tool as part of the training session, indicated that the P-E Fit was easy to understand. Participants reported that they were able to answer all questions without requiring further clarification of meaning however felt that it would likely take their clients longer to complete since the use of such detailed questionnaires is not typically a part of the Bosnian culture. Overall the translated version of the P-E Fit appeared to be acceptable for use within this study.

Graduates administered the assessment tools at pretest and posttest with each client who agreed to participation in the study. Data collection took place within the context of the graduates' application of the occupational therapy process with clients, the same process used with all occupational therapy clients.

Interview data was collected between April 1 and May 30, 1998. All interviews were conducted by this researcher. The group interview, which lasted approximately two hours, was conducted in English since all participants demonstrated a good command of English as a second language and all were familiar with speaking with this researcher in English. Of the seven individual interviews with key informants, two were conducted in English as these respondents were comfortable using English as a second language and preferred this to interpretation. The remaining interviews were conducted with the assistance of a competent independent translator. Prior to conducting these interviews, the interview questions were translated verbatim by same translator involved in the interviews in order to ensure

accuracy of interpretation at the time of the actual interviews. Key informant interviews were approximately 40 minutes in length, with time varying slightly to accommodate for interpretation.

All interviews took place in BiH, at a time and location that was convenient for the respondents. Key informants who did not speak English were contacted by the researcher with the assistance of a translator.

ANALYSIS

Numeric data was analyzed for objective 3 only, while non-numeric data was analyzed for objectives 1 through 4. Data analysis is described by objective in the following section.

Occupational Therapy Process: Objective 1

Transcribed data from the group interview with the graduates was analyzed in terms of the occupational therapy process as reported by this group of stakeholders. Organization of the data was facilitated by QSR NUD*IST (Gahan & Hannibal, 1998) and analysis proceeded with manual coding. First level codes were formulated through inductive analysis generated through the identification of themes emerging from the data itself. For example, graduates' experiences of overwhelming responsibility for the implementation of occupational therapy were grouped under the descriptive code, "it's up to me". These experiences were further differentiated into 'opportunities' and 'limitations', which arose from the graduates' new role. These codes were organized through an indexing system in QSR NUD*IST which allowed data to be reduced for display (see Appendix C, objective 1). Verification was completed to ensure distinct categories (external heterogeneity). Second level codes were developed through deductive analysis, recoding the data according to the steps in the occupational therapy process which include: referral; assessment; intervention; and discharge. These categories were supplemented and refined through a process of moving between the codes and the documents (Huberman & Miles, 1994). Descriptive codes came to include factors identified by the respondents and were differentiated in terms of actions and results. Data analysis provided a detailed description of the occupational therapy process as implemented in BiH by graduates of the Occupational Therapy Educational Program.

Contextual Factors: Objective 2

Data for objective 2 consisted of transcribed data from both the group interview with graduates and individual interviews with their supervisors. First level analysis of the focus group data was used from Objective 1. A separate analysis was completed using the data from key informant interviews with the supervisors. In this instance, each interview was successively added to the inductive analysis. This resulted in an index system of codes which emerged directly from the key informant interviews. For example, supervisors described a common 'vision of occupational therapy' and further identified 'new roles' for which the graduate would hold responsibility as an occupational therapist. Codes came to include the supervisors perceptions of the occupational therapists responsibilities, needs for the continued implementation of occupational therapy, and problems arising from the initial phases of implementation (see Appendix C, objective 2). Verification was completed on this set of data through a process of moving between the codes and the documents. Second level codes were obtained through a cross-source analysis of the group interview and key informant data. Analysis proceeded through deduction, using Scheirer's (1981) analytical framework for the study of social program implementation. Initial codes, developed inductively from the specific experiences of graduates and their supervisors facilitated comparisons between the two groups of respondents. Further analysis proceeded by grouping experiences within the overall framework of macro, intermediate and micro-level factors as identified by Scheirer (see Appendix C, objective 2).

Client Outcomes: Objective 3

Numerical data collected on the COPM and P-E Fit administered to clients at pretest and posttest intervals was analyzed in order to describe client outcomes in terms of occupational performance and person-environment fit following occupational therapy intervention. Non-numeric data from interviews with the graduates and their supervisors was also analyzed to identify significant client outcomes as perceived by these two groups of stakeholders.

COPM

Mean change scores in performance and satisfaction were tested separately for significance using a two-tailed t-test on the sample of 14 clients. Client outcomes on the COPM were also analyzed by activity to identify the frequency of client identified activities in each performance area of self-care, productivity and leisure. Each of these performance areas was further analyzed in terms of frequency of change or no improvement.

P-E Fit

The mean difference was analyzed for the overall score on the P-E Fit. One client did not complete the P-E Fit and hence analysis took place on a sample of 13 clients. Following initial analysis, each of the subscales were analyzed separately and tested individually for significance.

Graduate and Supervisor Report

Data consisted of transcripts of seven individual interviews and one group interview. Once again, organization of the data was facilitated by QSR NUD*IST (Gahan & Hannibal, 1998) and analysis proceeded with manual coding. First level codes were initially formulated to reflect the two outcomes of interest: occupational performance and person-environment fit. As transcribed data was coded, these initial categories were supplemented and refined through a process of moving between the codes and the documents (Gahan & Hannibal, 1998). Descriptive codes came to include factors identified by the respondents and were developed using words which came directly from them. For example client outcomes in occupational performance were described through the respondents' examples of client improvement with self-care activities. These examples were grouped together and subsequently differentiated into two categories (increased independence and increased awareness). Similarly, respondents described client outcomes in person-environment fit through a discussion of the occupational therapy role and environmental limitations. Consequently, these descriptive codes were utilized to describe client outcomes in person-environment fit from the perspective of the respondents (see Appendix C, objective 3).

Organizational Impacts: Objective 4

Data for objective 4 consisted of transcripts of the 7 individual interviews with the supervisors. Again, organization of the data was facilitated by QSR NUD*IST (Gahan & Hannibal, 1998) and analysis proceeded with manual coding. Themes generated from this group of respondents regarding organizational changes were coded and subsequently re-coded as each transcribed interview was added to the analysis. An initial theme of change in service delivery was identified and further differentiated into three themes relating to changes in service delivery. These included: home visiting; psychosocial support; frequency and duration of therapy sessions (see Appendix C, objective 4). Verification took place in the final stages of analysis as each theme was analyzed in terms of the percentage of retrieval by document. The first theme, home visiting was identified in 7 of 7 documents. Psychosocial support was identified in 6 of 7 documents and frequency and duration of sessions was identified in 7 of 7 documents.

ESTABLISHING TRUSTWORTHINESS

Four criteria have been proposed to ensure trustworthiness in qualitative inquiry. These criteria include: 1) credibility; 2) transferrability; 3) dependability; 4) confirmability (Guba & Lincoln, 1994). The following describes how these criteria were utilized to ensure trustworthiness in data collection and analysis for this present study.

Credibility

The researcher engaged with respondents for 7 months during data collection. Data collection methods and data sources were triangulated, such that cross-case analysis could be utilized in data analysis. Interview techniques were made consistent through the use of an interview guide. Process, categories, interpretations and conclusions were checked by educational supervisors with experience in qualitative inquiry and peers with experience in the region.

Transferability

As with any evaluation study, this implementation evaluation is specific to the program under study and hence conclusions are directly applicable to the experience of implementing occupational therapy in BiH. An in-depth description of the program and procedures is provided for the reader.

Dependability

An in-depth description of research methods is provided. Data collection methods and sources were triangluated. During analysis, first level codes were developed through inductive analysis utilizing data that came directly from respondents. This allowed for increased dependability when proceeding to second level coding, which was deductive in nature. Bracketing was used as a technique to decrease the influence of internal investigator bias on data collection and analysis. Experiences and opinions held by this researcher, as one of the program developers, were not included in the process of data collection or analysis. Bracketing of this experience was used to ensure trustworthiness of data collected and facilitated unbiased analysis.

Confirmability

Again, triangulation of data collection methods and sources was followed. Cross-case analysis allowed for confirmation of emerging themes. Clarification took place throughout group and key informant interviews to ensure accuracy of meaning by respondents. The use of internal investigation may have aided in the process of clarification during interviews since the researcher was highly familiar with the program, the organizations employing graduates and the goals of developing both CBR and occupational therapy in BiH. Since this study was an exploration of implementation and not an outcome evaluation, internal investigation was chosen as an appropriate method for understanding the full meaning of the data collected.

Verification was also used to ensure external heterogeneity through a process of inductive data analysis followed by a deductive approach for testing and verifying data (Huberman & Miles, 1994). The research process itself was under academic supervision.

ETHICS

Bosnian partners were informed of the research study and through verbal request, support was elicited for the study. All individuals were provided with opportunity to ask questions regarding the purpose and use of the study. The research proposal, which included ethics approval from Queen's University, was provided for their review. The researcher, familiar with all program participants, contacted both graduates and their supervisors to request participation in the study. Both graduates and/or their supervisors introduced the pilot study to their clients for the purpose of eliciting their participation. Informed consent was obtained for all clients participating in the study (see Appendix A). The consent form was translated by a competent independent translator and included a contact person from BiH should any participant have questions they wished to address to a local person in their native language. Client names were removed from data collected during the pilot study to maintain anonymity of participants.

Interview respondents were contacted either by telephone or in person to inform them of the study and to request their participation. Participation in the interviews and agreement to audiotaping was accepted as implied consent. An interview guide, which received ethics approval by Queen's University, provided the framework for each interview. Transcripts were coded for the interviewee's name. The audiotapes along with the master file of names and codes were kept in a secure, separate location.

The researcher was required to exhibit sensitivity to the cross-cultural element of the research. Previous experience of living and working in the region, ongoing interactions with local people and common sense guided the maintenance of appropriate behaviour.

CHAPTER 5

RESULTS: OCCUPATIONAL THERAPY PROCESS AND CONTEXTUAL FACTORS

In this chapter, results of the data collection are presented. At the outset, there is a description of the occupational therapy process used by graduates to implement occupational therapy in BiH. Following this, contextual factors within the workplace of the graduates are presented within an analytical framework, which allows for the identification of macro, meso and micro-level variables found to exert influence over the implementation of occupational therapy from the perspective of the graduates and their supervisors. The following chapter is then devoted to assessing the impact of the implementation of occupational therapy in BiH in terms of client outcomes and organizational impacts.

OCCUPATIONAL THERAPY PROCESS (Objective 1)

Interview data, generated from focus group interviews with graduates, was analyzed to describe the activities which took place during the implementation of occupational therapy from the perspective of the graduates. A systems approach, which describes steps in the application of occupational therapy with clients, was used to analyze the occupational therapy process as implemented by graduates of the Occupational Therapy Educational Program in BiH. Graduates' experiences are presented in terms of: referral; assessment; intervention; and discharge. Both the activities of the graduates and client reactions to the occupational therapy process are presented. Referral implies all activities related to obtaining client referral and determining eligibility for occupational therapy. Assessment refers to data collection, problem identification, analysis and program planning based on evaluation results. Intervention activities include the implementation of the therapeutic plan in order to develop, maintain or restore function. It also includes education and prevention activities. Discharge, the final stage in the process requires a re-evaluation of client progress and the formal termination of services (Canadian Association of Occupational Therapists, 1991).

Referral

Graduates received referrals through the traditional process used by their supervisors to refer clients for physiotherapy treatment. Referrals prescribed only physiotherapy interventions to be carried out by the graduates. However, graduates reported that there was an unwritten assumption that they would also provide occupational therapy services as deemed appropriate by them. With these referrals, graduates screened clients for occupational performance problems, using the COPM to determine the need for occupational therapy. Graduates reported that in many cases, these clients were not appropriate for occupational therapy, describing their challenge 'to find real clients for occupational therapy treatment'.

> "...because anytime [doctor] refers some clients to me, I have to say there isn't any indication for occupational therapy."

Consequently, they found themselves taking increased time away from direct client care, in order to find appropriate individuals for whom they could provide service. They did this by looking through client intake records within their facilities in order to identify diagnostic groups which may require occupational therapy intervention and by retrieving past charts of clients who they recalled from prior contacts with their organization. Graduates then approached these individuals to introduce the idea of participating in occupational therapy. The process was reportedly frustrating and time consuming since they were limited to clients who had been referred to their organization specifically for physiotherapy. Graduates reported similar experiences:

> "Everyone at this centre has a referral for physiotherapy, because doctors in hospitals or physicians in primary health care give referrals for those [clients] to come for physiotherapy, but not for occupational therapy. Everyone that came into our clinics was there with a referral for physiotherapy."

> "Most of the clients I'm seeing now are not clients for occupational therapy. They have problems with low back pain, cervical pain and most of the clients are those type of clients."

Graduates felt they needed more support from their supervisors in obtaining referrals for occupational therapy since they were not used to making referral decisions. However, being the only ones with an understanding of occupational therapy, the graduates were required to take this on.

> "Actually I talked to [supervisor] and he said it was up to me to decide who to choose, to complete the forms, to decide on the clients on my own... it's a challenge because you are deciding, you know, it's up to you. That's a challenge for me."

Graduates dealt with this challenge in different ways. One reported presenting a seminar about occupational therapy to familiarize other doctors with occupational therapy. Another graduate reported that she started to provide education for the doctors at her facility. She found it difficult to explain what she could do with clients and reported that she was attempting to show them by having them observe her work during sessions with clients. Another facility organized a workshop to familiarize all employees with occupational therapy including physiotherapists, nurses and other doctors. In other instances, supervisors directed graduates to people and services where they would be able to find appropriate clients.

> "[Supervisor] said ok, you have the MS Society and home visits that you are doing, you have the lady with the stroke. So he gave me some directions and he let me choose the clients."

Once the clients were found, graduates had the responsibility of providing both physiotherapy treatment as prescribed by their supervisor and initiating the occupational therapy process. Constraints on the graduates' time were compounded by the fact that they needed additional time to explain occupational therapy to their clients.

> "First visit cannot be less than an hour because first half hour I have to say who I am, from where I come, why I'm there, what I can do or what I can offer. You have to spend that much time until the moment when the person will say, 'yeah, I understand, I think I understand..."

In summary, great difficulties were encountered in the referral of clients for occupational therapy services. Time factors and a lack of decision-making experience influenced the graduates' ability to obtain appropriate referrals for occupational therapy service.

Assessment

Graduates reported on their process of gaining client trust because initial reactions to the use of interviews and questionnaires were quite negative. Respondents noted that clients were not used to filling out forms and participating in these types of interviews, so it took time to explain their use.

Clients were particularly concerned with the documentation of answers on the P-E Fit since they were suspicious of the use to which their answers could be put in the future. Graduates reported that since the war, people feel more vulnerable with the documentation of information.

> "Some people think you can use those papers or forms for something else and that it could be just your own interest, not their interest. So it needs time to explain to people and when they see that it's working and that you are helping them, then they participate with free will, but until that time it is hard."

They described a process of persuading clients that they could be helpful.

> "We need a real way to persuade [clients] that we are doing something worthwhile for them. That we are not just sitting there listening to their stories and asking them questions. That after those questions we are going to help them."

Graduates found clients very agreeable to initial assessments, involving the administration of the COPM. Clients reportedly enjoyed their conversations with the graduates because they felt that the graduate was concerned with 'real life problems'. Graduates found positive reinforcement in the fact that clients accepted their client-centred approach. Clients had difficulty with self-scoring required on this tool. Graduates used the number cards to have clients rate the importance of identified activities and then to score their performance and satisfaction with each problem activity. While clients would quickly rate the importance, they had difficulty rating their own performance and satisfaction and wanted direction from the graduates.

> "When they can't find exactly what it is that they think, they usually say, 'it's between 5 and 6 and you can make a decision which number to choose'."

> "...sometimes they say, 'o' come on, just put the number' and I say, 'I'm not marking myself'."

The P-E Fit questionnaire was left with clients to be completed prior to the next visit. Graduates experienced decreased compliance with this request reporting that clients found the form too long and the questions very frustrating. They explained that clients did not see the purpose of the questionnaire.

> "For example, you see this sentence, 'I have nice clothes', it is sometimes frustrating for them, 'I have a nice car, I am able to get a nice car, to be smart, to have a job, to be in marriage, to have children, to be strong, to be funny'. So these sorts of questions are really, really funny and it's hard for them and frustrating."

In an effort to increase compliance, graduates completed the P-E Fit together with their clients. They found that when they were there to ask the questions and record responses on the form, clients were more agreeable.

> "When I leave that paper with the client, when I see them again they ask me, 'What is it? I don't understand the questions!', but when I do the same paper with them, when I ask them, they answer me and they participate."

Graduates reported similar experiences noting that 'it's easier when you explain the question'.

By completing the questionnaire with their clients, graduates reported recognizing that some questions were not culturally appropriate for BiH.

> "What I noticed is that there are some questions on the P-E Fit that are not appropriate for this country, because of the way of thinking and the customs and habits people have. When you are asking about free time, about hobbies and other things, for most of the clients it's a funny thing to ask at all and if you ask them about travelling or other things in their free time, they will just tell you, 'I don't have money for that, I haven't traveled all my life, you can't expect me to travel now', or something like that..."

Graduates found the COPM to be a useful tool for planning interventions since it allowed them to be client-centred, ensuring that they focus on client-identified problem areas. Little was reported on the use of the P-E Fit for analyzing assessment results, however, one graduate noted that he was able to glean more information from the process of doing the questionnaire, than from the actual responses.

In summary, the assessment phase was described as a process of gaining client trust and acceptance of occupational therapy evaluation activities. Clients responded well to the opportunity to share real life difficulties with the graduates through their initial conversations. Graduates were faced with challenges when requesting clients to score themselves on the COPM and with issues of client compliance on the P-E Fit, since both the documentation and the kinds of questions were unfamiliar to their clients. Implementing the assessment process provided graduates with insights into the cultural appropriateness of the kinds of questions they were asking. This seemed to encourage reflection on the usefulness of the tools with their clients.

Intervention

All but one graduate provided occupational therapy services to clients in the home setting. Interventions were described as a combining of occupational therapy and physiotherapy skills since they were responsible to their supervisors for prescribed physiotherapy treatments. Travelling to clients' homes and combining physiotherapy and occupational therapy goals found the graduates 'squeezing time' to meet occupational therapy goals.

> "For example, if I want to work with a client, I can't offer so much time because I'm working as a physio. So if I can squeeze some time to spend a little bit more, or I could work in my free time and if I have some other obligation that means that I just don't have the time."

Services provided to clients included: education and advice; simple adaptations for bathing and feeding; and compensatory techniques for completing activities of dressing and daily hygiene. Simple adaptations such as the provision of adapted utensils and a bath chair or compensatory techniques such as learning new ways of dressing an effected extremity were activities that clients really appreciated because they assisted with real life challenges.

> "I was surprised how many people with rheumatoid arthritis were so interested in my assistive devices for spoon, fork, knife."

> "For example, one lady, she can't bathe herself in the bathroom, and I taught her how she could [bathe] in bed."

Graduates provided education and advice regarding environmental barriers and accessibility solutions. They recommended equipment to help with self-care tasks and provided information about how to obtain community resources such as war-veterans pension, wheelchairs or medications. However, the lack of finances to support client goals and the absence of equipment to provide to clients left the graduates feeling as though they could not complete the process with their clients.

> "So what she really needed in the bathroom were grab bars on the wall, but we couldn't make any, so we put a little chair in the bathtub, but she didn't have enough stability and she really needed something to help her, so it's always going around in a circle."

> "I mentioned that young girl, her goal is to go out, but she lives on the 5th floor and the elevator doesn't work. I couldn't help her with the stairs or with the elevator and she stayed home... something stays that you can't complete. It is a real pity because you know how much you can offer but the circumstances are like that."

Client motivation was an additional problem, which made the graduates feel as though they were 'going in circles'. Clients who were depressed were not interested in participating in occupational therapy, which provided increased challenges for the graduates.

> "I have a problem with one person who lacks motivation and it's so hard to work with that person. I couldn't find a way to help that person. I tried to talk, but with her I'm always in the same circle. I can't go out from it."

Despite their difficulties, there were some instances in which graduates felt that their interventions were making a difference. Respondents cited times where their client's mood improved because they were able to do an activity they had not been able to do before. Clients enjoyed the independence that small changes afforded them in their daily activities. Some concrete changes meant a great deal for clients such as when one graduate obtained a donated wheelchair for one of his clients. Graduates found their doubts subside when clients told them that they were feeling different than before and that they liked the way the graduate worked with them.

In summary, the intervention process presented challenges to the graduates in finding time to address both occupational therapy and physiotherapy goals. While service ranged from education and advice to recommendations for environmental adaptations, graduates felt that they were unable to complete the process with their clients due to the lack of finances and equipment to support treatment goals. Despite this, graduates noticed positive client reactions to this stage in the process. Their clients' appreciation of the small changes and ideas provided through occupational therapy, served to reinforce the graduates' participation in their new role.

Discharge

Re-assessment of client performance was completed using the COPM and P-E Fit measures prior to discharge. While completing the measurement tools was less of a problem at re-assessment, graduates were once again challenged by the self-scoring required of clients. Graduates found their clients wanting to make them feel like the process was a success. Respondents reported that clients did not want to let them down and for that reason tried to make the graduates think that everything is fine.

"But what they think, when they work with you on this, is that they are doing you a favor, they are doing this for you and they don't want to spoil anything for you, so they will try to be perfect."

Clients often asked the graduate what their scores were on the initial assessment, wanting to ensure that there was improvement at re-evaluation. This led graduates to question the reliability of the scores which clients provided. Consequently, graduates were doubtful regarding the usefulness of the measures for detecting actual change, which occurred in their clients as a result of occupational therapy intervention.

"Sometimes I was wondering, when I was comparing the two marks, was the information they were giving me correct... it made me wonder if they were really thinking about it."

In summary, during the discharge phase, graduates began to question the usefulness of the measurement tools for detecting change in their clients. While the graduates' reports suggest that there were successes in the development of rapport with their clients, this rapport influenced the extent to which client responses could be interpreted reliably.

CONTEXTUAL FACTORS INFLUENCING IMPLEMENTATION (Objective 2)

Using Scheirer's (1981) analytical framework for the study of social program implementation, contextual factors are presented within three components of implementation: macro, micro, and meso-level variables. Analysis of data from key informant interviews with the supervisors and the group interview with graduates led to the identification of factors influencing the implementation of occupational therapy at each of the macro and micro-levels, respectively. Cross-source analysis of supervisor and graduate responses led to the identification of intermediate factors as a result of the convergence of the data provided by the graduates and their supervisors. The macro-level variables are presented first, followed by micro-level factors and finally meso-level components found to influence implementation.

Macro-Level Variables

As discussed in Chapter 2, macro-level components were identified using Scheirer's definition of macro-level proceses which focus on the organizations or implementing systems as a whole and refers to decisions reached by authorities that direct employees toward specific actions. These influences form the context and procedures for operation of a program, setting the limits for intermediate and individual-level processes to function (Scheirer, 1981). Macro-level processes influencing the implementation of occupational therapy in BiH are presented in terms of: Decision and Control Processes: Obtaining Resources: and Relations with the Environment.

Decision and Control Processes

Decision processes at the macro-level concern the determination to adopt an innovation within the organization and refer to the way that organizational decisions are made, including the degree of control given to subordinates in the process. Within each organization employing graduates of the Occupational Therapy Educational Program, supervisors held direct responsibility for the decision to adopt occupational therapy, following the graduates' return to work.

Respondents described their organizations as 'in a phase of getting [occupational therapy] to work'. They referred to the implementation of occupational therapy as a 'pilot project' since occupational therapy is new to BiH and the small number of graduates means that services are thinly dispersed throughout the country. The existence of this newly trained group of graduates was perceived by supervisors as a positive factor for the development of CBR services in BiH since the graduates received training in the impact of the environment on disability. Supervisors felt that this new knowledge, not previously available to doctors or physiotherapists in their earlier work in Yugoslavia, would fill a gap in the delivery of community based interventions. By providing home visiting for clients and addressing environmental problems, the skills of the occupational therapist were seen as providing necessary links between the medical and social rehabilitation for persons with disabilities.

> "We are moving ourselves in an area that is not only medical... we have structures of medical services... but when we went to this social part, especially occupational part of rehabilitation, we need the help of society very much."

Despite the perceived importance of the role of occupational therapy within their organizations, supervisors frequently described the adoption of occupational therapy as being dependent upon the degree of success attained through this trial implementation. Respondents described their expectations for graduates 'to choose clients where they were sure to make good progress in occupational therapy' in order to demonstrate the results of their work. In some instances the trial phase was time limited and in others, supervisors relied on graduate initiative to try occupational therapy with clients referred to the organization.

> "I gave [graduate] a period of half a year, this period has not passed yet. After that [graduate] has to present to see what the results are. Then we are going to make a plan of how to use occupational therapy."

> "[graduate] can work as an occupational therapist whenever we find someone that needs services... [graduate] will get involved..."

In this way, graduates were in control of the prospective development of occupational therapy. If they could demonstrate successes, then they would experience greater opportunities for sharing in decision-making processes with their superiors.

> "...[occupational therapist] have to fight for this. That is a strong fight and a long fight...which must have results, and these results will be stairs through which they will go up to become a part of decision-making."

Supervisors relied on graduates to take initiative for the implementation of occupational therapy services. They reported that making something of occupational therapy depended upon how engaged the graduates were going to be in their activities.

> "It depends on the personality of the person doing this. It seems that there are a couple who are engaged and who really want to do this, as in any profession, it is very individual. Some of them have very good results. Some have to be pushed, and others are going to do it themselves, voluntarily."

The trial phase was further described as a 'combining of physiotherapy and occupational therapy'. Graduates were expected to provide mixed services, beginning with physiotherapy and continuing with occupational therapy goals. In some instances, graduates were provided with specified time periods in which they would provide occupational therapy services. This time frame

ranged from 2 to 4 hours within each organization. While specifying time periods assisted some graduates in developing a distinct occupational therapy role, supervisors tended to describe instances of combining physiotherapy and occupational therapy activities, as volunteering to do occupational therapy since they were legitimately employed as physiotherapists.

> "This that [graduate] did as an occupational therapist was volunteer work, inside of her work as a physiotherapist on the clinic."

Respondents were sensitive to the fact that the concept of CBR is also new to BiH and that the two are evolving simultaneously, increasing the time necessary to experience results.

> "Before the war, we didn't have this ambulant art of medical help, they were mostly in big institutions."

> "This whole CBR system is new to us, many doctors, many physiatrists haven't adapted to their role in the CBR system..."

This pilot implementation was seen as a productive time for graduates to gain experience by 'trying it out'. One respondent likened occupational therapy to 'a child that is growing' in BiH.

> "He's formed, he exists, now we're going to see how much he's going to adapt, which result he's going to make, how is he going to evolve."

The trial initiation of occupational therapy without a final commitment for adoption was also seen as a time for supervisors to assess the feasibility and effects of this new service. Short term trial, and trial through a combining of occupational and physiotherapy, were felt to be the most appropriate methods for introducing occupational therapy within these organizations in BiH, while reserving judgement on final decisions to adopt this innovation.

Obtaining Resources

Adequate resources to support an innovative program in its developmental phase include both human and material resources. Respondents identified resources as a primary factor limiting the implementation of occupational therapy in BiH. Equipment and materials, as well as the money to purchase them were the primary concern of supervisors since they could not support occupational therapy interventions from within their organizations. Respondents reported that clients were unable to obtain equipment recommended by the graduates, because they couldn't afford to pay for these

materials. Supervisors expressed great frustration with their inability to solve this problem internally, through the use of vendors or the graduates themselves.

> "For adaptation it takes imagination and funds for this helping equipment. we haven't solved this problem yet. The large choice of helping equipment. Neretva doesn't produce. our occupational therapists in these centres don't have the possibilities to make this equipment."

Transportation was another issue which required creativity in problem solving since graduates were providing services primarily within the home setting. The problem of transportation was solved internally within two organizations. One provided the graduate with a bus pass, which allowed travel within city limits to visit clients. The clients, being in a common catchment area, were all accessible by public transit. Another organization initially ensured that all clients referred for occupational therapy were within walking distance from the clinic. Eventually arrangements were made for families to pick up the graduate and drive them back to the clinic in their own car. This solution was supported by families who had access to a vehicle. Unfortunately the remaining graduates experienced continued difficulty with transportation to and from home visits. Two graduates reported using their own vehicle, noting 'there is no other way, you have to use your own car'. This was an additional expense incurred by the graduates. Another graduate reported that she had to pay for taxi or public transport out of her own pocket. The remaining graduate was not going to home visits. Although she had her own vehicle, the organization would not support her to use it, neither financially nor legally, and so she made the decision not to do home visits at all.

The lack of personnel to support occupational therapy service development was a concern expressed by supervisors. While six graduates were providing services within their organizations, other facilities lacked any occupational therapy support. This was described as the basic problem with implementing occupational therapy in BiH.

> "Only with the knowledge that there are 70 paraplegics, we would need 10 more occupational therapists... there are challenges because there is still a need for it. I mentioned that there are 70 people at home who don't receive any kind of therapy so far."

This lack of personnel led supervisors to find solutions to the gap in home care services. Suggested solutions included having occupational therapists provide services on a block treatment basis.

providing services for a set time frame and then placing the clients on hold while meeting the needs of the next group of clients.

Finally, the need for a longer time frame to develop occupational therapy through experience with implementation was a concern of supervisors, while time to implement occupational therapy within daily work schedules was the primary complaint of the graduates. The expectation to combine both physiotherapy and occupational therapy roles led to competing obligations on the graduates' available time.

> "I started to work on home visits, but there was a problem. [The physiatrist] sent me to those clients and the first goal for me is to work as a physiotherapist... if I work as an occupational therapist, I need to cut the time for physiotherapy in order to have time for occupational therapy."

The demand for resources extended beyond financial and material resources to support occupational therapy services to issues of transportation and personnel. A significant resource, in short supply, included time for graduates to implement the occupational therapy process with their clients.

Relations with the Environment

Relations with the environment focuses on both beneficiaries and supporters as integral to the social environment and refers to the extent to which they contribute support for the innovation. Client acceptance and the involvement of supervisors were identified as the primary constraints within the social environment of each organization.

Respondents identified client reactions as a significant factor influencing the implementation of occupational therapy in BiH. As the primary beneficiaries, clients reacted to all aspects of implementation including the introduction of home visiting and the use of client-centred questionnaires and interview tools. Supervisors reported that clients accepted the opportunity to have intervention within the home setting, noting that both clients and their families enjoyed the attention provided by someone who would visit and talk with them at home. In contrast, graduates reported on the process of gaining client acceptance, identifying their process of establishing trust with their clients. Initial visits were filled with the graduates' explanations regarding the purpose of occupational therapy and requests

for clients to participate in both an interview and filling out a questionnaire. Graduates described their experience as 'persuading the client to participate' in occupational therapy, explaining that clients did not understand the purpose of the questions.

> "They were participating in an interview, but they didn't trust that there is some help for them, they didn't believe it could be helpful... people are not used to filling out the questionnaires, to answering the questions, and no one ever asked them before the things we did, so it' s a completely new thing."

After some time, graduates described an improved rapport with their clients.

> "After a couple home visits, when you come, they are more happy than before, they are showing you what they can do, they talk and say to you I tried this..."

The time to build rapport and to complete evaluations was seen as a constraint for graduates in managing their work within a daily schedule of client visits.

The need for increased supervisory involvement was identified by both the supervisors themselves and the graduates. Supervisors felt that there was a need for increased participation in the identification of individuals and communities who could benefit from occupational therapy. Involving themselves by going out into their communities and 'becoming closer to their clients' was deemed an essential element of their role in the implementation of both CBR and occupational therapy services. Taking additional time with graduates to help them develop skills in networking would assist with linking occupational therapy services with other social service organizations. Supervisors and graduates felt that their hesitancy resulted from a lack of familiarity with occupational therapy. Supervisors noted that they understood the role of occupational therapy, but remained unsure of what the graduates actually do with clients in practice. Graduates also commented on this problem of physiatry involvement and on their steps to increase their knowledge of occupational therapy services. Graduates reported their recent attempts to educate others about occupational therapy with the intention of increasing referrals and ensuring an appropriate match between client needs and occupational therapy services.

> "I did a seminar about occupational therapy so the other doctors, general practitioners, can become familiar with occupational therapy and they will know there is something else they can do for the clients, so they can send me a patient if they think it might be a good idea."

Graduates reported that this process of educating others is complicated by their process of developing rapport and supporting client confidentiality. While it is easiest to show their supervisors what they do with clients through direct observation, client wishes for privacy when discussing sensitive issues precludes their involving others in some therapy sessions.

In summary, client acceptance of occupational therapy and supervisory involvement were identified as primary constraints within environmental relations, demonstrating the direct impact of stakeholders in the process of implementation.

Micro-Level Variables

Micro-level variables refer to the individual role changes required by individual staff members, in order to effectively implement an innovative program. These will be presented in terms of changes in graduate competence which, as discussed in Chapter 2, includes the composite of behavioural skills, cognitive supports and incentives.

Competence

While the differential degree of implementation within each organization may be shaped by the complex of macro-level processes, it may also be influenced by the individual competencies of each graduate. Graduates experienced challenges adjusting to their role change from technician who follows prescribed orders to professional who makes decisions. No longer were they on the lowest level of the 'career hierarchy' within their organizations, but their supervisors provided them with the opportunity to demonstrate leadership as pioneers of this new profession. Graduates found themselves both wanting the support they once had as physiotherapists and enjoying the independence granted to them in their new role. Upon re-entering the workplace environment, graduates were expected to make decisions in finding appropriate clients for occupational therapy, completing assessments independently and developing intervention plans, conducive to the goals identified by their clients. The client-centred nature of their work meant that they would also determine the duration and

frequency of occupational therapy sessions with each client. Graduates were motivated by their independence, often comparing their role as physiotherapists to that of occupational therapy.

> "First of all you don't assess as a physio because physiatrists do that part of the job and they make the treatment program, as physios, we are only working on treatment... and as occupational therapists, we can arrange things as we want because it is up to us and our client..."

Graduates also experienced challenges with decision-making since, in the past, they 'just did what others said to do'. The responsibility that came with their new role was overwhelming since they were the only ones with a comprehensive knowledge of occupational therapy and they could not expect direction and support from anyone else.

The distances between some of the graduates led to a greater feeling of isolation in their attempts at implementing occupational therapy. However, follow-up visits provided by the occupational therapy educator, were perceived by the graduates as helpful for both the doctors and the graduates as an overt sign of continued support for the implementation of occupational therapy within the organizations. Despite this, graduates experienced cognitive dissonance when confronted with the task of administering questionnaires and asking interview questions which they felt were culturally inappropriate. Client reactions to some of the questions as well as their own response led them to question the usefulness of the measurement tools which they had prior learned to administer. While graduates were able to identify alternate, more culturally appropriate methods to obtain client information, the lack of practice experience seemed to restrict them to the methods learned in classes.

Both supervisors and graduates identified the need for continuing education opportunities, especially in the area of mental health, for which graduates had less experience.

Finally, graduates were found to examine the incentives for implementing occupational therapy in terms of rewards and costs. In their present situation, graduates felt the rewards of positive client reactions, noting that even small changes were helpful for their clients. The costs were identified by graduates as perceptions of disapproval from fellow physiotherapists and a fear of losing their own physiotherapy skills over time. This process of weighing costs and rewards left some of the graduates

wondering if they should bother continuing with the implementation of occupational therapy, unsure of whether they would ever reap rewards in the form of remuneration or status.

Meso-Level Variables

Intermediate-level variables mediate the enactment of macro and micro-level processes and influence on the extent to which the innovation is congruent with old practices within organizations (Scheirer, 1981). These variables control the day to day operations of the innovative program. Cross-source analysis revealed a convergence of macro and micro-level variables, on factors affecting intermediate-level processes within the workplace context, from the perspective of the graduates and their supervisors. These factors will be presented in terms of: supervisory expectations; standard operating routines and technical requirements; and communication flow.

Supervisory Expectations and Work Group Norms

Role expectations of supervisors for their subordinates sets the tone for work within an organization. These expectations must be perceived correctly by both parties for adequate implementation to occur. From the perspective of the graduates there was a lack of congruence between their supervisors' knowledge of occupational therapy, and their own implementation of occupational therapy with clients. A clear example of their concern was expressed in the group's analysis of problems encountered with the referral of clients who were not appropriate for occupational therapy. Graduates felt that the main problem with obtaining referrals was that their supervisors 'just can't find the right clients for [occupational therapy] because they don't understand what we can do with them'. While supervisors were familiar with the purpose and goals of occupational therapy, they were unable to comment on what the graduates actually did with clients. Unable to guide the graduates in their interventions with clients, they remained focused on the demonstration of results as a gauge of successful implementation.

> "How she worked, I don't know. I just know the effects when clients come on control. I look at them as a unit, what has changed through occupational and physiotherapy."

The work hierarchy which was in place prior to the graduates' participation in the Occupational Therapy Educational Program was described by both groups of respondents. The well-established hierarchy within these organizations determined, to a great extent, role expectations between supervisors and their subordinates. Supervisors were in an established authority position over physiotherapists who, as technicians, were accountable to their supervisors for all actions carried out with clients. Assessing clients and prescribing a treatment regimen was within role expectations for the supervising physiatrists, while implementing the treatment program was carried out by physiotherapists. With the graduates' return to work, following participation in the educational program, role expectations for supervisors remained the same, while at the same time, permitting increased latitude for graduates to incorporate occupational therapy within their work as physiotherapists. The graduates, who had well established roles as subordinates within their work hierarchy, were challenged by this new autonomy. Supervisors described the need for graduates to 'take initiative', while graduates described the need for increased 'support' from their superiors. They were not used to making clinical decisions related to assessment and intervention planning within the context of their workplace. Reports from both groups of respondents suggests an incompatibility of expectations for the amount of support which could or would be provided to graduates in this expanded role. Supervisors hinted at the potential for an evolution of work roles for the graduates and themselves as they gained experience with this new profession called occupational therapy. As noted earlier, this evolution was dependent upon the successes experienced during a trial implementation period.

Finally, graduates commented on their supervisors' judgement of occupational therapy, perceiving a lack of interest and an attitude that occupational therapy is 'nonsense'. An exchange between three of the graduates revealed the following:

> "That's the attitude for doctors, they are doctors, you are nothing..."
>
> "... but still some of them are giving you support, some of them are denying, you know, like you just ...you don't exist..."

"... you don't exist. They are not mentioning it at all. It's nonsense, it's a wasting of time. You're a physio and don't mention occupational therapy at all."

Clearly, a disparity in views of the graduates and their supervisors regarding role expectations, fueled by a lack of reciprocity regarding job perceptions, resulted in a sense of role confusion for graduates. In one respect, they were given latitude to perform their work, in another, their perceptions led them to believe that their work was meaningless in the eyes of their supervisors. The misinterpretation of cues from their supervisors to take initiative was perceived by graduates as a lack of support. In contrast, supervisors perceived this trial or pilot phase as an opportunity for graduates to 'become some kind of leader', by taking responsibility and demonstrating what they could do for clients, thereby proving their worth within the organizations.

Standard Operating Procedures and Technical Requirements

Expanded duties within the graduates' role through the addition of occupational therapy to physiotherapy responsibilities forced a significant change in daily work routines for the graduates. The diversity of tasks included an expectation to carry out the physiatrist-prescribed physiotherapy treatment plan with their clients, plus their own plan of providing occupational therapy assessment and intervention. Graduates reported a lack of consonance between these two roles, stating that clients referred for physiotherapy are not necessarily appropriate for occupational therapy. Graduates found that old procedures for client referral were unsuited to the application of occupational therapy. There was a notable concordance with the supervisors' view of referral since they had developed their own methods for determining client need for occupational therapy. Respondents consistently identified clients who require occupational therapy as those who have reached a plateau with physiotherapy treatment and who continue to have problems causing disability which affects independent function. Supervisors agreed that "occupational therapy continues on physiotherapy" since physiotherapists attempt to regain normal mobility and occupational therapists help clients to make the most of their abilities.

"If medical rehabilitation managed to gain some normal function, we tried additional ways to make these persons as independent as possible. In these cases we refer patients to occupational therapy."

"Cause the person that does the kinesiotherapy doesn't show the patient how to use the hand at home. That is where I involve [graduate]."

"We try with physiotherapy, and after that with occupational therapy to normalize life and to make optimal for that hemiplegic hand or leg."

Respondents also identified problems outside of the realm of physiotherapy, which would require occupational therapy intervention.

"During the physical treatment, if there is a client with hard cognitive problems, [graduate] is immediately involved in the treatment, and [clients], where cognitive problems are dominant."

"Physiotherapist, maybe most of activities are just kinesiotherapy or exercise, you know, but [graduate] has one specific type of occupational therapy to provide psychosocial support..."

Despite these insights, graduates and supervisors were limited to the selection of clients for occupational therapy from those referred to the organization via other sources. Efforts were further confounded by a lack of pervasiveness of occupational therapy, such that individuals, outside of these six organizations, were unfamiliar with occupational therapy services. Supervisors anticipated the need to market their new service within their communities and through the media in order to make the public aware. As mentioned earlier, graduates spoke of their attempts to educate others, including general practitioners who make referrals to the CBR or rehabilitation clinics employing graduates. These attempts were clearly in their infancy at the time of data collection.

In addition to the technical requirements regarding the timing of referrals for occupational therapy service, was the substantive demand for time to provide occupational therapy in terms of both frequency and duration of therapy sessions. Both frequency and duration of occupational therapy were contrasted with physiotherapy where a client is typically seen daily for a period of 10 days. The nature of disability issues requiring occupational therapy meant that longer duration of support is necessary. Respondents described a minimum treatment interval of three weeks in order to meet short-term intervention goals. A maximum duration was not specified, noting that it was "completely dependent upon the type of illness and problems identified by clients". Frequency of visiting

reportedly varied between 1 and 3 times per week, depending on the goals and the feasibility of travelling to home visits. Supervisors and graduates both commented on the additional work time required to complete assessments which included an environmental appraisal or challenges of identifying goals for clients with mental health problems.

> "For this assessment, [occupational therapist] has to consult others, to consult literature, to consult colleagues, to interview patient, to compare results. In order to try to find out how he or she could provide intervention and reach results."

> "For assessment, I don't know, sometimes I need maybe two days, two hours, sometimes more or less, but for mental health problems, I need all week."

Finally, the client-centred nature of work in occupational therapy impacted the time spent in identifying problems, setting goals and carrying out the intervention. Respondents noted that this process can take much longer than standard physiotherapy and requires changes in the frequency of visiting throughout the duration of occupational therapy.

> "Patients are more involved in this process than in process of regular physiotherapy. Regular physiotherapy is more or less related with the facility, electrical equipment, laser or acupuncture or something else. In occupational therapy, patients are more - request for their participation is more and that could sometimes influence the length of therapy."

Task diversity required of the graduates seemed to influence standard operating procedures within each organization including referral criteria and the time required for implementing occupational therapy interventions. The lack of congruence of existing procedures with those required of the innovation did not facilitate the implementation of occupational therapy as perceived by both the graduates and their supervisors.

Communication Flow

Communication between supervisors and their subordinates is fundamental for adequate implementation. Open and timely communication mechanisms ensure reciprocity of commitment to the new program. Cross-case analysis of these two groups of respondents revealed underlying problems in communication within these organizations which have been revealed throughout this presentation of results. While each group, supervisors and graduates, had their own vision of the process required to implement occupational therapy with clients in BiH, they were not shared in an

overt manner. The lack of communication seemed to accentuate misunderstanding regarding the experience of implementing occupational therapy from the perspective of these two groups of respondents.

Summary of the Occupational Therapy Process and Contextual Factors

The interrelationship of the occupational therapy process and contextual factors can be found in this presentation of results. Application of each step in the occupational therapy process was clearly dependent upon the contextual factors within the workplace of the graduates. The macro and micro level variables converged at the intermediate-level to influence the implementation of occupational therapy with clients. These factors significantly influenced the extent to which the graduates could implement the occupational therapy process. For example transportation problems interfered with visiting clients in their homes and the transfer of standard routines for physiotherapy, to the application of occupational therapy procedures, led to difficulties in identifying appropriate clients who would benefit from the service.

Despite the varied contextual problems encountered by each organization, there remained indicators of effective implementation of occupational therapy with clients. Occasions where graduates were able to address client goals may not have met their own personal expectations of success, however clients were clearly appreciative of the help they were receiving. The fact that graduates were able to develop rapport with their clients suggests the significant influence of applying client-centred principles of occupational therapy.

A significant factor, woven throughout this presentation of results, was time. Time, both as a function of experience with the innovation and as opportunity within daily scheduling, was identified as an essential resource for the effective implementation of occupational therapy within these organizations.

CHAPTER 6

RESULTS: CLIENT OUTCOMES AND ORGANIZATIONAL IMPACTS

In this chapter, the results of the data collection for objectives 3 and 4 are presented. At the outset, results of the COPM and PE-Fit are presented, followed by reports of client outcomes from the perspective of the graduates and their supervisors. Results relating to organizational impacts will conclude this chapter.

CLIENT OUTCOMES (Objective 3)

Objective 3 sought to describe client outcomes in terms of occupational performance and person-environment fit, following a period of occupational therapy intervention by graduates of the Occupational Therapy Educational Program. Numerical data collected on measurement tools administered to clients at pretest and posttest intervals were used to describe client outcomes. The data reflected client perceptions of change in occupational performance and person-environment fit following occupational therapy intervention. Analysis of interview data from both key informant and group interviews resulted in reflections on client outcomes from the perspective of these two groups of respondents. This will be presented at the end of this section.

Occupational Performance

Administration of the Canadian Occupational Performance Measure (2nd Edition) (COPM) resulted in two scores: performance of occupation and satisfaction with occupation. Mean performance and satisfaction scores for the sample of 14 clients were analyzed separately. The difference in means between initial and re-assessment scores for both performance and satisfaction were statistically significant (see Table 1 & Table 2). The mean change score in both performance and satisfaction indicates that clients' perceptions of performance and satisfaction for self-identified problem activities

increased significantly following occupational therapy intervention provided by graduates of the Occupational Therapy Educational Program. Clients receiving occupational therapy intervention had a significant improvement in occupational performance as measured by the COPM.

Table 1. COPM Performance Scores (N=14)

Client	Therapist	Pretest	Posttest	Change	Treatment Interval (weeks)
1	3	1.25	2.25	1	3.5
2	3	2	4	2	4
3	3	2.4	4	1.6	4
4	3	1.6	4.6	3	4
5	1	1.66	2	.34	3
6	1	5	5	0	3
7	1	1.75	1.75	0	3
8	1	1	2	1	3
13	2	2	3	1	3.5
17	3	2	3.75	1.75	4
21	4	1	6	5	2
22	4	3.5	5.5	2	3.5
23	4	3.25	4	.75	1.5
24	4	3.5	5	1.5	1.5
N=14	**N=4**				
Mean		**2.28**	**3.78**	**1.50**	**3.12**
St. Dev		**1.14**	**1.39**	**1.32**	
St. Error				**0.35**	
T-Score				**t = 4.28***	

*p = .001

The mean change score for performance was 1.50 with a standard deviation of 1.32. T-test analysis resulted in t = 4.28 which was significant at (p = .001). The mean change score for satisfaction was 1.65 with a standard deviation of 1.19. T-test analysis resulted in t = 5.17 which was significant at (p = .000). There was no negative change.

Table 2. COPM Satisfaction Scores (N=14)

Client	Therapist	Pretest	Posttest	Change	Treatment Interval (weeks)
1	3	1	2	1	3.5
2	3	1.25	3.75	2.5	4
3	3	1.4	3	1.6	4
4	3	1	4.4	3.4	4
5	1	1.33	1.66	.33	3
6	1	5	5	0	3
7	1	1	1	0	3
8	1	1	2	1	3
13	2	1.25	2.75	1.5	3.5
17	3	2	4	2	4
21	4	1	4.5	3.5	2
22	4	5	7	2	3.5
23	4	3	4	1	1.5
24	4	1.5	4.75	3.25	1.5
N=14	**N=4**				
Mean		**1.91**	**3.56**	**1.65**	**3.12**
St. Dev		**1.42**	**1.60**	**1.19**	
St. Error				**0.32**	
T-Score				**t = 5.17***	

*p = .000

The treatment interval ranged from 1.5 – 4 weeks with a mean treatment period of 3.12 weeks. There was variability in the frequency of visits during this period of time with graduates reporting differences in the frequency of visiting. However, graduates reported seeing their clients on average, two times per week.

Client Outcomes by Activity on the COPM

On the COPM, clients identified problems in activities of self-care, productivity or leisure. For the sample of 14 clients, a total of 56 activities were identified as problem areas. Clients identified 33 (59%) problem activities as self-care, 11 (20%) as productivity and 12 (21%) as leisure (see Table 3).

Table 3. Frequency of Client Identified Activities on the COPM

Self-Care	Fq	Productivity	Fq	Leisure	Fq
Bathing	8	Work on Computer	2	Visits with friends	3
Transfers	6	Job Search	2	Sports	3
Walking	6	Return to School	1	Driving	1
Dressing	3	Work in Kindergarten	1	Conversation	1
Shopping	3	Babysitting Grandchild	1	Tennis	1
Transport	2	Writing	1	Reading	1
Toiletting	2	Cleaning	2	Writing	1
Feeding	2	Cooking	1	Leisure walks	1
Cooking	1				
Total	**33 (59%)**		**11 (20%)**		**12 (21%)**

Improved client perceptions of performance and satisfaction was reported for 39 (69%) of the identified activities. Clients did not report any change in performance or satisfaction for 17 (31%) of the activities identified as presenting problems. Tables 4 through 6 highlight specific activities in each of the three areas (self-care, productivity, leisure) where improvement or no change was scored by clients.

Self Care

Clients reported improvement in performance and satisfaction for 27 (82%) of the identified self-care activities. No improvement was noted for 6 (18%) self-care activities identified on the COPM. Self-care activities identified included characteristic activities such as bathing, transfers, toiletting, and feeding. Many self-care activities identified were common across clients with 2 or more clients identifying the activity as a problem area. Bathing, transfers and walking were the most frequently identified problem activities. Transport and cooking were self-care activities identified by only one client (see Table 4).

Table 4. **Change in Performance and Satisfaction for Identified Self-Care Activities on the COPM.**

Self-Care Activities	Improvement	No Improvement	Fq
Bathing	6	2	8
Transfers	5	1	6
Walking	5	1	6
Dressing	3	0	3
Shopping	2	1	3
Transport	1	1	2
Toiletting	2	0	2
Feeding	2	0	2
Cooking	1	0	1
Total	**27 (82%)**	**6 (18%)**	**33 (59%)**

Productivity

Productive activities reported as problem areas were diverse among clients, demonstrating the client-centred nature of the COPM as an assessment tool. Activities ranged from cleaning, cooking, working on computers and writing, skills needed to participate in productive occupations (ie: house keeping; correspondence), to work roles such as babysitting, going to school, work in a kindergarten and searching for employment. Clients identified improvement in both performance and satisfaction for 8

Table 5. **Change in Performance and Satisfaction for Productivity Activities on the COPM.**

Productivity Activities	Improvement	No Improvement	Fq
Work on Computer	2	0	2
Job Search	1	1	2
Cleaning	1	1	2
Work In Kindergarten	1	0	1
Baby-sit Grandchild	1	0	1
Writing	1	0	1
Return to School	0	1	1
Cooking	1	0	1
Total	**8 (73%)**	**3 (27%)**	**11 (20%)**

(73%) productivity activities and no improvement in 3 (27%) productivity activities identified on the COPM. Activities where improvement was noted included, cooking, writing, babysitting, working in a kindergarten and working on computers. No improvement was noted for the activities of return to school.

While problems with the activities of job search and cleaning improved for two clients, others did not experience any change in performance or satisfaction with these activities (see Table 5).

Leisure

Reports of leisure activities which presented problems were also diverse, with visiting friends and sports as the most frequently reported activities. The remaining activities ranged from reading, writing and conversation to driving. Improvements were noted for only 4 (33%) of all leisure activities identified as visiting friends, playing tennis, and writing. No improvement was reported for 8 (67%) leisure activities identified on the COPM. These activities included sports, driving, conversation, reading and leisure walks.

Table 6. Change in Performance and Satisfaction for Identified Leisure Activities on the COPM.

Leisure Activities	Improvement	No Improvement	Fq
Visits with Friends	2	1	3
Sports	0	3	3
Driving	0	1	1
Conversation	0	1	1
Tennis	1	0	1
Reading	0	1	1
Writing	1	0	1
Leisure walks	0	1	1
Total	**4 (33%)**	**8 (67%)**	**12 (21%)**

Person-Environment Fit

The second outcome of interest included person-environment fit. The difference in means between initial and re-assessment scores was not statistically significant. For the sample of 13 clients, mean person-environment fit scores were analyzed by combining all subscales of the P-E Fit. The mean change score indicates that client perceptions of person-environment fit did not change significantly following occupational therapy intervention. The mean change was -.923 with a standard deviation of 21.61. A two-tailed t-test yielded $t = -.154$ which was not significant at $p = .880$ (see Table 7).

Following initial analysis, each of the subscales were analyzed separately and tested individually for significance. The result was no significant change for any of the subscales. However, 4 subscales approached significance levels. These subscales included: activity; information; family relations, family; and achievement, individual (see Table 8).

Table 7. Person-Environment Fit Scores (N = 13)

Client	Therapist	Pretest	Posttest	Change	Treatment Interval (weeks)
1	3	316.5	303	13.5	3.5
2	3	294.5	298.5	-4	4
3	3	309.5	300	9.5	4
4	3	303.5	296.5	7	4
5	1	223	288	-65	3
6	1	289	294	-5	3
8	1	304	315	-11	3
13	2	308.5	295.5	13	3.5
17	3	309	306	3	4
21	4	315	288	27	2
22	4	282	282	0	3.5
23	4	334	334	0	1.5
24	4	288	288	0	1.5
N = 13	**N = 4**				
Mean		**298.19**	**299.12**	**-.9231**	**3.12**
St. Dev		**26.51**	**13.67**	**21.61**	
St. Error				**5.99**	
T-Score				**t = -.154***	

*p = .880

Table 8. Subscales Approaching Significance on the P-E Fit

Subscale	Mean Pretest	Mean Posttest	St. Dev Pretest	St. Dev Posttest	Mean Change	Sig.
Activity	17.08	18.12	4.17	3.22	-1.04*	.072
Information	18.46	17.00	3.15	3.83	1.46	.051**
Family Relations, Family	18.77	17.81	3.44	2.85	.962	.076
Achievement, Individual	24.65	25.81	4.09	3.69	-1.15*	.093

* negative change ** t = 2.163

Two of these subscales, activity and achievement, had a negative mean change, which should be interpreted with caution since occupational therapy intervention may result in greater insight into the environmental barriers faced, resulting in negative change (Coulton, 1979; Law et al., 1994). Conversely, intervention may help to alleviate the environmental barriers, resulting in perceived positive change. The information subscale most strongly approached significance and refers to the extent to which a client feels they have information about their situation. These four subscales appear to be more closely aligned with the activities of the graduates when compared with the remaining subscales of the P-E Fit. The remaining subscales ask clients to consider the fit between themselves and the demands of the economic, physical, workplace and social environments. In other words, these subscales address significant changes in attitudes, financial well-being and environmental barriers which exist within the larger community and affect activities such as return to school, obtaining employment, participating in organized sports and community outings.

Summary: COPM and PE Fit

Change in occupational performance was seen in the significant increase in both performance and satisfaction scores on the COPM. Analysis of the frequency of identified activities in the areas of self-care, productivity and leisure revealed that problems with self-care activities were identified with the greatest frequency. Problems with productivity and leisure activities were identified with a lower frequency on the COPM. Improvements in performance and satisfaction with leisure activities represented the least amount of improvement, while improvements with self-care activities represented the greatest improvement following occupational therapy intervention.

Change in person-environment fit was not detected as a significant client outcome, however four of the subscales approached significance levels. These four scales include: activity; information; family relations, family; and achievement, individual. By definition, these subscales appear more closely aligned with the activities of the occupational therapy graduates in BiH, whereas the remaining subscales address

larger environmental issues which appear to be outside of the scope of occupational therapy practice in BiH at this time.

CLIENT OUTCOMES: GRADUATE AND SUPERVISOR REPORTS

Qualitative data collected from a group interview with the graduates and key informant interviews with their supervisors were analyzed to identify client outcomes following occupational therapy intervention, from the perspective of these two groups of stakeholders.

Occupational Performance

Both graduates and their supervisors commented on their clients' change in occupational performance in the area of self-care. They described a number of examples where clients demonstrated improvements with self-care activities. Activities where improvements were noted included: transfers and mobility; bathing; eating; dressing and daily hygiene. Analysis of the data revealed that respondents tended to differentiate improvements in self-care in terms of: 1) increased independence with self care activity; and 2) increased awareness of their ability to participate in these activities.

Increased Independence

One supervisor described the changes in her clients with rheumatoid arthritis following occupational therapy intervention aimed at improving grasp on utensils for independence with eating.

> "Patients who haven't been able to eat liquid foods alone for years are now able to do it. I am impressed."

Another graduate noted that the exercises combined with the bath chair provided for her client were helping to increase trunk stability, allowing the client to bathe independently at home.

Coping with physical problems through the use of compensatory approaches or equipment meant that clients learned new ways of doing familiar activities such as learning how to complete daily hygiene from a seated position or learning new ways to dress their hemiplegic side following a stroke.

Increased Awareness

Supervisors spoke of their client's increased awareness of their ability to do self-care activities at home.

> "There were no spectacular improvements, but I think that there is success... the patient became aware that she could make coffee, do dishes and such things and before that [OT intervention] she wasn't doing these things."

This increased awareness was identified as an important step towards independence with activity. Clients were typically described, by both graduates and supervisors, as responding to their disability by taking on a helpless role. They reported that clients were not participating in activities and were unaware of what they could or should do when they returned home from hospital. Consequently, many of these clients lost meaningful roles they once held because of a lack of participation in the daily household chores such as cooking and cleaning. Respondents reported that this problem placed increased strain on caregivers who tended to do everything they could for their loved one, rather than encouraging participation in activity. Respondents felt that increasing their clients' awareness of their ability to participate in activity was a significant role for occupational therapy. Many respondents described the impact of occupational therapy on client outcomes by contrasting it with the familiar role of physiotherapy.

> "Physiotherapists look at the patient in terms of their [physical] function. They are trying to improve function to the level of 100%. If function remains at 80% or 17%, they haven't any idea how this [residual] function is effective in the field. Occupational therapists are trained and have knowledge and experience of how the [residual] function will be used in normal life."

> "The goal of physiotherapy is to remove disability completely and the goal of occupational therapy is to lower the disability as much as possible in order to encourage these persons with disability to live independently."

These statements were consistent with what other respondents described as the occupational therapist's role in helping clients to adapt to life with disability. One supervisor commented on the practical education of physiotherapists, noting that, 'we didn't take time to deal with how the client is going to deal with the loss in his life. Through occupational therapy they have a different view to all of this, and that's what was missing'. These comments reflect a continuum of treatment approaches which

begins with physiotherapy addressing client problems at the level of the impairment and occupational therapy addressing problems at the level of activity. The International Classification of Impairment, Disability and Handicap (WHO, 1980) was a significant component of the Occupational Therapy Educational Program design. Graduates learned to differentiate their role as an occupational therapist from physiotherapy by clearly identifying and classifying the problems addressed in therapy as impairments, activity limitations or problems with participation. The impact of the educational design is reflected in the supervisors' comments regarding adaptation as a significant client outcome following occupational therapy intervention.

Person-Environment Fit

While improvements in self-care activities were identified by respondents, changes in person-environment fit were consistently described in terms of the environmental barriers which limited the potential for client outcomes in this area. Architectural and financial problems were blamed for the lack of client outcomes in person-environment fit. Supervisors in particular described these problems which, "limit the higher possibilities of occupational therapy."

> "The clients are not able to buy all the equipment that the occupational therapist advises: to change the entrance to the bathroom: to change the toilet seats; to change the locks at the entrance; and to receive equipment for everyday life."

> "Barriers to the entrances of homes are not solved, there are still steps in front of buildings. It has an impact on the client because they can't go out in the city...they are tied to their bed."

Graduates and supervisors agreed that the occupational therapist has a significant role in the area of person-environment fit through interventions which focus on improving the environment, however the political, social and economic problems, systemic within the Bosnian culture at this time, prevented change from occurring in person-environment fit.

> "The best work [for occupational therapy] is to make conditions in the environment, in the community, to make the recommendations to have ramps and access..."

Graduates reported their frustration with not being able to help with environmental issues by comparing the resources in Canada versus their country.

"Our possibilities to do the treatment are much different than in Canada, because our country is one year after the war, so people need to understand that we don't have enough money, materials, so we can't do more for the clients. It's easier in Canada, you can just say, 'ok, that person can live in an accessible house or an accessible apartment'. Here we don't have accessible apartments, especially if the apartment has 10 or 11, 12 floors and the elevators are still not working. So it's hard to help people with that."

These comments reflect the challenges for occupational therapy practitioners in affecting change in the area of participation as identified in the WHO (1980) framework.

Summary: Client Outcomes

Increased independence with self-care activities and increased awareness of the ability to participate in self-care tasks were identified by both graduates and their supervisors as the primary outcomes in occupational performance following occupational therapy intervention with clients. While some respondents referred to the role of occupational therapy in assisting clients to return to work or other productive roles, this was consistently described in terms of the potential future role of occupational therapy. Leisure outcomes were not identified by any of the respondents. These outcomes are consistent with client outcomes on the COPM. Recall that clients identified 59% of problem activities as self-care and experienced improvement in both performance and satisfaction for 83% of all identified self-care activities. Productivity and leisure activities were identified with less frequency. Increased performance and satisfaction with leisure activities represented the least amount of change following occupational therapy intervention.

Assisting clients in the process of adapting to life with disability was considered, by respondents, to be a primary goal of occupational therapy intervention. Outcomes on the COPM and the P-E Fit, combined with the details provided through qualitative analysis of interviews with the graduates and their supervisors revealed that occupational therapy had an impact on client outcomes at the level of activity, specifically in the occupational performance area of self-care. Barriers within the social, political and economic environment prevented change from occurring at the level of participation as measured by change in person-environment fit.

ORGANIZATIONAL IMPACTS (Objective 4)

Qualitative analysis was used to describe the organizational impacts resulting from the implementation of occupational therapy by graduates of the Occupational Therapy Educational Program. Data collected from key informant interviews with supervisors was used to identify and describe organizational impacts as perceived by this group of stakeholders. Respondents identified common changes in the delivery of rehabilitation services within each of the six organizations employing graduates of the Occupational Therapy Educational Program. Respondents attributed three changes in service delivery to the implementation of occupational therapy in BiH due to the additional knowledge brought to the organization through the work of the graduate. These changes included: 1) increased home visiting; 2) provision of psychosocial support; and 3) changes in the frequency and duration of therapy sessions.

Home Visiting

The responsiveness of each organization to changes in the graduates' role, after completion of the Occupational Therapy Educational Program, influenced the methods of service delivery. The most obvious change was the increase in home visiting provided or planned for within each organization. Six of the seven respondents noted that home visiting was an added component of service delivery within CBR and rehabilitation programs employing graduates.

> "When [graduate] finished this course in occupational therapy, it changed her role as a therapist. In the beginning, we arranged for her to work half time on home visits where she sees 2 – 4 patients per day."

Providing services to clients at home was consistent with the expectations placed on the occupational therapy graduates. As discussed earlier, increasing independence with everyday activities and adapting to life with disability are two key roles of the graduates in their work with clients.

> "When the patient is finished with physiotherapy, when it is a difficult case of hemiplegia and the person stays disabled, I know that the client must do the work at home, and I call the occupational therapist to help the patient with advice on how she can manage home activities more easily."

Supervisors reported that their organizations were able to provide outreach to individuals who were unable to come to the clinic due to environmental barriers. Occupational Therapy graduates would

visit clients who were unable to get out of their apartment because of architectural barriers that prevented them from getting to the first floor in their wheelchair. Graduates also visited clients who had problems with transportation to and from the clinic because of inaccessible public transport or lack of a social network to assist with transportation. Many of the clients referred to occupational therapy were socially isolated because they either lived alone or had limited support from family and friends.

Supervisors also reported that home visiting was the most appropriate method of service delivery in occupational therapy since the goal of occupational therapy was to teach the client how to participate in functional daily activities at home. Home visiting meant that graduates could provide community based interventions, which focused on the environmental issues experienced by their clients. Supervisors gave graduates credit for sharing their knowledge, which considers the impact of the environment on their clients' ability to participate in daily activities. This new knowledge helped to fill a gap within the CBR and rehabilitation programs in BiH.

> "Occupational Therapy is something which is really connected with the environment. It is not only connected with the patient's physical ability. This is not something which is a topic of medical doctors... it is something which is new for everybody."

Psychosocial Support

Dealing with loss and developing meaningful roles despite disability were identified as goals of occupational therapy interventions with clients. Respondents discussed the provision of psychosocial support as a new component of service delivery within the CBR and rehabilitation clinics employing graduates. Being able to support clients and their families through the adjustment phases of adapting to life with disability was seen as filling a gap in rehabilitation in BiH.

> "Practically we always educated physiotherapists how to physically help the person. Maybe we didn't take enough time to deal with how the client is going to deal with the loss in his life. Through occupational therapy we have a different view to all of this, and that was what was missing."

Respondents reported an increase in referrals to occupational therapy for clients with cognitive problems resulting from stroke or traumatic brain injury, as well as an expectation that occupational therapy would assist clients with affective issues such as grieving losses and supporting families in

adapting as well. In the past, these same organizations provided only physical rehabilitation services through modalities intended to remove impairments resulting from physical pathology. With the addition of occupational therapy knowledge, services have expanded to include psychosocial support for clients and families as an essential component of adapting to life with disability.

Frequency and Duration of Therapy Sessions

Respondents commented on both the frequency of occupational therapy visits to clients and the duration of occupational therapy interventions. As noted earlier, supervisors described a range in terms of frequency of visiting from 1 – 3 times per week, depending on the goals to less frequent visiting over a longer duration (ie: once every 3 – 4 weeks). They described a minimum treatment interval of 3 weeks in order to meet short-term intervention goals. None of the supervisors identified a maximum duration for occupational therapy treatment stating that it was completely dependent upon the type of illness and problems identified by clients.

Respondents reported a number of factors which influenced the need for long-term involvement from occupational therapy, compared with physiotherapy. Supervisors consistently reported that clients referred for occupational therapy had longer-term problems due to the progressive nature of their illnesses. This is consistent with the earlier reports of occupational therapists working toward improving clients' independence with activity and participation in community life, while physiotherapists focus on the remediation of impairments.

In addition, respondents identified that the client-centred nature of the occupational therapy process, such that the client is more involved in identifying problems and setting goals than in physiotherapy. They noted that this means that the process itself can take much longer and require changes in the frequency of visiting over the duration of occupational therapy intervention. Supervisors commented that the wider spectrum of issues that an occupational therapist considers has an impact on the assessment process. Gathering all of this information from clients and putting it together into a treatment plan takes considerable time.

Finally, supervisors noted that providing psychosocial support for clients and families takes much longer than standard exercises performed in physiotherapy. The time taken to visit at home and to listen to clients and caregivers impacts on the time required for occupational therapy.

Summary: Organizational Impacts

In summary change in service delivery was identified by supervisors to be an organizational impact resulting from the application of occupational therapy with clients. Organizations responded to service delivery needs by increasing opportunities for home visiting, incorporating psychosocial support as a service offered through the organization and by altering both frequency and duration of visiting to accommodate intervention methods as applied in occupational therapy.

CHAPTER 7

DISCUSSION

SUMMARY OF FINDINGS

In order to discover the relationship between transfer of learning and implementation, the educational accountability process was used to describe the degree to which occupational therapy was implemented, following the graduates' completion of the Occupational Therapy Educational Program in BiH. Using the framework presented in the Model of Educational Accountability, this study sought to identify client outcomes and organizational impacts, which resulted from the graduates' work with clients. In addition, description of the occupational therapy process and identification of contextual factors was used to discern influences on implementation outcomes.

Findings showed that while positive client outcomes were evident in the area of occupational performance, significant improvement in person-environment fit was not evident. These results suggest that the graduates' were able to transfer their learning to make occupational changes in their clients. More specifically, client outcomes were achieved in terms of improvements in the area of self-care, which was consistent with reports of both graduates and supervisors who said that clients experienced increased independence and increased awareness of their abilities in the area of self-care.

Despite the lack of improvements in person-environment fit, results showed that the information subscale approached significance, indicating that clients felt more informed about their situation. This is consistent with reports of education and advice provided, by graduates, during their application of the occupational therapy process with clients, despite the lack of finances and equipment to support actual changes in person-environment fit.

Findings also showed that the organizations employing graduates changed their methods of service delivery by: increasing home visiting; assuming psychosocial support as a new service offered by the organizations; and altering the frequency and duration of therapy to accommodate the need for longer term involvement in occupational therapy. Increasing supervisors' knowledge of occupational therapy

appeared to be an essential step in the implementation process, since supervisors held direct responsibility for the ultimate application of occupational therapy within each organization. Improved understanding by supervisors regarding the purpose and activities of occupational therapy prompted organizational change. This responsiveness was reflected not only in changes to service delivery methods, but also in problem-solving strategies used to better identify true beneficiaries of occupational therapy services. These results suggest that graduates transferred their learning to their supervisors, illustrating the dynamic nature of the educational accountability process.

However, results also indicated that the process of implementing occupational therapy with clients was incomplete. The occupational therapy process was directly influenced by a number of contextual factors during each stage of referral, assessment, intervention and discharge. Indeed, respondents attributed the absence of equipment and finances to problems fulfilling intervention goals. Graduates also noted instances where they felt they were unable to complete the process with their clients due to a lack of time or work experience. Results showed that the application of occupational therapy with clients added to the graduates' existing work role of physiotherapist. The expansion of old procedures increased task diversity, which required graduates to be responsive to the evolution of their new role as problems emerged. Their resourcefulness was evident in the actions taken by graduates toward increasing referrals, developing client rapport and in their ingenuity with implementing interventions using available resources.

Implementing occupational therapy, following graduation, hastened the identification of contextual problems affecting implementation of this innovative program. Results showed clearly the interrelationship between application of the occupational therapy process and contextual influences, which ultimately affected the graduates' work with clients. Consequently, the degree of implementation, as influenced by contextual factors, affected the extent to which client outcomes and organizational impacts were experienced.

DESIGN ISSUES AND STUDY LIMITATIONS

The mixed qualitative and quantitative design was appropriate to this investigation in order to obtain data relating to both the processes and outcomes of implementing occupational therapy in BiH following graduation from the Occupational Therapy Educational Program. There were however, some inevitable difficulties in designing this study, which considered the views of primary stakeholders in the process of implementation and used internal investigation as a primary method of data collection. The foregoing discussion must be understood in the context of the following limitations.

One of the limitations of the study was the language difference between researcher and respondents. While this researcher had a basic understanding of Bosnian, and many of the respondents were highly competent in English, there were three challenges to be overcome. First, there was a reliance on the respondents' fluency in English for adequate interpretation of the group interview with graduates and two of the key informant interviews conducted in English. Second, there was a reliance on the accuracy of the translator for the remaining key informant interviews when interpreting questions posed in English and responses provided in Bosnian. Despite the use of a competent, independent translator for these interviews, it is possible that some depth of meaning was lost through misinterpretation. As an example, many respondents chose to speak in metaphors to describe their experiences of implementing occupational therapy within their organizations. These comparisons required additional explanation on the part of the respondents and were often challenging to translate into English such that their original meaning was left intact. The use of metaphors, during interviews conducted in English, provided even greater challenge to decode exact meanings. For example, one metaphor used was 'like putting salt into wine'. This metaphor required further clarification through translation until the meaning, confirmed in English stated, 'someone will not tell you what to do without having all of the facts'. Third, while translation of the data collection tools from English into Bosnian was examined by three additional translators, competent in both English and Bosnian, it is possible that some shades of meaning may have been lost.

The familiarity of respondents with this researcher is considered a limitation of internal investigation. Having had responsibility for the development of occupational therapy in BiH, through the introduction of an educational program, this researcher was likely considered by respondents to be a stakeholder in evaluations of program implementation. While the study questions guided this researcher throughout the data collection and analysis, consideration should be given to the issue of respondent bias such that details may have been withheld due to the fact that that there was a prior relationship between respondents and researcher.

Data analysis did not commence until data collection was complete. This may be considered a study limitation since analysis could have begun and proceeded concurrently with interviews for improved responsiveness to emerging themes. However, this researcher chose to maintain consistency in data collection techniques in an effort to eliminate internal investigator bias.

Finally, the methods of data collection regarding client outcomes were also a source of internal investigation since graduates collected data from their own clients. The potential effect of bias of these data collectors could have been mediated through the use of an independent, external data collector, however it was felt that the logistical problems in this form of data collection far outweighed its benefits. In order to collect data from Bosnian clients, the independent data collector would have to be Bosnian speaking and would require training in the administration of each measurement tool. This would likely lead to increased loss of meaning since the administration of evaluations in occupational therapy require a therapeutic rapport with the client and necessitate a client-centred approach to problem identification and rating performance. This can be completed only with a thorough knowledge of the occupational therapy process. In addition, the potential for Type I and Type II error should be a consideration when interpreting quantitative data obtained through administration of the COPM and P-E Fit instruments given the small sample of clients on whom data was collected.

The benefit of internal investigation to obtain evaluation information from primary stakeholders is supported by Patton (1990) who emphasized that "distance does not guarantee objectivity; it merely guarantees distance" (p. 480). As an exploration of implementation, it is felt that the overall effect of the

above limitations was minimal. The use of triangulation, in the form of group and key informant interviews as well as the collection of data on client outcomes, supported objectivity and assisted in verifying results obtained through this study.

DISCUSSION OF FINDINGS

This study demonstrates that the identification of contextual influences is essential for understanding the degree of implementation of innovative programs. Some questions, however, are raised: Since the multifaceted nature of contextual factors means that they will constantly exert influence, to some degree, within the macro, micro and meso levels of organizational implementation, what conditions actually help to mediate these contextual influences? In addition, how can these conditions be shaped through the educational accountability process? Understanding how contextual factors were mediated during the implementation of occupational therapy in BiH will provide greater insight into the educational accountability process and the relationship between learning, transfer and impact.

In answering these questions, findings will be discussed by considering the implementation of occupational therapy as a dynamic process, facilitated by the behavioural responses of program participants. This discussion will be facilitated by reintroducing key aspects of Scheirer's (1981) analytical framework, which established a conceptual foundation for understanding the contextual influences on the implementation of innovative programs. Her concepts and analytical framework will be used to explain the significance of findings for this implementation evaluation.

As presented in Chapter 2, Scheirer proposed that implementation of innovative programs is a dynamic process which includes: 1) adoption of the program; 2) assembling resources to support implementation activities; 3) role change required on the part of program participants to implement the innovation effectively; and 4) problem solving strategies which provide feedback on the implementation process. Scheirer proposed that while these stages are roughly sequential, assembling resources, role change and problem solving are likely mutually contingent processes which affect the ultimate institutionalization of a new program. She speculated that role change is central to any implementation

evaluation because of the reciprocal nature of role change required by program participants at each macro, micro and meso-level of program implementation. This discussion will proceed by discussing findings from this study in terms of the contextual influences operating at each organizational level, focusing on role change and problem solving as two mechanisms, which facilitated the implementation of occupational therapy in BiH.

Macro-Level Variables

While the development and implementation of occupational therapy was affected by both international and national influences as described in Chapter 3, these broader societal factors were not the focus of this study. Instead, this study analyzed macro-level variables as defined by Scheirer (1981), focusing on the organizations employing graduates as implementing systems. Hence, macro-level variables included decisions reached by supervisors, which directed employee actions. These decisions ensure that adequate conditions exist to support implementation such as obtaining resources and management backing of the innovation. This study revealed a number of macro-level influences on the implementation of occupational therapy in BiH. Macro-level influences, included: provision of opportunity for graduate involvement in decision-making processes through trial adoption of the innovation; lack of adequate resources to support implementation efforts; and expectations placed on clients, as beneficiaries of occupational therapy, and supervisors as supporters of the innovation.

Supervisory decisions to adopt occupational therapy on a trial basis facilitated the graduates' process of gaining experience, while providing them with opportunity for role change. Graduates were presented with the opportunity to become pioneers of occupational therapy in BiH. This was seen as a privilege, which exempted graduates from the usual control processes imposed from within their organizations. The transition from technician to professional held the promise of accompanying change in status within the organization since it involved opportunity for increased independence and sharing in decision-making processes with their supervisors. In this way, developing their new role as an autonomous worker became just as important as the changes required in developing their skill as an

occupational therapist. This underscores the level of participation required, on the part of the graduates, toward the prospective development of occupational therapy services within BiH. This is consistent with Scheirer's hypothesis that implementation will be facilitated if those responsible for everyday implementation, participate in activities which influence decision processes. However, the degree of responsibility required by graduates was inconsistent with the predominant control processes of supervisor-employee relationships and expressed itself in the challenges encountered by graduates who felt overwhelmed by their accountability for the programs' success.

Implementation of occupational therapy was influenced by the lack of adequate equipment, transportation, personnel and time to implement the new service in BiH. Respondents realistically identified that obtaining resources to support their implementation efforts would be an ongoing issue in the delivery of occupational therapy services since there were no manufacturers of adaptive equipment within BiH and the lack of materials meant that graduates could not make equipment themselves. Despite obstacles to obtaining adaptive equipment, it was evident that attempts had been made, from within the organizations, to resolve other resource problems. Examples included efforts to solve transportation issues so that the organizations could support the graduates' delivery of services within their clients' homes. Time was accommodated for graduates to schedule occupational therapy sessions, allowing changes in frequency and duration of visiting which would more appropriately match occupational therapy objectives. In addition, solutions to the problem of having a high need for the service with very few occupational therapists were tried within some of the organizations.

Identifying resources required to adequately implement occupational therapy, and seeking internal solutions were important activities within each organization during these early stages of implementation. Unfortunately, problems with the acquisition of equipment was expressed in the disillusioned voice of supervisors and graduates who felt that efforts would be wasted without adequate materials. Scheirer hypothesized that the more frequently resources are obtained from within the organization's usual sources of support, the easier long-term implementation will be. While internal

efforts were being made to solve transportation, time and personnel issues, equipment remained problematic since there was no local source for the supply of adaptive equipment.

Attention to the development of relationships with both clients and supervisors revealed that a degree of role change was required on the part of these two groups of stakeholders for adequate implementation to proceed. The expectation for clients to participate in the occupational therapy process through identifying problems, scoring their own performance and setting goals compelled clients adapt to their new role as a participant in the therapeutic process. This change was contrasted with the expectations clients had of a more passive role, familiar to them as recipients of prescribed physiotherapy interventions. As graduates found, change was not easy for their clients and necessitated the development of trust before they could be assured of their clients' willingness to participate.

As supervisors became more familiar with specific activities of occupational therapy, they began to identify personal opportunities for role change. Increasing their support of occupational therapy by applying their skills of networking and management to the developmental process were within their capacity for change. The nature of the innovation meant that supervisors did not have first hand experience with the procedures utilized in occupational therapy which is consistent with Scheirer's opinion that supervisors may require specific training in the innovation to ensure a match between the program goals and expectations. It was evident that through these initial stages of implementation, supervisors were becoming oriented to the purpose and objectives of occupational therapy interventions. Although role change was identified as necessary, the lack of specific education to supervisors left them speculating as to what direction this role change should take.

Relationships with both clients and supervisors demonstrated the importance of role change demanded of beneficiaries and supporters, as stakeholders in the implementation of occupational therapy. Scheirer hypothesized that stakeholders have the power to enhance or undermine the implementation of an innovative program through their behavioural responses. This influence was evident in the supervisors' concern regarding client acceptance of this new therapeutic approach and in the graduates' perception of support available from their immediate supervisors. Results of this study suggest that

increasing client and supervisor knowledge of the role of occupational therapy enhanced the implementation process, however, time to develop rapport with clients and to educate others was a significant hurdle for graduates in their management of daily work as occupational therapists.

Micro-Level Variables

Micro-level factors focus on the understanding, commitment and behavioural change necessary from graduates involved in the day-to-day implementation of the innovation and include skills, incentives and cognitive supports. As noted in Chapter 2, the composite of these qualities, were broadly defined as competence. Isolation from peers was an influential factor operating at the micro-level within organizations employing graduates.

Activities at the individual-level of implementation required graduates to balance their old role within the organization with their new professional responsibility as occupational therapists. Through the process of implementation graduates realized that their role was evolving from one who 'just did what others said to do', to one requiring initiation and decision making. This challenge was discussed by the graduates in terms of the conflict between their desire for independence and their need for assistance from their supervisors. These needs were in turn shaped by their individual abilities, motivation and experiences.

Graduates sought guidance from their supervisors, clients and the occupational therapy educator, however, remained isolated from one another, limiting this inherent source of support. Isolation from their peers may have fostered increased cognitive dissonance between their old and new roles since they lacked a cohesive work group of peers who shared similar views. In Scheirer's (1981) opinion, the lack of a viable project work group may influence the level of acceptance of a new program on an individual level since employees are likely to be socialized into positive or negative beliefs about the innovation by the norms already established within the workplace (p. 54). The dispersion of graduates throughout the country, following graduation, fostered a sense of isolation in the delivery of this new program. This was evident in the graduates' examination of incentives for implementing occupational therapy on an

individual level, without the feedback of a supportive peer group. This accentuated the difference between the environment fostered within the educational program and the reality of the workplace context to which each graduate returned.

Meso-Level Variables

Meso-level factors mediate the enactment of macro and micro-level processes. At this level, the focus is on supervisory expectations, the development of routines for the innovation and communication flow. Meso-level processes influence the extent to which old practices influence the development of new practices and are dependent upon the degree of congruence of the innovation with organizational processes (Scheirer, 1981). In this study, meso-level influences included: the process of distinguishing between expectations for graduates, supervisors and physiotherapists; and communication problems which limited the sharing of ideas surrounding the innovation.

The provision of increased latitude in their new role, in the presence of an established work hierarchy led to a certain amount of role confusion for the graduates. Supervisors traditionally held responsibility for assessment, and intervention planning where physiotherapy treatment was concerned, giving them control over the activities implemented within the organization. With the addition of occupational therapy to their work role, graduates took on similar responsibilities. From a review of the literature, it was expected that the supervisors would want to maintain their control within the work hierarchy, perceiving the graduates as a threat to their position. Results of this evaluation, however, indicated that supervisors were agreeable to the addition of occupational therapy, since it would fill a gap in the delivery of community based services. Supervisors identified occupational therapy as having the potential to link the medical and social supports for persons with disability and they pointed to the graduates' expertise in the area of the environment, noting that this knowledge was not previously available to them in their experience as medical doctors.

The distinction between activities required in the role of supervisor and those of occupational therapist were further defined through the analysis of differences between physiotherapy and occupational

therapy. These distinctions seemed to clarify the implementation procedures of each worker, fostering a common vision of occupational therapy among supervisors of each organization and prompting role change from within each organization. Organizational change was evident in the philosophical shift described by supervisors who considered that occupational therapy services should be provided for clients who had reached a plateau with physiotherapy but would require ongoing support in accommodating for impairments through the adaptation of activities of daily living. By virtue of placing occupational therapy following physiotherapy treatment and including occupational therapy for clients with cognitive and mental health problems, supervisors felt that these decisions would ultimately change the way services were delivered within their organizations.

Despite common ideas among supervisors, communication problems limited the degree to which their vision was shared with graduates. In addition, lack of reciprocity regarding job perceptions limited opportunities for graduates to provide feedback to their supervisors on the day-to-day process of implementing their service. "Open communication channels" were proposed as essential for both vertical communication, between superiors and subordinates, and horizontal communication between staff members in general (Scheirer, 1981, p. 51). It appeared as though participation in the implementation evaluation, which overtly requested feedback regarding job perceptions, acted as a catalyst for the transmission of ideas. This stresses the significance of communication flow as a factor that underlies all other processes within program implementation.

ROLE CHANGE AND PROBLEM SOLVING

It is remarkable that while a number of factors limited the implementation of occupational therapy, role change and problem solving were two conditions which appear to have had a mediating influence on contextual factors at each of the macro, micro and meso levels within these organizations. These conditions are consistent with stages three and four of Scheirer's implementation process (Scheirer, 1981). Common among the organizations employing graduates was the significance of role change and problem solving processes in supporting early attempts at implementation.

Role change was fundamental to the promotion of implementation activities, not only for the graduates, but also for their clients as beneficiaries of this new service. Changes were also manifest in supervisors as supporters of the innovation and although less tangible, role change for the organization as a whole, facilitated the implementation of occupational therapy. Role change focuses on the actual behaviours of those affected by the innovation and is dependent upon the ability to change, motivation and supports (Scheirer, 1981). As such role change can be considered a process, which enhances the fit between new behaviours and expectations for the innovation.

Scheirer's view of role change links the throughput and output components of Model of Educational Accountability, as presented in Chapter 2. Through the application of the occupational therapy process with clients, graduate competence, gained through the educational program, is applied beyond graduation as new behaviours, while contextual factors act as a filter for implementation efforts, based on the expectations for the innovation. Results of this study, however, revealed that role change was also required of clients, supervisors and the organizations as a whole, which suggests a further link between contextual factors as they act to support or impede implementation outputs: client outcomes and organizational impacts.

This is not to say that role change came easily for these groups, only that it was a natural behavioural response to the contextual influences, which arose during the implementation process. The process of role change was by no means completed. Indeed, the significance of this process was stressed by respondents who felt that substantial experience with implementation would be required for the evolution of new roles.

Problem identification as an essential component of the implementation process must not be underestimated, since diagnosis is necessary prior to further modification of the innovation. Scheirer (1981) noted that even with careful prior planning, success with implementation attempts cannot be guaranteed and require an orientation toward problem-solving methods (p. 66).

Problem identification was significant to this evaluation which examined issues arising in the early stages of occupational therapy implementation. Problem finding took place throughout each stage

in the implementation process and problem solving processes were used to counter the contextual influences, which presented barriers to implementation. Respondents illustrated a number of occasions where the implementation of occupational therapy was facilitated through the use of problem solving strategies. Examples included the innovative use of every day materials by graduates to adapt client activities in an effort to increase independence with self-care, and the accommodations made by supervisors to support transport to client homes for the purpose of carrying out occupational therapy within the clients actual environment.

Findings from this study suggest that the implementation of occupational therapy was supported by problem solving processes on the part of graduates and their supervisors, despite limiting contextual factors. Hence, problem solving processes facilitated both client outcomes and organizational impacts.

In summary, role change and problem solving were identified as two key processes which served to mediate the influence of contextual factors during program implementation. Application of the occupational therapy process was influenced by a range of contextual factors operating within each of the organizations employing graduates. Role change accompanied by problem solving strategies were behavioural responses of participants, which served to counter these contextual influences at each macro, micro and meso organizational level. The combination of implementation efforts through the application of the occupational therapy process, contextual influences and behavioural responses impacted on the potential for implementation effects.

In this study, participant responses through role change and problem solving were influential factors in determining the extent to which client outcomes and organizational impacts could be attained. This was evidenced in positive client outcomes in the area of self-care where graduates used ingenuity to solve client problems using their knowledge and available resources. The fact that organizational impacts occurred suggests that there was an active process of problem identification and solution finding, despite the reality of no final commitment regarding the adoption of occupational therapy within each organization. These impacts were achieved through initial implementation efforts, which respondents described as their process of gaining experience with the innovation. These findings suggest a

relationship between actual implementation outcomes and the degree to which role change and problem solving processes were operationalized.

CONCLUSION AND IMPLICATIONS

This study demonstrates the application of a model of educational accountability to enhance our understanding of the relationship between learning, transfer and impact resulting from the development and implementation of educational programs. It was proposed that the educational accountability process is fundamental to evaluations of health service education since these programs exist to meet the needs of consumers as the ultimate recipients of service provided by graduates. The model was useful in designing an evaluation, which considered transfer and impact together as elements of program implementation, providing a framework for identifying client outcomes and organizational impacts as indicators of educational accountability. The model also allowed for the identification of specific implementation activities, namely, application of the occupational therapy process and contextual influences on the implementation.

This study illustrates the importance of contextual factors in terms of their influence over implementation results. While contextual influences had a predominantly limiting effect over implementation results, this discussion has focused on two conditions that actually facilitated implementation. Understanding these conditions allows for the identification of recommendations regarding ways in which these conditions could be enhanced throughout the educational accountability process. Overall, results suggest that some successes were possible in the face of some insurmountable obstacles (such as those imposed by the lack of equipment and materials to support interventions).

This study suggests that role change and problem solving processes were influential behavioural responses, which actually facilitated the implementation of occupational therapy in BiH, through their mediating effect on contextual variables. These findings are supported by the literature which proposed that application of learning is conditional upon both the opportunities and limitations provided within the work climate (Baldwin & Ford, 1988; Curry & Wergin, 1993; Fleishman, 1953; House, 1968; Stenhouse,

1975). Findings from this study lend support to Scheirer's (1981) theory of implementation as a dynamic process which includes: adoption of the program; assembling resources; role change; problem solving and institutionalization. While Scheirer's conceptualization emphasizes role change as being dependent upon the assemblage of resources, nonetheless, findings of this study suggests that both role change and problem solving are interdependent behavioural responses which facilitate implementation even in the absence of adequate resources.

This is not to say that resources were not important, indeed respondents identified the need for equipment and materials to support occupational therapy intervention, however, the fiscal reality facing these organizations made acquisition of adaptive equipment unattainable at the time of this study. These findings are significant for the development of educational programs in BiH and other developing countries where resources may be lacking. If occupational therapy is to succeed in BiH, organizations employing graduates will have to rely on role change and problem solving as processes to compensate for these obstacles. Otherwise, the innovation risks failure, based on the belief that occupational therapy will not succeed in the presence of limiting contextual factors. Assuming that role change is necessary on the part of all program participants suggests an interdependency of program stakeholders for ultimate decisions leading to the adoption of the program. Considering the degree of role change required from consumers, as active participants in the implementation process, highlights the effect this group has on the ultimate institutionalization of a new program.

This study lends support to Scheirer's tenet of the implementation process as being dependent upon the whole organizational social system since each component process can have a vital influence on the success of implementation efforts (Scheirer, 1981). Considering role change and problem solving processes in terms of their contribution toward enhancing educational accountability allows us to postulate methods for incorporating these conditions into the educational accountability process such that they improve overall implementation.

It seems evident that in maintaining accountability, graduates were able to foster change in their clients' performance and satisfaction with self-care activities and to a lesser extent with productive and

leisure tasks. Therefore, these organizations could continue to promote successful development in this area. In addition, this study revealed the extent to which program participants have already begun the process of identifying barriers to implementation, many of which were solved using creativity and ingenuity. Since barriers were common among each organization, encouraging communication flow vertically, between supervisors and graduates, and horizontally, between these six organizations, would likely foster continued development of problem solving initiatives. Establishing project work groups would likely facilitate continued creativity on the part of stakeholders and is consistent with Scheirer's recommendation for improving implementation at the intermediate level within an organization since it would establish a set of work group norms based on similar beliefs. In this way, improved communication channels would serve to foster rather than inhibit role change.

Including consumers as agents in this problem solving process would promote their active involvement in the development of occupational therapy while at the same time demonstrating the application of client-centred principles. If it is truly a client-centred therapy approach, consumers should participate in decisions that affect the institutionalization of this new service.

This study demonstrates that the implementation of innovative programs requires subsequent role change and problem solving as dynamic processes. These processes serve as mediating conditions to the aggregate of contextual factors influencing the implementation of innovative programs. When role change and problem solving processes are present, their dynamic relationship impacts on the successes with both client and organizational outcomes.

Although this discussion has focused on methods to improve overall implementation, these strategies can be considered in relationship to the design of future educational programs for occupational therapy practitioners in BiH. Including role change and problem solving, as specific educational objectives, would in turn lead to the development of teaching methods to promote these skills prior to graduation from the program. As presented in Chapter 2, generalization and maintenance of learning are considered conditions of transfer (Baldwin & Ford, 1988). The educational design has the potential to influence both learning objectives and teaching methods, hence facilitating transfer of learning beyond

graduation. Therefore, including role change and problem solving as specific educational objectives may foster improved transfer.

Including educational opportunities for supervisors to learn more about occupational therapy prior to the graduates return to the workplace would also faciliate increased cohesion between these two groups of stakeholders. Similarly, including consumers in the process of educational development and implementation would ensure their understanding of and commitment to the development of this innovation.

This study has implications for other allied health programs wishing to incorporate an educational accountability focus into curriculum development. It would be most enlightening for developers of allied health programs to consider the educational accountability process as central to the development of educational objectives, teaching methods and implementation activities in order to ensure transfer of learning beyond graduation. The model of educational accountability, as a tool used in educational design and evaluation, can facilitate the educational accountability process within each domain of learning, transfer and impact.

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APPENDIX A

INFORMATION/CONSENT

Occupational Therapy Education in Bosnia and Herzegovina
Program Evaluation

Principal Investigator:	Michelle Villeneuve. Graduate Student School of Rehabilitation Therapy; Clinical Educator International Centre for the Advancement of Community Based Rehabilitation (ICACBR), Queen's University (613) 545-6000 x 4609
Supervisor:	Dr. Mary Ann McColl, Associate Professor and Head of the Division of Occupational Therapy, Queen's University (613) 545-6000 x6319
Director:	Dr. Malcolm Peat, Director and Professor in the School of Rehabilitation Therapy and Executive Director of the ICACBR, Queen's University (613) 545-2920
Contact Person:	Dr. Nada Zjuzin. Professor of Physiotherapy at the High Medical School. University of Sarajevo (071) 524 178

You are being asked to participate in a research project which will evaluate the implementation of Occupational Therapy in Bosnia and Herzegovina. The evaluation is being conducted by Michelle Villeneuve, graduate student and employee of the War Victims Rehabilitation Project, ICACBR, Queen's University.

You will be interviewed on two occasions by one of the occupational therapists. The interview will take place at a time and location which is most convenient for you. You will be asked questions related to your performance of daily activities. A second interview will take place within a 4 – 6 week period. The second interview will be similar to the first. Each interview will take no longer than one (1) hour of your time.

There are no risks associated with participation in this evaluation. There are no direct benefits to participation in this evaluation. However, it is hoped that the information gathered from this study will benefit future planners of educational programs. Information from this study will benefit rehabilitation professionals and educators working in Bosnia and Herzegovina.

Participation in this study is voluntary. You may withdraw at any time without prejudice to your rehabilitation care at present or in the future. If you refuse to participate, your rehabilitation care will not be compromised in any way.

All information obtained during this study is confidential. Information, collected by your occupational therapist will be stored in a locked cabinet and available only to the principal investigator, Michelle Villeneuve. Your name will not appear in any published findings from this study.

You may contact Michelle Villeneuve, principal investigator, at any time if you have questions regarding this research project. Michelle can be reached in Sarajevo at (071) 203 020.
Two copies of this consent/information are provided. Please sign both copies and keep one for your records.

By signing this consent form, I agree to participate in the above named research project.

Signature of Participant Date

The information within this consent has been explained to the participant and to the best of my knowledge, the subject understands the nature of the study and the risks and benefits involved.

Signature of Data Collector Date

APPENDIX B

INTERVIEW GUIDE

Introduction

As you are aware, [name of graduate/ graduates] participated in a study designed to assess the implementation of occupational therapy. During that the time of this study, patients/clients of [name of facility] were recruited by [name of graduate/yourselves] from his/her/your list of referrals for therapy.

During the study, patients/clients of [name of facility] agreed to participate by completing one interview and one questionnaire with [name of graduate/yourselves]. Following a period of treatment, the same questionnaire and interview were re-administered with the patients/clients.

What I am interested in is the process used at [name of facility] for occupational therapy intervention. The following questions will relate to this topic.

I would like to record this interview on audiotape so that I don't miss anything. Is this acceptable to you? If you wish, the recorder can be turned off at any time. I will also make some notes while we talk.

1. Can you describe for me the process used to refer patients/clients for occupational therapy treatment at [name of facility]?

   Probes: How does this compare with the process of referral to physiotherapy?
   Who refers patients/clients for occupational therapy service?
   How is it determined, who should be referred?
   When are patients/clients referred?

2. What types of patients/clients are referred for occupational therapy intervention?

   Probes: What kinds of problems do they have?
   Are these different problems than those referred to physiotherapy only?

3. What services do you (or referee) expect the occupational therapist to provide?

4. How does the occupational therapist provide service for patients/clients at [name of facility]?

   Probes: What do they do?
   Where do they provide occupational therapy services?

5. Are you aware of any challenges in implementing occupational therapy treatment?

   Probes: What are these challenges?
   Why do you think this is so?

6. When patients/clients are referred for occupational therapy, how long does their treatment usually last?

Probes: How many days, weeks, months (duration)?
What is the frequency and intensity of treatment?
Is this different than the duration, frequency and intensity of physiotherapy treatment alone?

7. The study allowed 4 – 6 weeks for occupational therapy treatment before re-assessing patients/clients with the questionnaire and interview. What are your feelings about this length of time allotted?

8. What is your opinion of the referral process used at [name of facility] to refer patients/clients for occupational therapy?

9. How much time do you expect [name of graduate] to provide occupational therapy service?

10. Do you have anything you would like to add?

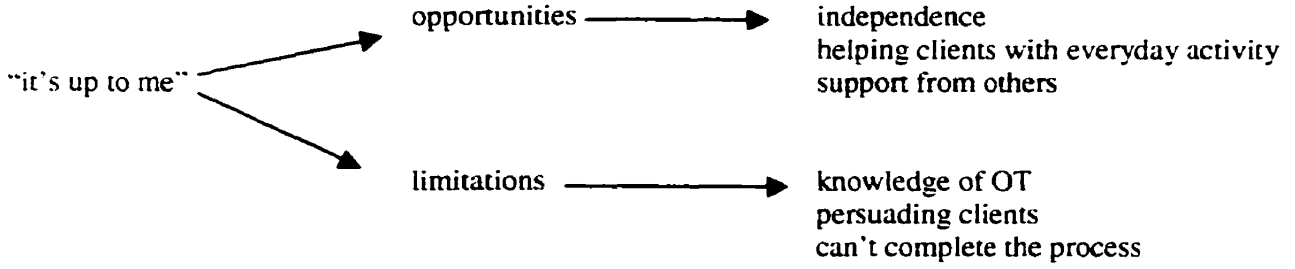
I appreciate you taking the time to meet with me and I thank you for providing me with your opinions and knowledge. We talked about a lot of things. As a result, it may be helpful for me to contact you by telephone if I need some clarification about what we discussed. Would this be okay with you?

APPENDIX C

DATA ANALYSIS TOOLS

Objective 1. Occupational Therapy Process

(1st level coding)

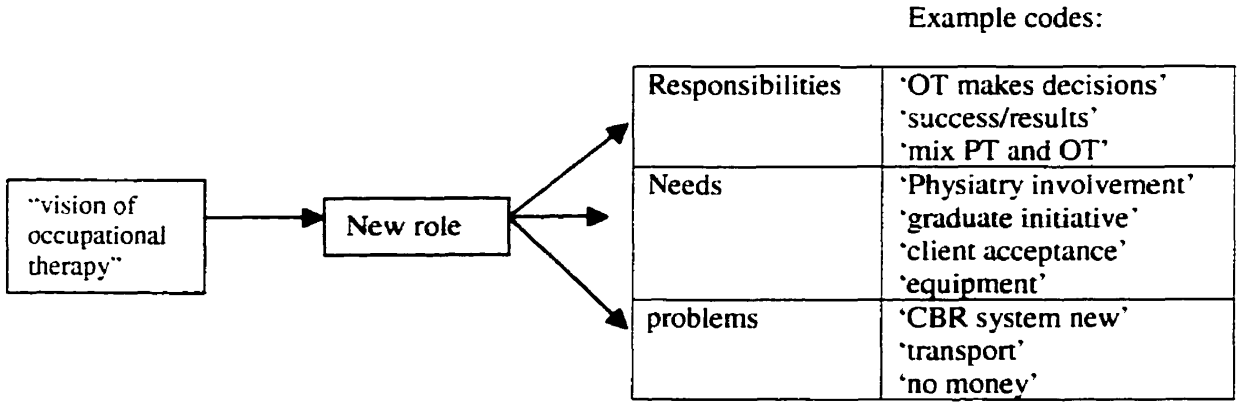


(2nd level coding, examples)

Stage in OT Process	Actions	Results
Referral	'dr. refers' 'find clients myself' 'educating others'	'work time' 'no indication for OT'
Assessment	'administering COPM & P-E Fit' 'explaining OT' 'developing trust'	'clients want something concrete' 'client acceptance' 'inappropriate questions'
Intervention	'1st goal PT' 'education/advice' 'adapting activity'	'squeezing time' 'going in circles'
Discharge	're-assessment'	'question results'

Objective 2 Contextual Factors

(supervisors 1st level coding)

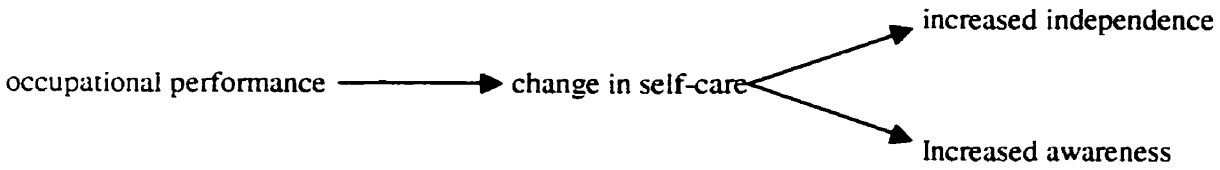


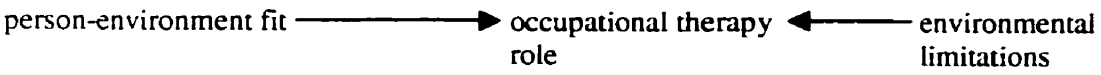
(2nd Level Coding using cross-case analysis of graduate and supervisor responses, Example codes)

Organizational Levels	Contextual Factors
Macro	decision/control processes; obtaining resources; relations with environment
Meso	supervisory expectations/work group norms; technical requirements/ standard operating procedures; communication flow
Micro	competence

Objective 3 Client Outcomes

(graduate & supervisor reports)





Objective 4 Organizational Impacts

(supervisor reports)