THE EFFECTIVENESS OF THE 'COUNTERPART ROTATION' PROCESS TO UPGRADE KUWAITI PHYSIOTHERAPY PRACTITIONERS

by

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ABSTRACT

There is a need to understand how to provide the best clinical teaching model for post-graduate physiotherapists. Models of continuing education and internship have been used for new graduates but the use of such for practicing post-graduate physiotherapists to improve standards of physiotherapy practice in an entire country has never been previously implemented. As part of the Kuwait-Dalhousie Project, a Counterpart Rotation Program using direct patient service in Kuwait, was developed and evaluated. The purpose of the Counterpart Rotation Program was to integrate and apply learning in current research and academic studies to the clinical environment, resulting in the development of clinical expertise and improved patient management. The purpose of this descriptive study was to evaluate the effectiveness of the Counterpart Rotation Program and to respond to the question, "Has the Counterpart Rotation Program been an effective way to improve the theoretical knowledge and clinical skills of Kuwaiti physiotherapists?" Two tools were utilized for gathering data, a chart audit (May and Oct. 1999) for 130 and 150 physiotherapists, and a physiotherapy survey (April 2000) to 141 physiotherapists. Analysis of the data collected indicated the use of a Counterpart Rotation Program may have improved the standards of practice of physiotherapists in Kuwait. They perceived their clinical skills were more effective and efficient and their theoretical knowledge was increased. This continuing education model was shown to have a positive effect on practicing physiotherapists and it may be appropriate for improving standards of practice in other countries.

CHAPTER ONE

Introduction

In 1996, the Ministry of Health in the State of Kuwait expressed concern over the high cost of sending patients abroad to mainland Europe, Great Britain and North America for physiotherapy and rehabilitation. The public and the Ministry of Health generally described the quality of the service provided by Kuwaiti physiotherapists in Kuwait as poor. At the time of this study there were 223 physiotherapists in the Ministry of Health. The majority (140) were Kuwaitis trained in Kuwait (for the past ten years) or before that in Cairo. The 91 expatriate physiotherapists were predominantly Egyptian but were also from India, Bulgaria and Nigeria. Of the physiotherapists trained through the Kuwait-Dalhousie project from the Ministry of Health (n=181), 72% were Kuwaiti, 18% were Egyptian, and 10% were other (Bulgarian, Indian or Nigerian). The physiotherapy programs in Kuwait and Cairo offered a Bachelor of Science degree in Physiotherapy. These programs were members of the World Confederation of Physical Therapy but had not completed the equivalent accreditation process that was used by North American programs. The credentials of the other programs (India, Bulgaria, and Nigeria) are beyond the scope of this study.

Patients were reluctant to use the physiotherapy services provided in Kuwait and often chose to travel to western-based treatment centres for care. Physiotherapists were working as technicians in an environment that was dictated by physiatrists, specialists in physical medicine. Physiatrists performed patient assessments, established diagnoses, and prescribed physiotherapy treatments. The physiotherapist was expected to carry out the treatment and was discouraged from completing an independent physiotherapy assessment, and determining physiotherapy intervention in conjunction with the patient. This practice was not consistent with standards of practice in the western world. The physiotherapy profession in Kuwait was lacking:

- Standards of practice
- Post-graduate continuing education programs
- Peer review and other continuous quality improvement measures
- Self-regulation

The Ministry of Health speculated that by establishing a program to improve the quality and quantity of physiotherapy and rehabilitation care in Kuwait there would be a reduction in the need to send rehabilitation patients abroad, and there would be cost savings that could be used for other health care needs. To reach this objective, the physiotherapy profession required assistance with:

- improving the efficiency of patient care activities
- improving quality of care

- promoting the profession to the public
- developing systems to support appropriate physiotherapy standards of practice.

The School of Physiotherapy, Dalhousie University, Halifax, Nova Scotia, responded to a request by the Ministry of Health in Kuwait to improve the quality of care. The Kuwait-Dalhousie Project (hereafter referred to as the Project) was presented in a proposal submitted in June 1996 to the Ministry of Health outlining a Rehabilitation Unit for the State of Kuwait (Makrides, 1996). The Project was initiated in October 1996.

The Project was implemented, taking into consideration the implications of the cultural differences between Canada and Kuwait, as well as the limited development of the physiotherapy profession in Kuwait.

The Project's mission was to promote excellence in physiotherapy and Rehabilitation services in the State of Kuwait through service, education, clinical training and research according to Canadian standards. The philosophy of the Project included the following underpinnings:

- The adaptation of Canadian standards of physiotherapy and rehabilitation in Kuwait to suit Kuwaiti lifestyle and culture.
- The promotion of rehabilitation services based on current knowledge and research to promote evidence-based practice.
- The application of a multidisciplinary model to achieve optimal functional outcomes and quality of life for each patient.

- The ongoing communication and collaboration with physiotherapy and other rehabilitation professionals to address identified service, training and education needs.

The Project consisted of four main components (Makrides, 1996):

1. Service Improvement - Five multidisciplinary clinical teams (Orthopaedics, Paediatrics, Neurology, Cardiovascular/Cardiorespiratory, and Burns and Plastic Surgery) worked on-site in Kuwait with Kuwaiti counterparts in a Counterpart Rotation Program providing education and training through the service platform. A professional support team (nurse, health educator, dietitian, psychologist and exercise physiologist) was available to provide comprehensive intervention to the patients and training to the counterparts. The team was housed at the Kuwait-Dalhousie Physiotherapy and Rehabilitation Centre (KDPRC), an autonomous centre, within the Physical Medicine and Rehabilitation Hospital (PM&R).
2. Training Plan - As well as the counterpart rotation program there were continuing education activities provided by each team and within the Ministry for all rehabilitation professionals. These took the form of inservices, guest lectures, tutorials, case presentations, multimedia instruction, and seminars. Workshops in Kuwait and a Clinical Residency Program in Canada were another focus of this part of the overall proposal.
3. Accreditation - Physiotherapy departments were initially assessed for accreditation based on Canadian standards. Consequently preparation

and assistance to meet these standards was provided throughout the Project.

4. Research - Research seminars, development, and assistance with research studies was undertaken by the Research Director with all physiotherapy departments in the Ministry of Health.

The training and educational mission of the Project was paramount to improve patient service. In order to have a lasting effect on the quality of the service provided, it was imperative that both theoretical knowledge and evidence-based skills be introduced in a clinical setting. The quality of the clinical application of this knowledge was essential and was the focus of the counterpart rotation. The pursuit of clinical excellence through clinical training and continuing education are well documented in the literature: Oldmeadow (1996) and Carpenter (1995). Health professions are reviewing their current practices and demanding competency of their practitioners as an entry level to practice. Clinical excellence is expected as an individual progresses through their career.

Purpose of the Study

The purpose of this study was to evaluate the effectiveness of the Counterpart Rotation Program. In general the study attempted to respond to the questions:

- has the Counterpart Rotation Program been an effective way to improve theoretical knowledge of the Kuwaiti physiotherapists?
- has the Counterpart Rotation Program been an effective way to improve the clinical skills of the Kuwaiti physiotherapists?

There is a need to understand how to provide the best clinical teaching model for practicing physiotherapists. Models of internship and clinical rotations have been used for new graduates entering not only physiotherapy, but also other health professions. The use of a Counterpart Rotation Program for practicing post-graduate physiotherapists to upgrade or improve standards of physiotherapy practice in a country has never been previously implemented. Education programs developed in other parts of the world have incorporated clinical rotations for physiotherapists re-entering the profession but not to upgrade the knowledge and skills of practicing physiotherapists.

This study describes the Counterpart Rotation Program education/training model, evaluates its effectiveness and reports the findings.

Objectives of the Study

The objectives of the study were:

1. To determine if there were improvements in standards of clinical practice for Kuwaiti physiotherapists after one eight-week Counterpart Rotation,

2. To determine the level of satisfaction perceived by the physiotherapists with the Counterpart Rotation as an educational experience,
3. To determine if the Counterpart Rotation Program met the Kuwait physiotherapists' perceived learning needs.

Objectives 2 and 3 are relatively subjective measures of satisfaction and will be addressed as adjuncts to the main question.

CHAPTER TWO

Literature Review and Justification of Components of the Counterpart Rotation Program

The first section of this review defines clinical excellence and relates it to physiotherapy. Clinical training and how it is placed in the education of physiotherapists is then discussed. The Counterpart Rotation Program used in this Project was a new model of enhancing the performance of practicing physiotherapists in Kuwait. The development of this Counterpart Rotation Program was unique to this Project as it was used for practicing physiotherapists and employed a one-to-one model of supervision while treating patients. This may be a model for other countries to adopt to further develop professional requirements. The literature review examines education models and principles and models of clinical training to demonstrate how the counterpart rotation model was established. Cultural influences, considerations and their influence on training are important, as the model was based on Canadian experiences applied to an Arabic culture. The last sections of the review examines the literature to support the methods of evaluation chosen, i.e. chart audit (part of peer review) and questionnaire surveys.

Clinical Excellence

It is important to understand the scope of practice of the physiotherapy profession. Physiotherapy or physical therapy is defined by the American Physical Therapy Association (1986) as "the examination, treatment and instruction of human beings to detect, assess, prevent, correct, alleviate and limit physical disability for the purpose of reducing the incidence and severity of physical disability, movement dysfunction, bodily malformations and pain" (Bassett, 1995 p. 787).

After graduating from university, all physiotherapists must strive for clinical excellence (Farrell 1996). Clinical competency leading to clinical expertise in the realm of patient management is essential to the provision of quality patient care. In physiotherapy, skilful treatment requires ongoing education, clinical thinking or reasoning skills, and excellent communication skills (Farrell, 1996). Clinicians must be able to perform a skilled and detailed examination of the patient, identify problems, treat the patient's problems, and meet their functional needs (Higgs, 1992). These were basic objectives of the Counterpart Rotation Program as they are the foundations of patient treatment.

Mathews (1989) stated that each new client encounter presents a problem to be identified and a mystery to be solved. There are patient variables that tend to be characterized by uniqueness, uncertainty and sometimes, unknowns. The palpation skills or craft skills are acquired from

the treatment of thousands of patients, which is important for the clinicians' knowledge base (Farrell, 1996). Each patient becomes a mini-research project from which data are collected to determine which patients will benefit from various types of treatment or to determine if the patient will benefit from any sort of treatment. It is generally agreed that professional expertise requires not only the possession of technical skills, but also the use of analytical skills for critical analysis and appropriate intervention (Farrell, 1996). It is precisely these skills that the Counterpart Rotation attempted to improve and promote. The objectives of the Counterpart Rotation demanded that the counterparts must show evidence of their ability to analyze patient assessment information and use this when planning treatment intervention. Moreover, demonstration of continual re-assessment and re-evaluation of the patient and their problems and planning appropriate intervention were crucial to the success of the counterpart in the Rotation Program.

Oldmeadow (1996) examined developing clinical competence in physiotherapy students and stated that it is a challenging task due to the complex clinical environment. Studies have shown that students want frequent, constructive feedback as well as time with supervisors for observation, questioning and sharing of ideas (Oldmeadow, 1996). The Counterpart Rotation was an 8-week period of such frequent supervision. A study by Knowles (1980) stated that the development of expertise results from the progressive mastery of skills of increasing complexity. The progression from novice to expert occurs with the increasing ability to learn

from experience (Oldmeadow, 1996). Benner (1982) describes the development of expertise through five stages: 1) Novice, 2) Advanced beginner, 3) Competent practice, 4) Proficient, and 5) Expert.

The Counterpart Rotation was designed for experienced post-graduate physiotherapists who have identified an interest in a specific clinical area of practice. In the Kuwaiti context, the majority of physiotherapists could be determined to have attained the level of the "advanced beginner" using Benner's stages. This may be attributed to little or limited availability of professional continuing education as well as difficulty in easily accessing, current Western literature and research (Makrides et al, 1996). The "advanced beginner" stage demands less supervision than the "novice" and is characterised by the identification of recurring events and clinically relevant patterns. However, prioritising information and recognising critical cues continues to be difficult. Moderate supervision is necessary and supervisors need to be aware and tolerant of inflexibility in the students who are using established routines and protocols.

The third stage, "competent practice", is the entry level to practice for new graduates in Western programs. A Physiotherapy National Examination (Canada) attempts to verify this by setting a minimum standard that must be achieved by new graduates before licensure to practice. This stage is characterised by the ability to analyse data, make diagnostic and management decisions and follow through with plans to achieve designated goals. It was the objective that the counterparts, upon completion of their 8-

week rotation, would attain the level of "competent practice." The stages of "proficient" and "expert" are not necessarily reached by all practicing physiotherapists in North America. The achievement of these levels develops from the practice of thoughtful reflection rather than longevity or seniority (Oldmeadow, 1996).

Clinical Training

The Counterpart Rotation Program at the KDPRC was a period of clinical training or education that established standards for time and achievements. It has been well documented that clinical education, training or supervision is an important part of the curriculum for health care professionals and is incorporated into university and technical programs (Higgs, 1993). Each clinical profession has developed standards that determine the number of hours of clinical training each student must successfully complete. Harden (1999) described the need for closer support and supervision, the need for greater feedback, and the lack of time that consultants have to dedicate to clinical training. These have been identified as factors that have a significant detrimental effect on the quality of training. Harden (1999) further prescribed that having a set of objectives and learning outcomes can lead to improved training.

A service-based approach to learning has achieved wide recognition and there was a need to link education closely with service and use the first-hand

experience of the doctor, or other practitioner, as a major source of learning (Harden, 1999). Higgs (1992) argued that clinical education or practice with patients was vital to help students gain confidence in handling patients, develop their clinical/technical skills and acquire skill in clinical decision-making. Clinical education programs using patients and real problems has been widely used and been proven as an effective method of training health care professionals according to Higgs (1993).

Training through a service platform was chosen for the Counterpart Rotation and allowed the two objectives, providing service for the Kuwaiti public and training for the physiotherapists, to be met. The physiotherapists were experienced graduates that had identified a clinical area of specialty and had patient management issues that required improvement. In the Counterpart Rotation the participants were encouraged to select patients that closely resembled their caseload at their employing hospital. Providing new theoretical knowledge and practical application through a clinical caseload allowed identified patient issues to be managed and appropriate standards of practice to be reinforced. Within this model of clinical training, the predominant learning styles were convergent and accommodative (Harden 1999), suggesting that the optimal learning techniques were problem solving and hands-on experience. Harden (1999) also suggested that future training courses must be designed to consider this learning style in order to make optimum use of the learning time available.

Graham (1996) discussed the evolution of learning in physiotherapy and reports that trends in clinical education began in the 1970s with the demonstration of clinical competence. During the late 1970s and early 1980s the development of problem-solving skills evolved. Emphasis was placed on the process of problem solving and modes of inquiry rather than on the simple mastery of information. The late 1980s and early 1990s saw the focus shift to problem-based learning structured around patient problems.

The term "reflective practitioner" (Schon, 1987) has been used during in the recent past to refer to the development of graduates that have grasped the concept of clinical analysis and the use of clinical reasoning. This is the hallmark of a professional as opposed to a technician. In a presidential address to physiotherapists at the 1989 American Physical Therapy Association Congress, Jane S. Mathews stated that one of the goals for physiotherapy programs is to prepare their graduates to be reflective practitioners. Physiotherapy programs have extensive clinical components that provide students with the opportunity to interact with clients as both observers and supervised clinicians. Continual reflection on practice techniques, standards, rationale and outcomes is essential to the profession of physiotherapy. The process or development of that reflective capability and awareness is the foundation of initial professional education (Mathews, 1989). One of the primary goals of the Counterpart Rotation Program was to provide the counterpart with the opportunity to practice a problem-solving approach in a clinical setting, and provide opportunities to justify the

assessment and treatment methods chosen. Thus, the counterpart was asked to reflect upon and justify the clinical decisions made.

The use of reflective concepts such as problem-solving, clinical reasoning and critical analysis had not been practiced in Kuwait previously. The physiotherapists in Kuwait had considerable difficulty analysing patient information to determine the clinical problems that required intervention. Their clinical education activities as students were established around modelling behaviours and not problem-solving. In Canada, the current state of practice is based on clinical analysis and problem solving and is the result of comprehensive clinical education programs and post-graduate continuing education (Carpenter, 1996).

Hunt, Adamson, Higgs, & Harris (1998) reviewed teaching strategies in western schools of physiotherapy. They observed that the prevailing philosophy indicated that physiotherapists need technical knowledge and skills, as well as capacity to be innovative, able to solve problems, and create new solutions. They also needed to understand the environment in which they operated and to be able to work effectively with people and within the work context (Hunt et al., 1998). The Counterpart Rotation Program attempted to reinforce these qualities and strategies by establishing objectives and methods for each counterpart. This was reinforced through the provision of systems of practice and management outlined in Accreditation preparation.

Al-Refai (1995) studied the changing patterns of health care delivery in the Arabian Gulf Region and stressed the need for change. As lifestyle has changed in the region due to economic growth, health care has also undergone extensive transformation. Patterns of health care delivery systems in the region should also change as they are influenced by the emergence of more complex health problems related mainly to lifestyles. Those responsible for health care delivery need to address their methods and approach in order to become more efficient and more effective. Al-Refai (1995) acknowledged that medical education does not end with the undergraduate program. Rather it is a continuum, including specialty training and continuing education, which is the joint responsibility of health institutions and health care providers. Similarly, Higgs (1992) reported that physiotherapists need to be capable of performing competently in an autonomous, professional capacity, and be able to respond to the changing health care needs of the community. The importance of maintaining competence and improving general knowledge throughout their careers is essential to meet the changing scope of practice of physiotherapy. Continuing professional education is essential to assist physiotherapists to meet these demands. This realisation supported the need for a continuing education plan for health care professionals, of which physiotherapy was one of the largest groups in Kuwait.

Continuing Education

Continuing education for professionals has been defined as education and training beyond the basic professional degree or license (McCormick and Marshall, 1994). Continuing professional education is essential to all physiotherapists and enables them to be aware of, and educated in, changes in clinical practice and research. Physiotherapists have a responsibility to adhere to professional standards and maintain a comprehension of current clinical knowledge and skills.

It has been well documented that the body of knowledge upon which physiotherapy is based changes rapidly each decade (McCormick & Marshall, 1994). Young & Willie (1984) reported that the overwhelming viewpoint in the literature was that professionals must remain abreast of the developing knowledge base of their profession and skilled in the techniques associated with good practice.

By the end of the 1970s, mandatory continuing education was established for many professions, and health care was one of them. Ogden (1985) reports that as a result of mandating physiotherapy continuing education in Colorado, there was increased attendance at professional meetings, quality of patient programs offered improved, self-assessment instruments were developed, membership of professional organisations increased, professional journals reflected a greater interest in educational matters, and there was an increased respect and recognition of the

profession by allied professionals. Engaging in educational activities was viewed positively as it moved requirements for practice beyond initial licensure (Young & Wylie, 1984). More recently, the concept of lifelong learning has gained increasing currency (National Committee of Inquiry into Higher Education, 1997). The next step, according to Young & Wylie (1984) was to ensure that the professional continuing education system met the needs of the individual practitioners. The Counterpart Rotation insisted that the participants set their own goals based on their perception of their clinical and professional needs. Continuing education activities such as lectures, tutorials, in-services, case studies and workshops within the Rotation and the Project were established to meet these needs.

Continuing education is often heavily influenced by personal motivation. Young & Willie (1984) stated that people cannot be forced to acquire knowledge and skills that have no meaning for them, nor can they be forced to practice according to the highest standards. The incorporation of the information from continuing professional education into daily practice rests predominantly with the professionals themselves. The availability of time, supplies, new equipment and department protocols and standards must also be considered before utilizing information into patient programs. It is ultimately up to the physiotherapists to make the changes in their practice upon completion of the Counterpart Rotation, using the theoretical knowledge and clinical skills gained.

According to Gosling (1997), there are mounting pressures on professionals to demonstrate their accountability to the public and to prove the efficacy of their practice. As stated previously, the public in Kuwait was reluctant to use the local physiotherapy services and chose more western-based international centres for their treatment. Many Kuwaiti patients have had at least one visit to a Western Medical Centre outside Kuwait, funded by the ministry of health, and they look for a similar service in Kuwait (discussion with Dr. Yousef Al-Momen). When this service is absent, they demand to be sent abroad again (discussion with Dr. Yousef Al-Momen). This resulted in increased health care costs for the Ministry of Health. One part of the Project mandate was to train physiotherapists to provide quality and competent physiotherapy care for all patient populations.

Carpenter (1996) examined the changing profession from the perspective of education. She stated that instead of relying on what works from experience, there was a need to ensure credibility of practice by establishing functional outcomes for interventions, and conducting clinical research generated from within practice. This is reflective of current practice in Canada, and the Counterpart Rotation introduced functional outcome measures in all counterpart rotations.

In Kuwait, prior to the implementation of the Project, there were few opportunities for continuing education and no structures in place for ongoing physiotherapy education within the Ministry of Health. Physiotherapy in Kuwait currently has neither a professional association nor a professional

journal. The KDPRC and specifically the Counterpart Rotation has provided continuing professional education for physiotherapy over a three-year period.

Educational Models and Principles

The Counterpart Rotation program of the KDPRC used a unique approach to providing education and training to Kuwaiti and expatriate physiotherapists. The design of the 8-week rotation was based on several underlying educational principles and models. Also, the program took into account the limitations of the physiotherapy profession and the cultural and environmental differences specific to Kuwait. This section of the review will focus on the educational principles of adult education, clinical placement/residency mentoring, modelling, peer learning, interdisciplinary teams, collaborative models and clinical training in different cultures.

Adult Learning

McCormick & Marshall (1994) proposed that educators have widely accepted and promote the concept that adult learners should be self-directed and self-motivated to learn. The authors also state that adult educators recognise that the initiative for learning has to come from the learner and the way in which learning is to occur should be determined by the learner. The learning experience will be most effective when it addresses the perceived needs of the learner (McCormick & Marshall, 1994). The first activity of the

Counterpart Program was the development of learning objectives from the caseload and work situation of the counterpart. This was critical to set the stage for the learning activities.

Gibson, Nair, Davies & Saunders (1995) discussed a program that was established and implemented using adult learning methods. This was a new approach to clinical training for medical students that included small group tutorials that involved the interns in the exploration of clinical problems, involvement in the planning and evaluation of the program, and feedback from the interns that led to further course development. The KDPRC Counterpart Rotation program was designed and implemented using all of the above methods.

Carpenter (1996) stated for teaching to be effective there must be an acknowledgement of the contribution of the learners or participants. As the counterparts worked closely with the Canadian physiotherapist, their contribution was acknowledged and valued. Great importance was placed upon the counterpart's interpretation of findings after an examination of a patient and consequent planning of patient treatment. The counterpart had to actively participate in order to take advantage of the practical application of new information, skills and knowledge and to meet their objectives that determined the success of the rotation.

Clinical Residency / Placement

Farrell (1996) argued that a clinical residency program approach would improve clinical education and the profession of physiotherapy. He stated that the residency concept that integrates academic and advanced clinical education at the post entry-level was a sound method for improving the clinical education process of the entire profession. He maintained that the testing of clinicians over an extended period of time with actual patients was an excellent process for training for advanced clinical competence. Education that takes place in a clinical environment is the best venue to teach advanced communication skills, analytical and clinical reasoning skills, treatment selection, and progression skills (Farrell 1996).

Farrell (1996) maintains that a key ingredient of residency training is working side-by-side with a mentor and learning how and when to modify the patient examination and treatment as data are emerging from the patient. Through consistent contact with a mentor, the training clinician is asked to rethink and remould his/her clinical reasoning process. Professional educational programs need to assist students in becoming critical analysts. This process should occur in the context of clinical practice so students learn to problem-solve and learn to respond to data as it emerges from the patient. The clinical residency established to meet these needs in the US should be 6-12 months in length (Farrell, 1996). It would be sensible to assume that this identified US need would also be relevant in other countries including Kuwait.

Learning activities and experiences add to the knowledge base and when used during clinical practice, may guide reasoning. The role of the patients providing feedback is an advantage of the clinical setting. Each new learning experience or clinical episode provides clinicians with the opportunity to re-evaluate, refine and supplement their knowledge and strengthen their knowledge base. Both physiotherapists and physicians have been found to perform clinical reasoning better in real treatment situations and with practice (Farrell, 1996). This supports the model of education through clinical practice. When learning takes place in the appropriate context, the student may recall that learning when in future similar situations.

Mentoring, Modelling and Peer Learning:

Historically, the components of physiotherapy that are taught poorly in undergraduate programs are patient management of large caseloads, time management, development of flexibility and a positive attitude to change, documentation skills, and interpersonal and inter-professional communication (Farrell, 1996). These skills are best learned through constant mentoring (Higgs, 1993). These components have been observed as lacking in the counterparts by the Canadians (Makrides et al, 1996). General counterpart objectives and specific individual objectives were developed and utilized to guide the development of these skills.

Modelling is an important component of the teaching function and takes place when a person observes the behaviours of others, forms an idea of the

performance and uses this information to guide further behaviour (Ladyshewsky, Barrie & Drake, 1998).

Clinical education or training attempts to produce independent clinicians who can evaluate their own skills, are reflective, and become life-long learners. Lincoln & McAllister (1993) described how students used a superficial and deep approach to learning and that reflection is an important part of clinical learning. Deep learning is necessary for students to apply theory to clinical situations in an appropriate way and reflection is necessary for students to learn from their clinical experiences. Peer learning promotes deep learning, reflection and self-direction that assist in developing clinical independence (Lincoln & McAllister, 1993). A peer is a colleague. Essentially, peer learning techniques were used with the counterparts. Both the Kuwaitis and Canadians involved were physiotherapists graduated from four-year baccalaureate programs with a number of year's experience, and as much they could be considered to be "peers".

Peer learning was also believed to be an important part of the learning processes of students of health care programs (Lincoln & McAllister, 1993). Peer interactions allow adults to maintain their independence and may affirm the adult's self-esteem, self-concept and perceptions of usefulness, according to Lincoln and McAllister (1993). Adults bring a wealth of experience to a learning situation that may facilitate peer learning. It has been proposed that another benefit of peer learning may be the promotion of collegial relationships between peers (Lincoln & McAllister, 1993). These

authorities also argued it was important to encourage co-operation between peers because it is an essential skill for allied health professionals in their work environment. The lack of teamwork was another issue in Kuwait. There was little evidence that the health care professionals worked together to meet the goals and needs of the patients. Each provided individual care and there was no co-ordination of service or planning of care (Makrides et al, 1996). In the rotation model, each discipline worked in a team as peers and each was equally valued. It was anticipated that the counterparts return to their work environment with a different view of and respect for their allied health colleagues.

Peer learning may also benefit the profession as a whole. One of the problems in Kuwait, in discussion with a senior group of Kuwaiti physiotherapists, was that the profession was not strong and not visible to the public (Makrides et al, 1996). Nemshick & Shepard (1996) reported that peer learning contributes to a sense of professional identity. In the future, this may result in the establishment of a united professional group that values members' expertise and whose members actively consult each other. Peer learning promotes the development of professional identity and it is hoped that after working in a peer relationship with the Canadians the Kuwaitis may work with each other in such a way. This did not happen between physiotherapists in Kuwait prior to 1996, as there was no consultation for clinical, educational or administrative issues (Makrides, et al, 1996).

Interdisciplinary Teams

Cox et al (1999) report on a clinical placement whereby students spent time with specialties other than their own. One of the main tenets of the Project's Counterpart Rotation Program was the inherent application of the interdisciplinary approach to improve the outcome for the patient. Cox et al (1999) also reinforced that client-centred models rely on accreditation standards that emphasize quality from the client's point of view. This in turn increases the importance of comprehensive team management.

Cox (1999) further postulated that students working in an interdisciplinary model gained insight into what the other health professionals did with their patients or clients. It helped them see a holistic approach. Treating the entire person instead of seeing the patient in parts is a superior model of treatment and allows for more appropriate and accurate clinical analysis (Cox, 1999). The Counterpart Rotation Program model allowed the counterparts to assess patients with other team members. This had not been done before in Kuwait in physiotherapy (Makrides et al, 1996).

Clinical reasoning also involves interacting with others through the communication and justification of clinical decisions to colleagues and patients, and the involvement of the patient in the data collection and decision making process. The latter process recognizes the patient's rights and responsibilities in the management of their own health and well being (Higgs, 1993). The interdisciplinary model that was used in the Program

realized that the patient was an integral part of the team and was included in all decisions, goals and outcomes. The patient was also responsible for actively participating in treatment in the Centre and at home. Previous to the Project, the patient was a passive recipient of treatment in a medical environment and all decisions and directions were made by the health care providers.

Collaborative Models

Models of clinical teaching have incorporated both 2:1 (2 learners:1 mentor) and 1:1 (1 learner:1 mentor) learning situations for physiotherapy in the past decade (Nemshick & Shepard, 1996; Ladyshewsky et al, 1998). During the period of the Project both the 1:1 and 2:1 models were used as methods of learning. One of the premises supporting this model is that physiotherapists seldom work in isolated clinical environments, but rather in environments that involve peer review, collaboration for treatment ideas, peer support in staffing shortages or special projects, and discussions with other treatment team members to achieve patient goals. Both co-operative or collaborative (2:1) and individual learning (1:1) combined, enhance the completeness of the professional development experience (Nemshick & Shepard, 1996; Ladyshewsky et al, 1998).

Bandura describes a framework or theory for co-operative learning (Ladyshewsky, Barrie & Drake, 1998). The theory describes three kinds of reinforcement that influence learning outcomes. These are:

1. direct external reinforcement-people regulate their own behaviour on the basis of consequences they experience
2. self-administered reinforcement-involves regulating a person's own behaviours according to standards
3. vicarious reinforcement-the result of observing the experiences of others

Co-operative learning and modelling provide an environment for the three types of reinforcements described by Bandura. Co-operative learning strategies appear to be especially effective for high-level cognitive outcomes such as identification of concepts, analysis of problems, judgement, and evaluation (Ladyshewsky, Barrie & Drake, 1998). These are ideals inherent to the objectives of the Counterpart Rotation and are the components of clinical reasoning. The counterpart set individual objectives based on their perceived needs, utilizing caseload issues and previous continuing education. The objectives were from the psychomotor and cognitive domains of learning.

Clinical Training in Different Cultures

Two articles describe clinical training in different cultures, relevant to the Counterpart Rotation Program implemented in Kuwait. Malik (1991) discussed how medical students were exposed early in the curriculum to skill acquisition that adopted problem-solving, integrated and community-oriented approach in a medical school in the Sudan. The study described how the program was set up and how the students learned these skills. One

important finding was the need to have time to practice practical skills with real patients. In traditional medical schools there is no formal mechanism to develop or acquire these practical skills and this has not provided for the optimum learning situation for students (Malik, 1991). Malik (1991) described an effective skill lesson and states such a session should include the following steps:

1. Clear guidelines of the steps and components necessary to perform the skill.
2. An effective demonstration of the skill by an expert person.
3. A sufficient period for the student to practice the skill.
4. Supervision during the practice with feedback to improve the ability of the student to perform the skill.
5. Evaluation of the students' ability to perform the skill.

The second paper discussed the internship year designed for graduates of a community-oriented medical school in Beersheva, Israel (Porter, 1991). Graduates were placed in community clinics and participated in one-day per week post-graduate education programs. The need to extend the internship program in community care to improve the level of primary care in Israel was illustrated. Porter (1991) stated that definitions of the specific service and clear educational objectives of an internship are essential to allow evaluation of an innovative internship experience. The article added that experience must have adequate supervision and a patient load that is realistic for a new graduate entering medical practice.

Cultural Issues

Higgs & Titchen (1995) discussed how types of knowledge were obtained. Personal knowledge was subjective, concrete and existential; it was also knowing one's self. Behaviour was influenced by the individual's personal experiences and their reflections on these. The individual's behaviour was also influenced by their frame of reference. Issues that have constructed the Kuwaiti frame of reference are:

- Educational - the majority of the physiotherapists studied up to grade twelve in Arabic before entering the university physiotherapy program conducted in English. The Kuwait physiotherapy curriculum was different in both strength and emphasis.
- Historical – Kuwaitis were primarily tribal and nomadic until quite recently. The first major Western influence in Kuwait was British (early 1950's with the discovery of oil) and the strong links with Britain for products, services and technology were still evident today.
- Cultural - the influence of Islam was paramount on both home and work environments and the division of roles as defined by sex. Women were largely responsible for all domestic and childcare responsibilities and had rigid social responsibilities to the extended family. Men had total control over all business, government, religious and political decisions, but also had rigid social responsibilities to the family. Female physiotherapists

would not treat male patients unless in an acute situation such as intensive care. Most female physiotherapists chose to treat females in an outpatient setting and leave the acute care to expatriates. Female patients would not be treated by a male physiotherapist. Boys were considered to have reached puberty by the age of eight and are then transferred to adult services for treatment

- Socio-economic

(personal communication in Kuwait, May 1996-May 2000).

Within this frame of reference, knowledge was translated into decisions for practice, which were influenced by the person's convictions and judgements about the worth of this knowledge and its relevance to the current situation (Higgs & Titchen, 1995).

Australia is one country that has looked at the educational challenges for different cultures and has marketed its educational services to overseas students, mainly those from Asia. University programs have given priority to marketing to these nations and most have found it necessary to establish an international education office (Ladyshewsky, 1996). The literature does describe several issues concerning overseas students studying abroad, although not specifically in the healthcare field. The Kuwait experience was unique in that this was a Western project bringing its expectations and standards to an entirely different culture. Ladyshewsky (1996) stated that many problems stem from the culture of learning, which is embedded with context-specific values unique to the host country. Students of non-English

speaking Asian background are reported to have significant clinical difficulties in their programs. This may be due to differing expectations regarding English language proficiency and may purely be a language problem. These difficulties could also be attributed to a different reason; that of the student's clinical reasoning skill. The influence of religion and traditional education structures in Asia reinforce memory work and passivity as a mode of learning rather than critical analysis and challenge, which tend to be more associated with Western learning strategies (Ladyshewsky in press). It is crucial for an academic and/or clinical instructor to understand the differences between Western and Asian cultures. This is also absolutely true for Kuwait. Another factor for Asian students is the desire to "save face" (Ladyshewsky, 1998). This factor may explain why some clinicians are averse to taking risks during clinical practice, preferring instead to be guided through their placement to ensure success. Similar occurrences have been observed during the Counterpart Rotation as the Kuwait culture upholds reputation and dignity. To admit to not knowing something was considered shameful.

All three issues described above have been identified as influencing the learning environment in Kuwait:

- Religion - Islam exerts a great influence over the learners
- Learning Methods - many of the learners had expectations of being given knowledge and there were no expectations of practice or performance
- Saving face - reluctance to admit any lack of information.

Ladyshewsky (1996) attempted to answer the question: "what is the influence of culture and language on student performance and clinical supervision?" A study with nine South East Asian students in the fourth year B.Sc. (Physiotherapy) program at Curtin University of Technology in Perth, Western Australia, concluded that cultural factors were often separate and foreign to the worldview of the students who came from a different culture.

Western modes of clinical education have different expectations of performance, such as self-directedness, assertiveness and independent problem solving. These develop as part of learning in North America and other Western cultures. The question of whether Western and Arabic learning expectations and behaviours are in direct conflict needs to be examined. These contrasting expectations can lead to difficulties in the clinical environment of the Counterpart Rotation. Clinical instructors expected the counterparts (as expected with Western students) to be relatively independent and assertive in the learning experience by bringing forward their own ideas and perspectives. In contrast, the Asian student's view of learning and subsequent behaviour was typically designed to ensure normative approval and harmony (Ladyshewsky, 1996). Behaviours that were seen to be assertive, such as presenting your own ideas and opinions, violated the concepts of maintaining harmony and enduring normative approval (Ladyshewsky, 1996). For instance, students in Hong Kong were found to have a narrow, systematic, and step-by-step orientation to learning

that was influenced in part by their cultural traditions of learning and their ability to speak English (Ladyshewsky in press). These learning traditions were quite different from Western approaches, which emphasized critical analysis, fluidity of knowledge, and constant revision. The impact of cultural learning traditions, therefore, was also an important factor. The application of theory to practice required the student to have some grasp of the local culture (Ladyshewsky, 1996). Otherwise, meaningful dialogue could occur between the client and the health professional.

"Wait time" was a communication phenomenon defined as the silent time period which occurs between individuals when communicating (Ladyshewsky, 1996). These wait periods were culturally bound. In Western culture, significant delays may indicate a lack of knowledge or a lack of interest. In a cross-cultural teaching and learning situation, these "wait time" expectations can lead to assumptions about a student's competency. Even with this understanding it was sometimes difficult to determine whether an apparent lack of knowledge is due to this communication issue or a true lack of knowledge (Ladyshewsky, 1996). South East Asian students may have stated that they have understood feedback when in fact they have not. For the student, admitting that you have not understood the feedback may come across as disrespectful and may lead to a "loss of face." Cross-cultural supervision requires more time, slower, clearer speech and careful communication construction.

Literature describing clinical supervision from a western viewpoint was plentiful. Of relevance to this study was the changing process when the learner comes from a different cultural or language background. Ladyshewsky (in press) asked whether the student's cultural background could be taken into consideration when evaluating performance. Answers to these questions were not readily available in the literature. Ladyshewsky has investigated this phenomenon in Perth, Australia, and concluded that Asian learners have different expectations of their educational experience. He has stated that cultural traditions influence peoples' attitudes to the acquisition and interpretation of knowledge and in a Confucian, Buddhist, Hindu, or Islamic society, the ability to cite quotations from the sacred writings, the sayings of the sages, and the words of the leading scholars is the essence of scholarship.

An important and fundamental question regarding learning in Kuwait examined whether there were contrasting teaching and learning expectations present between western worlds and Islam. Ladyshewsky (in press) stated that non-western cultures would have different behavioural approaches influenced to a large degree by their religion, national history and political systems. These cultural differences, therefore, would have a direct influence on how learners deal with their day-to-day learning challenges. It is well documented, for example, that the role of women in the Islamic culture influences learning expectations (Ladyshewsky in press). Women have responsibilities to their extended family that override their clinical learning

responsibilities to a much greater degree than a Western female. Students studying in Western educational systems often had difficulty changing roles from passive recipient in the process to an active participant. These same students also had difficulty questioning and developing critical views on the issues under discussion (Ladyshewsky in press).

In an interview with a male Kuwaiti physiotherapist, some of the views on learning from a Muslim perspective were explained (Sarkhou, 2000). This view countered the idea that learning was passive. The prophet Mohammed said "seek knowledge from birth to death." This was the same expectation for both sexes. Seeking knowledge was the duty of every believer. Knowledge was defined as general knowledge and not restricted to religious knowledge. When asked why some Kuwaiti physiotherapists (all are Muslim) did not take the information (both theoretical and skill) from the Rotation and apply it to their practice, the answer was, "not everybody knows his responsibility." From an Islamic point of view, learning is very important. The mind is very important as is thinking and learning. God is talking to people that were thinking. Another cultural issue that was mentioned was that there is no personal accountability and that material goods played a very important role in society (Sarkhou, 2000).

Leavitt (1995) described nursing in a different culture, concluding that each clinician was immersed in their own culture with its associated beliefs, attitudes and behaviours that guided personal and professional interactions. It was the framework that guided individuals in everyday life. People all tend

to be ethnocentric, believing their own cultural and way of life was the norm, the standard by which all others are judged. The ability to function well in another culture was not easy. Leavitt (1995) argued that individuals must strive for a feeling of cultural relativism whereby one can understand and accept the validity and reasonableness of others' beliefs and practices. The author suggested that we recognize our ethnocentricity, look for and acknowledge the similarities and differences of the host culture, and understand that there is no right or wrong way, just ways that are different. This can readily be applied to physiotherapy. Much of the practice of physiotherapy is not evidence-based and there are many different approaches to the same condition. The commonalties are the successful resolution of patient problems.

Of importance were the issues around understanding the goals and philosophy of a program or work situation, and background and rationale of a project. Particularly important was whether the program was primarily oriented to service or training and education of people who will take over after the program has finished. A conflict in individual goals and the program's goals will lead to disappointment. Maintaining realistic expectations and reasonable goals was extremely important for success.

In order for programs which cut across cultural or sub-cultural values to be effective, they must take account of the perceptions, beliefs and attitudes of the community (Parfitt, 1998). The author also wrote that experts from the West who were working in development projects of any kind need to be

guided by the influence of the culture of the group they were assisting. The effects of political decision-making and culture were in most cases difficult to separate (Parfitt, 1998). Parfitt (1998) stated that the major reason why Western medicine has been able to hold such a powerful position in global health development was because of its powerful technological advancement in the 20th century. This was true of Kuwait, looking to the West for current advances in medical technology as well as information.

Data Collection

Chart Audit Issues

A chart audit is carried out to ensure that a physiotherapist continues to meet minimal standards of practice for patient care (Tobin & Judd, 1998). By examining physiotherapy records in a systematic method, it is possible to obtain a numerical value that compares individuals, facilities and provides feedback that should act as an impetus for improvement in charting. The chart audit provides limited information that evaluates whether or not the objectives of the counterpart rotation have been met. There were no formal or informal chart audits done in Kuwait prior to 1997. During the counterpart rotation, audits were completed with the counterparts that introduced them to the system and measured their practice against a standard. Formal chart audits were initiated in Ministry of Health physiotherapy departments in May, 1999.

Tobin & Judd (1998, 1999) have written a series of articles discussing the barriers to chart audit implementation systems in England. They described the chart audit as a cyclical process that was used to evaluate the effectiveness of clinical care against agreed standards or evidence-based guidelines with the sole aim of improving services for patients (Tobin & Judd 1998, 1999). The benefits to patients were outlined when quality issues were identified and actions were taken to deliver clinically effective practice and optimum outcomes of care. They stated that health care professionals may also improve their knowledge and understanding of effective practice and improve the care they were giving through audit systems (Tobin & Judd 1998, 1999).

The British government looked at quality care issues in a National Health System in a Government White Paper (1998). Doctors in Great Britain had been using chart audits since 1989 and nursing and therapy professions since 1991 (Tobin & Judd, 1998). Implementation of chart audits was one of the ways for physiotherapy managers or superintendents to measure effective physiotherapy service. Physiotherapists can bring about changes in clinical care and benefit patients through clinical audits. The new agenda for quality that was emerging in the modern National Health System in Britain has set the stage for the clinical professions to be able to make the achievement of excellence in clinical practice a priority for every individual practitioner (Tobin & Judd, 1999). Clinical audit, when carried out as part of

an overall clinical effectiveness strategy, provided an effective method of measuring and demonstrating the quality of physiotherapy services.

Simpson (1998) stated that documentation was used to indicate treatment intervention for a clinical problem and was seen to promote a high level of practice. It was a useful tool for teaching. The documentation results and indications should be in accordance with evidence-based practice wherever possible. If there was no physiotherapy record on the chart, then Simpson indicated that the assessment and treatment programs do not exist. They cannot be shared with other team members or used for teaching purposes. Thus the importance and relevance of charting and chart audit were constantly reinforced throughout the counterpart rotation.

El-Din (1991) discussed how patient care was influenced by the quality of the physiotherapy and the system in which the care was provided. Both must be taken into consideration when evaluating the effectiveness or efficiency of the care. Peer review, encompassing chart audit, looked at the quality of physiotherapy care. It was not the only way to review quality of care but it was one way and considered an important one by the author. This article concurred that chart audit was useful for evaluation of the quality of physiotherapy care. Peer review was also a way to demand accountability. It evaluated the quality and efficiency of services of other physiotherapists. The process by which patient care was given and recorded, and the outcomes of the care given, was examined. The standards in the review or chart audit reflected the established standards of the profession. Kuwait had

no established standards of physiotherapy practice, so Canadian standards were used.

The assumption that guides peer review was that the closer the facility was to the accepted professional standards of care, the higher the quality of care that can be assumed. Patient care reviews were completed by scrutinizing patient records. The reviewer looked at the initial evaluation, appropriate and measurable treatment goals and other information such as the length and duration of treatments. Progress notes must be objective and document patient progress and changes in status. Discharge information was also reviewed and must relate to the original goals of the treatment. There would also be a discharge summary and home program. These were basic components of a physiotherapy patient record and reflected the minimum standard. A standard score can be determined and a picture of the facility or individual relative to standards can be achieved.

Questionnaire Issues

A survey refers to mailing a questionnaire to human subjects to obtain their voluntary responses to items on the survey instrument (Michels, 1985). The advantages of the questionnaire survey were that it can meet the objectives of the research, obtain the most accurate information possible, and was time efficient (Sheatsley, 1983). Good questionnaires must be organized and encourage respondents to provide the most accurate information they are capable of providing. The respondent must have an

awareness of the issues being surveyed. In this study, the questionnaire respondents were all counterparts, and intrinsically aware of the issues. For a valid response, it was important that the respondents were interested in the issues and topics included in the questionnaire (Sheatsley, 1983).

Open questions in the survey allowed respondents to answer using their own frames of reference, entirely uninfluenced by any specific alternatives suggested by the interviewer. In this study questionnaire only one question used an open format. The responses to this question needed to be clear, concise, and amenable to categorization.

Closed questions also pose some disadvantages, essentially forcing respondents into a fixed answer. For the reasons of time, cost, interviewer variability, respondent variability, coding and analytical problems, the researcher was generally well advised, to employ a closed format for as many questions as possible on any large-scale survey (Sheatsley, 1983).

Within survey design a five-point Likert scale provided flexibility, allowing the researcher to look at all five groups in the total sample, but can easily combine the two agree positions and/or the two disagree positions when looking at subgroups of smaller size (Sheatsley, 1983). Beyond five categories, it became increasingly difficult to describe the positions using language (i.e. difficult, somewhat difficult etc.). Beyond a 5-point Likert scale the researcher must resort to some sort of scale that forced respondents to answer in terms of numbers rather than give their opinions, a task that some people find difficult.

Selection of the neutral may suggest to the respondent that it was safe to do so and they may escape a difficult choice. This was avoided in the survey.

CHAPTER THREE

Chapter Three provides a description of the Counterpart Rotation Program and background information on the Program.

The investigator collected data after the counterpart had returned to his/her practice, at his or her employing hospital. It can be assumed, then, that this may demonstrate whether the Project has made any changes or whether the Kuwaiti physiotherapists are returning to their old methods of practice. Indications that the physiotherapists are continuing to practice according to the Canadian Standards of Physiotherapy Practice that were demonstrated in the counterpart rotation would include completing comprehensive assessments and complete and appropriate charting for each patient.

The Counterpart Rotation Program

The main activity of the Project in Kuwait was the Counterpart Rotation Program. The intent was that all Kuwaiti (N=140) and the majority of the expatriate physiotherapists (N=91) in the Ministry of Health complete one eight-week rotation with one of the five Canadian clinical teams.

The purpose of the Counterpart Rotation was to integrate and apply learning in current research and academic studies to the clinical

environment, resulting in the development of clinical expertise and improved patient management. The Counterpart Rotation Program was designed for postgraduate physiotherapists in Kuwait to assist them with meeting Canadian Standards of Physiotherapy Practice, in order to improve quality of patient care. The goals of the Counterpart Rotation Program were to provide the Counterpart with the opportunity to:

- acquire additional skills and capabilities that may not have been addressed in previous training and education
- practice a problem solving approach in a clinical setting, and provide opportunities to justify the assessment and treatment methods chosen
- develop and enhance previously acquired clinical capabilities in complex situations
- further develop effective written and verbal communication skills with clinical personnel and patients
- provide an opportunity to further develop professional attitudes and behaviours.

The Counterpart Rotations consisted of an eight-week internship for a Kuwaiti or expatriate physiotherapist, known as a counterpart, to work in a Canadian 'environment' that modelled Canadian standards of practice within the limitations of the space, equipment, supplies, and personnel available. The components of the Counterpart Rotation were designed specifically to closely resemble the activities that the counterpart faced in their own clinical practice setting. Patient care activities that promoted clinical reasoning such

as assessments, evaluations, presentations, and case studies were used constantly.

The counterpart worked with one Canadian physiotherapist for the eight weeks to upgrade their clinical skills, patient management and theoretical knowledge. The counterpart brought clinical and theoretical issues from their practice to the Rotation, and practiced in an environment that promoted a collegial, problem-solving relationship with the Canadian physiotherapist. Mutual respect was established at the beginning of the rotation and the Kuwaiti physiotherapists viewed the Canadians as peers and not supervisors. The Canadian team member worked with the Counterpart to assist with the achievement of objectives, using co-operative learning, modelling, mentoring and peer learning during many of the patient care and professional activities of the eight-week program period. The majority of Counterpart Rotations employed a 1:1 model, although some rotations did allow for the use of the collaborative model, 2:1 method.

Background Information for the Counterpart Rotation Program

Preparation for the Counterpart Rotation began in October, 1996, by gathering information regarding numbers of physiotherapists and areas of specialization in order to plan a timeline for the rotations. Consultation and collaboration with Kuwaiti health professionals to fully understand the health care system in Kuwait was essential during this time, as were visits to all

hospitals to meet with physiotherapists to explain the goals of the Project. A questionnaire was developed and distributed to all physiotherapists to determine their continuing education needs.

By March 1997, the Canadian clinical teams began working to link with Kuwait physiotherapists and other health care providers to gain trust and credibility. Meetings continued with key medical and rehabilitation professionals and patient information and clinical assessment forms were developed for use in the counterpart rotation. In April 1997 the orthopaedic team started the first eight-week Counterpart Rotation at Hospital #9, and in May 1997, eight-week Counterpart Rotations began at the Centre for both the orthopaedic and neurology teams. Ultimately all five teams were providing Counterpart Rotations by November 1, 1997. In September 1997, the Counterpart Rotation Evaluation Tool was modified to suit the Kuwait physiotherapy environment and to evaluate the counterparts' clinical competence. Regular structured counterpart interviews were established and completed at two, four and eight-week intervals. A master Counterpart Rotation plan was established, and a clinical education program within the Counterpart Rotation was established and continually revised in response to regular feedback from the counterparts.

Simultaneous to the Counterpart Rotation implementation, the physiotherapy staff and superintendents in Ministry of Health physiotherapy departments were preparing to meet Canadian Physiotherapy Standards of Accreditation. These two activities, the Counterpart Rotation and

Accreditation preparation, both worked towards implementation of Canadian Standards of Practice for physiotherapists and were mutually supportive of each other. The Accreditation process supported the objectives of the Counterpart Rotation Program by establishing standards, policies and procedures that mirrored the Canadian standards that were expected in the Counterpart Rotation. These standards supported the patient care activities in the Counterpart Rotations. The counterparts were first exposed to these practices at the Centre and then Accreditation activities attempted to organize the systems to support the continuation of appropriate standards of practice upon their return to their departments.

The Dalhousie University Evaluation of Clinical Competence Form was chosen to evaluate the competency of the participants. This form has been used in the undergraduate program in The School of Physiotherapy, Dalhousie University for at least eight years. It was modified to suit the Kuwaiti population and to exclude the affective domain i.e. the areas of professional behaviour, attitudes, ethics, values and standards. The premise for this was that the Project was attempting to introduce Canadian standards in the areas of patient assessment and treatment that belong specifically to the cognitive and psychomotor domains of learning. The counterparts were asked to complete the tool and to perform a self-evaluation to give them an indication of their level of competency. The original evaluation tool was difficult for the counterparts to complete due to the language in the document. Even though all charting was done in English in the Ministry of

Health hospitals, the average Kuwaiti physiotherapist had a poor grasp of the English language and often did not chart at all. Therefore, the language in the original tool was modified to better reflect the cultural and professional standards of physiotherapy in Kuwait (Appendix A). During the trial period, it became evident through interviews with the counterparts and the Canadian physiotherapists that the modified tool was still not appropriate for this environment. Several issues were documented:

- The counterparts stated that the evaluation tool treated them like students,
- the Canadians stated that the tool did not afford an opportunity to show progression of the counterparts' skills, as the counterparts' theoretical knowledge and practical skill level were not compatible with 'Competencies' identified in the original or modified instruments,
- the counterparts were not co-operative in completing the form and felt that they had had a process imposed upon them, and,
- the original form assumed a Canadian-based curriculum of clinical education in physiotherapy and preparation at a Canadian university.

Therefore, a format containing both broad clinical objectives and more specific individualized objectives was developed and implemented with the counterparts participating as committed partners in the Counterpart Rotation Program. The broad clinical objective was to successfully complete a Counterpart Rotation. To do this, the counterpart was required to:

1. Complete comprehensive assessments on each patient, using the Canadian forms/guidelines.

2. Apply thorough problem solving skills and assessment findings to make a clinical analysis.
3. Develop treatment programs appropriate to the patients' needs and goals, based on the clinical analysis and evidence-based practice.
4. Modify and /or progress treatment procedures appropriately, in response to ongoing evaluation.
5. Follow standardized charting guidelines, in documenting the initial evaluation, treatment plan and effectiveness of the treatment.
6. Use appropriate outcome measures for each patient.
7. Provide comprehensive management of the patient using an interdisciplinary approach, including referrals to other health care services, discharge planning and follow-up.

In the individual learning situation, the counterpart, with the assistance of their Canadian mentor, was expected to develop more specific learning objectives that matched their needs and clinical caseload. A learning objective determined what the counterpart would learn, how this was accomplished, within what period of time, and what the outcome would be. The objectives and their outcomes formed a basis or structure for the Counterpart Rotation, as well as a tool for discussion and evaluation. The Counterpart Manual (document into which objectives were written) was a clear and concise statement of what the counterpart was expected to achieve.

The setting of objectives by the counterparts in accordance with adult education values was chosen as a model in order to engage the counterpart in the education/mentorship process. The Counterpart Manual was introduced on the first day of the Counterpart Rotation. The rationale, description of how to complete and examples of objectives, learning resources required and outcomes expected were reviewed with the counterparts in detail. During the first week of the Rotation, the counterparts determined their specific objectives to meet their learning needs. These objectives were reviewed formally by the Canadian supervisor and the counterpart at four and eight weeks, but it was recommended that the review take place more frequently. The Project assured that at the end of eight weeks the counterpart would have met most of their objectives, thereby practicing according to Canadian Standards of Practice.

CHAPTER FOUR

Methodology

Chapter Four describes the methodology and the data collection of the study. Data collection for the study was taken from two sources and relates to each of the three main objectives of the study. For ease and clarity of reporting, the methodology and data collection for each objective will be described separately. The limitations of each type of data collection are then listed.

For the purpose of this thesis and in order to respond to the research questions, two methods of data collection were selected. The first was chart audit data collected in May and October of 1999, and the second was information gathered from a survey questionnaire administered to all physiotherapists that had completed a Counterpart Rotation. These two data sources will be discussed separately.

Chart Audit

Objective #1- To determine if there were improvements in standards of clinical practice for Kuwaiti physiotherapists after one eight-week Counterpart Rotation.

Methodology:

The data collected to respond to this objective was through the two chart audits conducted in May and October 1999. The assumptions were that:

- Chart audit scores from October will be higher than in May
- Chart audit scores for counterparts will be higher than those for non-counterparts

If the counterparts continued to practice and chart according to their counterpart objectives, then their scores will be higher than those that were not exposed to the Rotation. The investigator was unable to identify individuals during the audit but identified whether or not the chart was from a past counterpart. The information from these chart audits indicated whether or not there was a difference in score between these two populations of physiotherapist-counterparts versus non-counterparts. This method will identify if there were any changes in Standards of Practice as a result of the Counterpart Rotation. The Chart Audit scores, May and October 1999, from each Ministry of Health hospital were analyzed by the investigator.

Data Collection:

The first chart audit was completed on May 16, 1999, and the second on October 3 and 18, 1999. Both audits were conducted using the same procedures and the same auditors. The chart audit form was developed in Kuwait by the Accreditation Team of which the investigator was the leader (See Chart Audit Form, Appendix B). The form was comprised of a list of 41

items in five sections that were considered minimum acceptable standards for physiotherapy patient charts. The sections were as follows:

1. Section 1 - Present Demographic Data (six items) - This included name, age, address, sex, file number and occupation
2. Section 2 - Referral Information (three items) - Each patient must have had a referral from a physician under Kuwaiti law. The referral, date and patient diagnosis must have been present.
3. Section 3 - Assessment/Treatment (twenty items) - This section was the longest and most important, as accurate assessment allowed the physiotherapist to determine appropriate intervention or treatment. The items were as follows:

- Subjective data as past history, social/employment history, function, history of present illness and pain
- Objective data as observations, mental status, sensation, strength, range of motion, developmental skills, and gait
- Outcome measures
- Precautions and contraindications to treatment
- Patient problems must be identified and an analysis of the situation must be present
- Treatment plan and patient goals

4. Section 4 - Recorded Progress and Discharge Notes (eight items) - There must have been regular notes to outline the patient's progress and identify

the exact physiotherapy intervention he/she was receiving. Progress notes must have related to patient problems and treatment plans as identified in section three. Other items as documented goals, utilisation of a specific format known as SOAP (Subjective, Objective, Analysis, Plan), presence of outcome measures and discharge planning must have been present to meet standards.

5. Section 5 - Process Mechanics (four items) - This included acceptable abbreviations and signatures, legible ink pen, and dated entries.

Other information gathered at the top of the form included the site, service, auditor, type of patient, room or chart number and whether or not the patient was current or retrospective. This information was developed for future use and not all of it was important for this study. The investigator added a line to indicate whether or not the chart was completed by a counterpart and this was essential to this study. There were squares to the right of each of the forty-one items for a check mark and each form could contain the audit for ten charts. The physiotherapists' charts were read by the auditor and check marks were placed in the spaces provided if the standard was met. If the standard was not met the space was left blank or there were instances that were not appropriate (N/A) and this was counted in favour of the physiotherapist being audited. An example of an item being counted as N/A was Section 1 item six, occupation. This was inappropriate for a paediatric chart.

Every physiotherapy department in the Ministry of Health in Kuwait was informed of the audit form and had input into its design through the Accreditation process. The auditors were Canadian physiotherapists, occupational therapists and one exercise physiologist that had all been working with the Counterpart Rotation Program. They attended one information session given by the investigator. At the session the investigator outlined the correct use of the audit form, the designated hospital where they were to perform the audit, and the audit procedure in each hospital. The physiotherapy community in Kuwait agreed to be audited, were informed of the process and procedure, and letters were sent to the superintendents of physiotherapy (head of the physiotherapy departments), informing them of the date and the auditors in their facility three days before the audit. This time frame had also been agreed to by the superintendents. The Kuwaiti superintendents and senior physiotherapists assisted the Canadians with locating the charts and providing a space in which to work. Each physiotherapist had two charts randomly chosen by the auditor from their previous day's patient list. The audit was completed in the hospital and the forms were given to the investigator to tabulate.

Tabulation of the results was done by obtaining an average score of each of the five sections of the form for each physiotherapist. The average of each section was then tabulated for the whole department by dividing by the number of physiotherapists. The total charting result was obtained by

adding the scores of completed items and dividing by the number of physiotherapists in each hospital.

Limitations:

Data collection for chart audits:

- There may have been some variability in the standard for inclusion-e.g. the exercise physiologist may have misinterpreted some data because she had a different background from the physiotherapists and occupational therapists.
- Each hospital was expected to perform a random selection of charts. There was no way to oversee that this was done.
- Hospitals were given three days warning to select the charts for the audit. There may have been some preparation of the charts beforehand.
- There may have been variability between Canadian teams of auditors. One team may have been more stringent than others in deciding items of inclusion. This audit was not a quality audit but simply one of inclusion. It was not what the physiotherapist wrote that was evaluated but whether the item was present.
- There was variability in numbers of physiotherapists in the departments. A 0 score of a chart in a department of eight physiotherapists would lower the overall scores by significantly more than if the department had 20 staff.

Physiotherapy Survey

Objective #2 - To determine the level of satisfaction perceived by the physiotherapists with the Counterpart Rotation as an educational experience.

Methodology:

The data to respond to this objective was collected through a survey of all past counterparts conducted in April 2000, Sections II and III (Appendix C). The assumption was that:

- Scores will be high for satisfaction with the Counterpart Rotation Program

Objective # 3 - To determine if the Counterpart Rotation Program met the Kuwait physiotherapists' perceived learning needs.

Methodology:

The data to respond to this objective was collected through a survey of all past counterparts conducted in April 2000, Sections I and IV. The assumption was that:

- Physiotherapists will perceive that they have improved in their clinical abilities and theoretical knowledge base.

The purpose of the survey of all past counterparts was to gain information about the Counterparts' perceived satisfaction with the education processes provided in the Counterpart Rotation (Objective #2), and their

perception of any improvement in skills and knowledge gained as a result of the counterpart experience (Objective #3).

Data Collection:

This survey format was developed for the purpose of the study (Appendix C) and contained five sections. Section I evaluated the perceived changes in practice since completing the Counterpart Rotation. Physiotherapists were asked to rate six questions: idea to attend, job satisfaction, confidence, effectiveness, initiation of new programs, and participation in continuing education, by indicating a yes or no response. Space was provided to allow the physiotherapists to comment on their rating if No was the response. Section II evaluated the counterpart's perceived level of satisfaction with the Counterpart Rotation Program. The respondents were asked to rate each question using a five point Likert Scale (1=Not at All Satisfied and 5=Very Much Satisfied). The counterparts rated their perceived levels of satisfaction on fourteen questions including:

1. Program orientation
2. Setting of objectives
3. Communication with the team
4. Feedback from Canadian counterpart
5. Time for discussion and problem-solving
6. Opportunity to attend inservices, lectures etc
7. Patient caseload that helped meet objectives

8. Assistance by the Canadian counterpart
9. Assistance by the team
10. Importance of their opinions and comments
11. Follow-up plan
12. Total learning experience
13. Their present role as a physiotherapist
14. Changes made by their department

Section III was an open-ended question asking what changes would the counterparts like to see if they were to repeat the Counterpart Rotation. Section IV assessed the changes in practice since completing the Counterpart Rotation. The counterparts were asked to rate these changes using a four point Likert Scale (1=Strongly Disagree and 4=Strongly Agree). The fourteen areas assessed included:

1. Assessment abilities
2. Problem-solving skills
3. Clinical analysis abilities
4. Charting and documentation skills
5. Treatment skills
6. Patient care planning skills
7. Discharge planning skills
8. Clinical knowledge
9. Clinical practice
10. Revaluation and modification of patient treatment

11. Patient treatment based on need
12. Outcome measures understanding
13. Standards of practice understanding
14. Skill in one area of practice

Finally, in Section V, the counterparts were asked nine questions of demographic information that included:

1. Date of rotation
2. Team worked with
3. Nationality
4. Age
5. Sex
6. Marital status
7. Credentials
8. Years of practice
9. Patient caseload

A pilot study of the survey was conducted in January 2000 with eleven Kuwait physiotherapists who were completing a six-month Clinical Residency Program at Dalhousie University. These eleven physiotherapists had been excluded from the study results as the other participants had not been exposed to the Dalhousie experience. Their responses were used only to determine clarity of the survey questions. The survey was administered by a third party at Dalhousie University and the completed surveys sent by return mail to the investigator in Kuwait. Upon review of the responses, there were

no questions that were not answered completely. The respondents reported having no difficulty answering the questions

The survey was then sent to 141 physiotherapists who had completed the Counterpart Rotation and were working in the Ministry of Health hospitals. Some counterparts had changed jobs to other Ministries and some of the expatriates had returned to their home countries. The physiotherapists who were working in the Ministry of Health had returned to their employing hospital in the Kuwait system in the area of practice corresponding with the area of practice in the Counterpart Rotation. The surveys were placed in an envelope for each of the ten hospitals with the names of the counterparts listed on the front. An explanation sheet was given to each participant as to the purpose of the survey. The surveys were completed and the names crossed off. The survey results were kept strictly confidential by not asking the participants to identify themselves. The survey collection was done by a third party who gathered the surveys at their hospital. The surveys were then returned to the investigator who completed the analysis. The response rate was high, as 120 out of a possible 141, or 85.1% completed the survey.

Limitations

- the way the respondents interpreted the scaling system may be different than in English-speaking countries.

- Cultural differences may affect the respondents' answers. The only perfection belongs to Allah (Sarkhou, 2000) and a perfect score may not be appropriate for the Arabic Counterparts to record.

Research Design and Data Analysis

These two methods of obtaining data will indicate which changes are perceived (Survey) and which changes are practiced (Chart Audit).

CHAPTER FIVE

Results and Data Analysis

The fifth chapter presents the results of the study. The first part of the study discusses the rates of participation. The second part reports the scores and the third part reviews the assumptions and reports the findings to test the assumptions.

Participation Rates

Chart Audit

At the time, and for the duration of the study, the total number of physiotherapists in the Ministry of Kuwait was 231 (140 Kuwaitis and 91 expatriates). In May, 1999, 130 counterparts had completed rotations with the Canadian teams and by October, 1999, 150 counterparts had completed rotations with the Canadian teams. For purposes of the chart audit, two patient charts were audited for each physiotherapist. The numbers of counterparts by hospital and the numbers of charts audited for May, 1999, and October, 1999, are shown below in Table 5.1.

Hospital	Counterparts completed by May 1999	Counterpart Charts Audited May	Counterparts completed by October 1999	Counterpart Charts Audited Oct.
1	11	14	13	18
2	9	12	13	23
3	8	16	9	17
4	7	12	9	17
5	10	18	10	12
6	7	10	9	12
7	9	16	10	12
8	8	12	8	13
9	14	22	17	24
10	47	69	52	66
Total	130	201	150	214

Table 5.1 Numbers of Counterparts and their Charts Audited in 1999

The discrepancy between the number of counterparts and the number of charts included the following reasons:

- Some physiotherapists changed their place of employment out of the Ministry of Health to other ministries or private practice
- A small number had left the country

- At any one time there were six to twelve counterparts in Canada
- Vacation, sick leave and maternity leave were always an issue.
- Could not always find two charts per physiotherapist for the audit

Physiotherapy Survey

By April 1, 2000 172 counterparts from the Ministry of Health had completed rotations. 141 surveys (Appendix C) were delivered to the physiotherapy departments and 130 were returned. The rate of return was 85.1%. The reasons for the difference in number (31) between the total number of counterparts and the number of surveys mailed included the following:

- Some physiotherapists changed their place of employment out of the Ministry of Health to other Ministries or private practice
- A small number had left the country
- Twenty-one were ineligible after completing a six-month course of study in Canada

The return rate of the surveys by hospital is seen in Table 5.2.

Hospital #	Counterparts working in each hospital by April 2000	Survey results completed
1	14	13
2	13	9
3	11	11
4	9	7
5	8	6
6	9	8
7	6	5
8	7	6
9	12	11
10	52	44
Total	141	120

Table 5.2 Physiotherapy Surveys Completed by Hospital April 2000

120 (85.1%) counterparts completed the survey. 21 (14.9%) counterparts did not complete the survey due to the following reasons:

Vacation	12
Maternity leave	6
Sick leave	3
Total	21

Scores

Chart Audit

The percentage of the Total Charting Results for all hospitals is found in Appendix D. The hospitals are listed from 1-10 with results of the total charting completed. There were 41 line items on the chart audit form that could be completed. The total charting was the average of completeness of the number of charts for each hospital. This number of charts audited is shown at the bottom of each column.

The scores for Total Charting complete for May varied from 22-67% while the same for October varied from 11-88%. Hospitals 1, 2, 6, and 8 improved 27, 44, 24, and 45% respectively between May and October. Hospitals 5, 7, and 10 improved 7, 10, and 10% respectively between the same time period. Their scores in May were higher than the previous hospitals mentioned. Hospitals 3, 4 and 9 did not improve their scores between May and October 1999. They decreased their scores by 1, 2 and 11% respectively. Hospital 3 was charting at an acceptable level for this period; Hospital 4 was below the others for the October period; and Hospital 9 had low scores for both periods.

The results are seen in Table 5.3.

Hospital #	% Total Charting May 1999	% Total Charting Oct. 1999	% Difference
1	34	61	27
2	31	75	44
3	67	66	-1
4	58	56	-2
5	51	58	7
6	25	49	24
7	62	72	10
8	43	88	45
9	22	11	-11
10	48	58	10
Average	44.1%	59.4%	15.3%

Table 5.3 Total Charting Scores for October and May 1999

Chart Audit Results May 1999 for all Hospitals (Appendix E)

On the chart there are three bars for each hospital, again numbered from 1-10. Total charting in shown for each hospital as well as for counterparts and non-counterparts. In most hospitals the counterparts achieved higher scores than the non-counterparts. The exceptions to this are hospitals 4, 5 and 8. There are only counterparts (no non-counterparts) for hospitals 8 and

hospital 4. Both groups achieved the same score for total charting. Hospital 5 demonstrated that the counterparts achieved a lower score than the non-counterparts.

Chart Audit Results October 1999 for all Hospitals (Appendix F)

The chart follows the same format as May 1999. By this time, most of the hospitals had sent all of their Kuwaiti physiotherapists and some of their expatriate staff to the Counterpart Rotation Program. The numbers of charts audited for non-counterparts were low (2-42). The counterparts that remained to be trained at this point in time were new graduates or expatriates. These two groups of therapists should have had relatively high scores as they had been recently trained (new graduates), or worked with counterparts and Canadians in their hospitals (expatriates). In most hospitals the counterparts did achieve higher scores than the non-counterparts. The exceptions to this were hospitals 6 (no non-counterparts), and 9. Hospital 9 continued to attain low scores with the non-counterparts achieving a total score of zero. There was poor leadership at this hospital with poor recognition of the accreditation process and poor acceptance of Canadian standards. There were no consequences for low scores in the chart audit.

The Canadian teams emphasised the concepts of patient assessment, determining patient treatment, and monitoring its results. The two most important areas in the chart audit to review that these standards were practised, were the Assessment and Progress Note categories. These have been chosen for each hospital in Table 5.4 below to illustrate how well the physiotherapy departments were meeting Canadian standards of practice as the scores for these two categories improved.

Hospital	May 1999 Assessment	Oct 1999 Assessment	May 1999 Progress Notes	Oct 1999 Progress Notes
1	33	61	14	42
2	26	76	14	40
3	63	68	30	27
4	60	56	36	41
5	52	55	24	25
6	25	45	16	22
7	73	67	56	40
8	42	86	32	77
9	18	13	7	2
10	49	61	30	29

Table 5.4 Assessment and Progress Note Categories Chart Audit 1999

Comparing the scores for both assessment and progress notes for the months of May and October 1999 demonstrated an improvement in scores for most hospitals during this time period. Improvement for the assessment category varied from –6%-50%. Hospitals 2, 8, 1 and 6 demonstrated an improvement in scores from 50, 44, 28 and 20% respectively. Hospitals 10, 3 and 5 improved less dramatically with scores of 12, 5 and 3% improvement. Three hospitals had a decrease in scores for assessment between May and October. Hospital 9 had consistently poor performance throughout the chart audit, while hospitals 7 and 4 had the highest scores for assessment in May, and the decrease in score in October 1999 does not allow them to fall below an average score. Seven out of ten hospitals (70%) improved their assessment scores between May and October 1999.

In Progress Notes category the same pattern was seen, but the scores were less remarkable. This was a category that was very poorly done by the physiotherapists at the beginning of the Counterpart Rotation Program in all hospitals so the scores were lower overall. Hospitals 8, 1 and 2 demonstrated improvement by 45, 28 and 26% respectively in the period between May and October 1999. Hospitals 4, 5 and 6 improved slight amounts from 1, 5, and 6%. Four hospitals, 10, 3, 9, and 7, decreased their scores 1, 3, 5 and 16% respectively, in the reporting period. Hospital 7 had lost two experienced staff to a M.Sc. program at Dalhousie and two others were in Halifax during that reporting period. The remaining staff were new

graduates or expatriate physiotherapists who had worked a number of years and were reluctant to make changes to their standards of practice.

Hospital	May 1999 Assessment Counterpart	May 1999 Assessment Non-Counterpart	Oct 1999 Assessment Counterpart	Oct 1999 Assessment Non-Counterpart
1	52	22	68	47
2	48	11	76	76
3	73	62	73	62
4	58	62	56	54
5	45	70	56	50
6	33	16	45	NA
7	75	52	76	70
8	42	NA	85	88
9	25	5	19	0
10	57	33	64	56

Table 5.5 Results of Assessment for Counterparts versus Non-Counterparts 1999

Upon reviewing the assessment results for the May, 1999, reporting period between counterparts and non-counterparts (Table 5.5), seven out of nine hospitals or 78% demonstrated a higher score in this category for counterparts. One hospital had no non-counterparts. Hospitals 5 and 4 non-counterparts had higher scores than the Counterparts by 25 and 4%

respectively. In the October, 1999 audit, 78% (seven out of nine) demonstrated a higher score. Hospital 2 had the same result for both groups, hospital 6 had no non-counterparts, and hospital 8 had a 3% higher score for non-counterparts.

Table 5.5 also demonstrates that the counterparts had higher scores overall but that both groups (counterparts and non-counterparts) improved between May and October 1999.

Hospital	May 1999 Progress Notes Counterpart	May 1999 Progress Notes Non-Counterpart	Oct 1999 Progress Notes Counterpart	Oct 1999 Progress Notes Non-Counterpart
1	29	7	51	25
2	31	3	46	30
3	33	27	40	8
4	39	32	46	19
5	26	0	27	13
6	26	4	22	NA
7	46	31	54	59
8	32	NA	68	81
9	10	1	3	0
10	35	20	37	17

Table 5.6 Results of Progress Notes for Counterparts versus Non-Counterparts 1999

Every hospital had a higher rate for counterparts than non-counterparts in the May 1999 period, and 78% (seven out of nine) of the hospitals demonstrated a higher rate for counterparts in the October 1999 period. In October 1999, one hospital had no non-counterparts and two had higher results for non-counterparts. Most of the staff in those hospitals had completed the counterpart rotations and those that did not were expatriates from different countries that had fair standards of education (India and Egypt). This chart also demonstrated that the counterparts had higher scores over all but that both groups (counterparts and non-counterparts) improved over time.

Physiotherapy Survey

The data was collected through a survey (Appendix C) to all past counterparts in the Ministry of Health conducted in April 2000. Table 5.7 indicates perceived improvement in skills or knowledge.

Question	Yes	No
1	84.0	16.0
2	80.8	19.2
3	85.7	14.3
4	87.2	12.8
5	72.9	27.1
6	92.3	7.7
average	83.78	16.18

Table 5.7 Survey Section I Responses by Percentage

Demographic data was gathered in Section V, questions 2 through 9. A summary of each question is provided below with accompanying Figures 5.1-5.8:

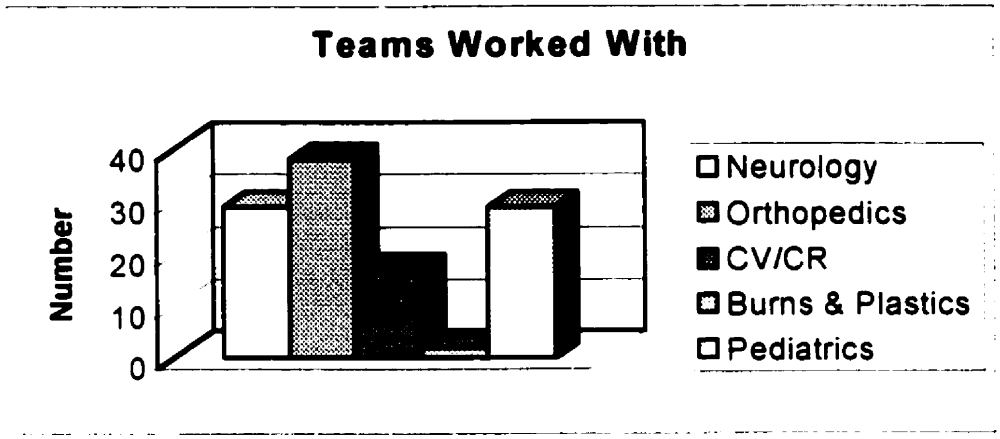


Figure 5.1 Question #2 - Teams Worked With

The greatest number of counterparts worked with the orthopaedic team (33.04%), followed by neurology and paediatrics (both 25.22%), CV/CR (14.78%), and burns and plastic surgery (1.74%).

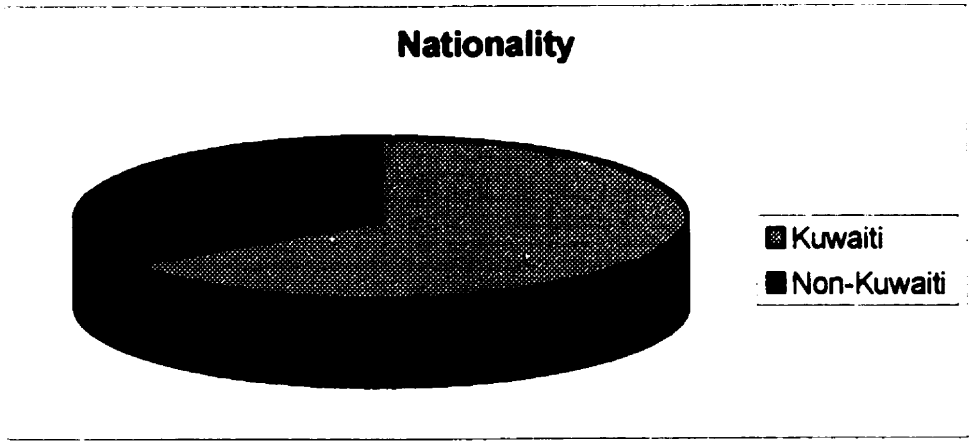


Figure 5.2 Question #3 – Nationality

65.5% of the respondents were Kuwaiti and 34.5% were expatriates.

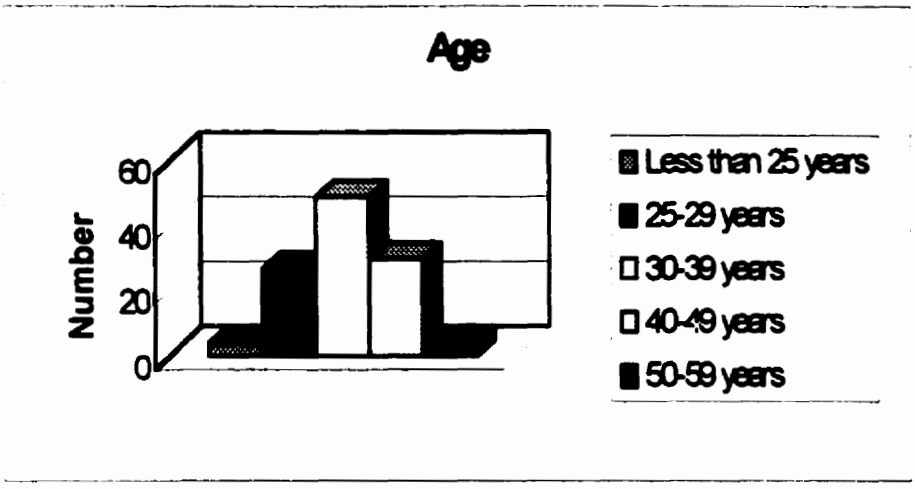


Figure 5.3 Question #4 – Age

The majority of the counterparts were 30-39 years of age (41.88%), followed by 40-49 years (25.64%), 25-29 years (23.01%), and the same number being 50-59 and less than 25 years (3.42%).

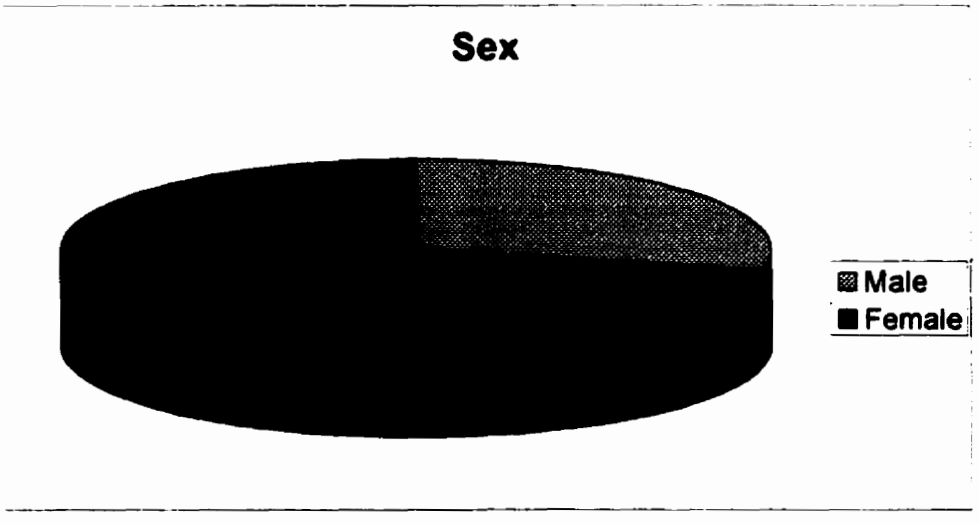


Figure 5.4 Question #5 – Sex

28.7% of the counterparts were male and 71.3% were female.

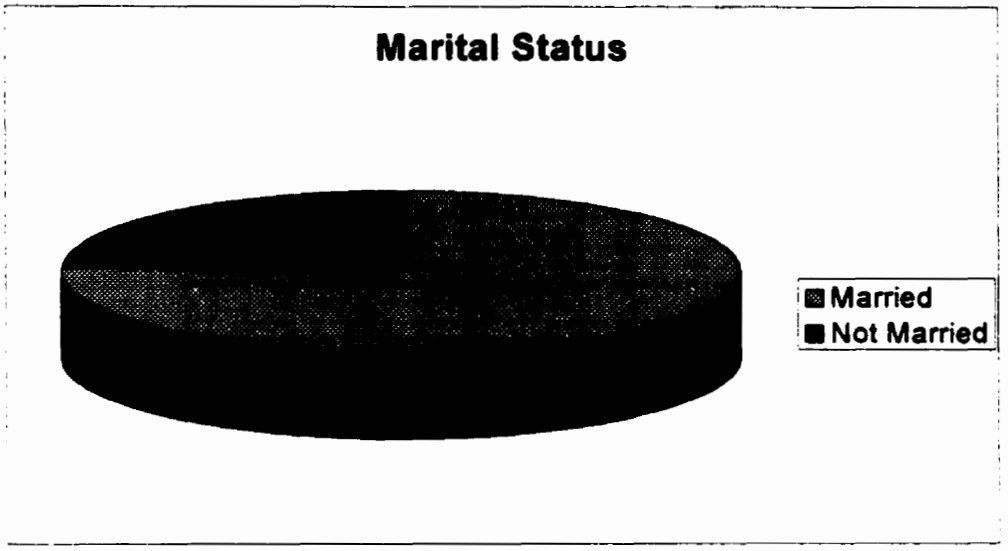


Figure 5.5 Question #6 - Marital Status

76.1% of the counterparts were married and 23.9% were not married.

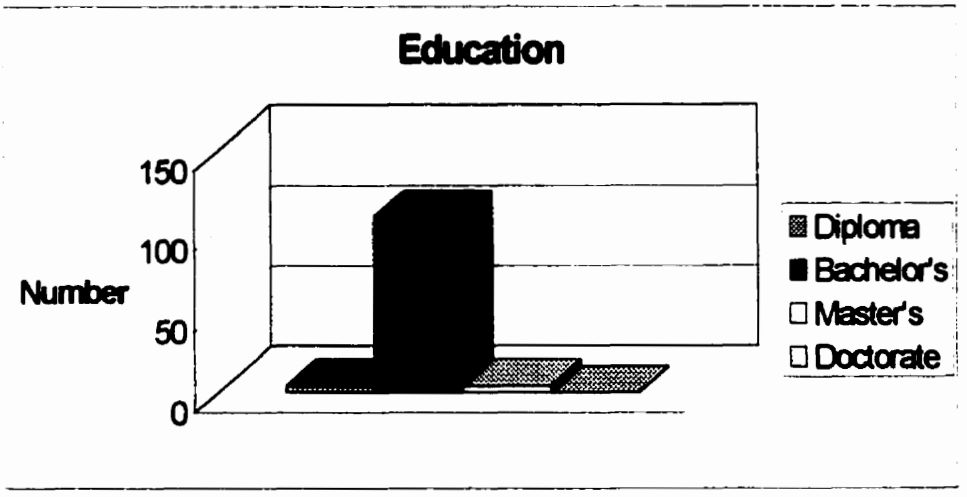


Figure 5.6 Question #7 - Education

93.2% of the counterparts had a Bachelor's degree and 3.4% each had a diploma or a Master's degree.

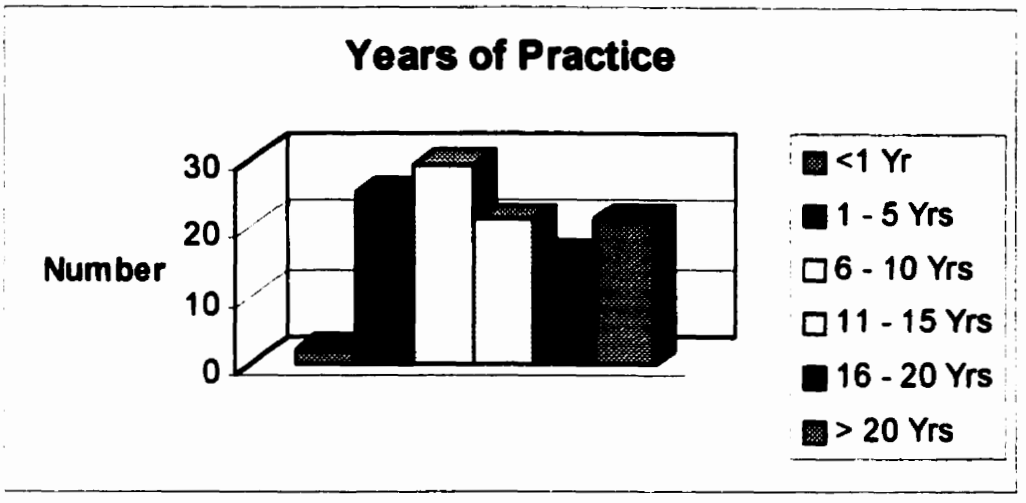


Figure 5.7 Question #8 - Years of Practice

Less than 1 year 1.8%; 1-5 years 21.9%; 6-10 years 25.4%; 11-15 years 18.4%; 16-20 years 14%; over 20 years 18.4%

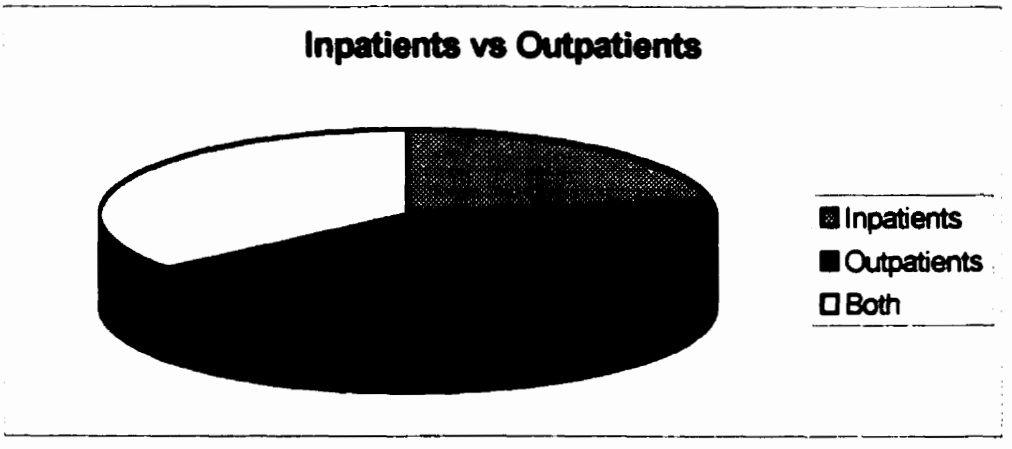


Figure 5.8(a) Question #9 - Patient Types

Slightly less than half treated a mixture of in and out-patients with the remainder treated either in or out-patients. In each of the three categories of Question #9, counterparts checked more than one box making the number of responses greater than the number of respondents.

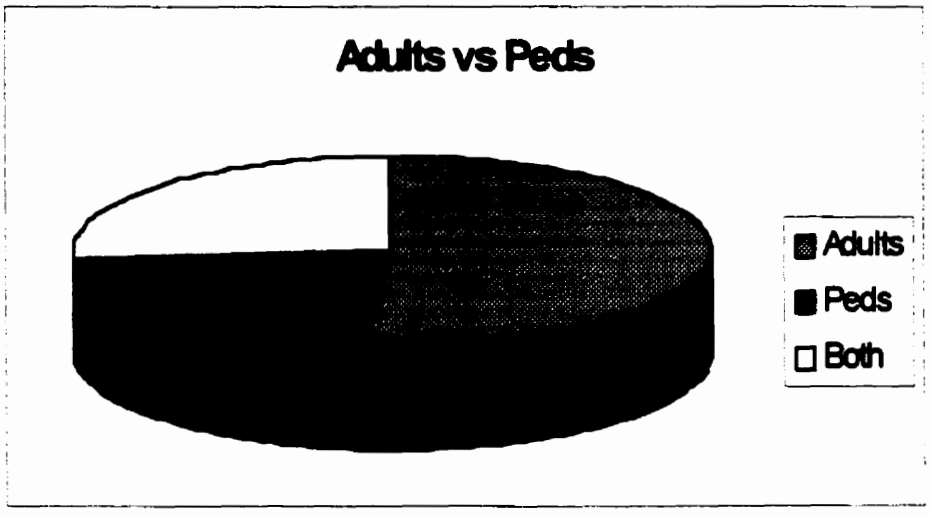


Figure 5.8(b) Question #9 - Patient Types

Slightly more than half treated adults while the rest treated either paediatrics or a mixture of adults and paediatrics.

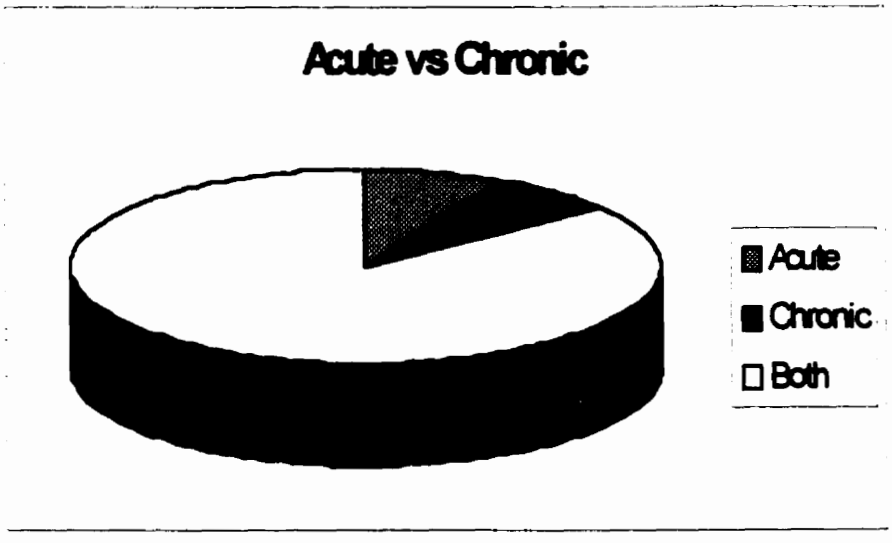


Figure 5.8(c) Question #9 - Patient Types

Generally the respondents treated a mixed caseload of acute and chronic conditions.

The data from Section II illustrated that a response in categories 3-5 indicated satisfaction with the Counterpart Rotation as an educational experience.

The percentages of satisfaction for each question were as follows in Figure 5.9:

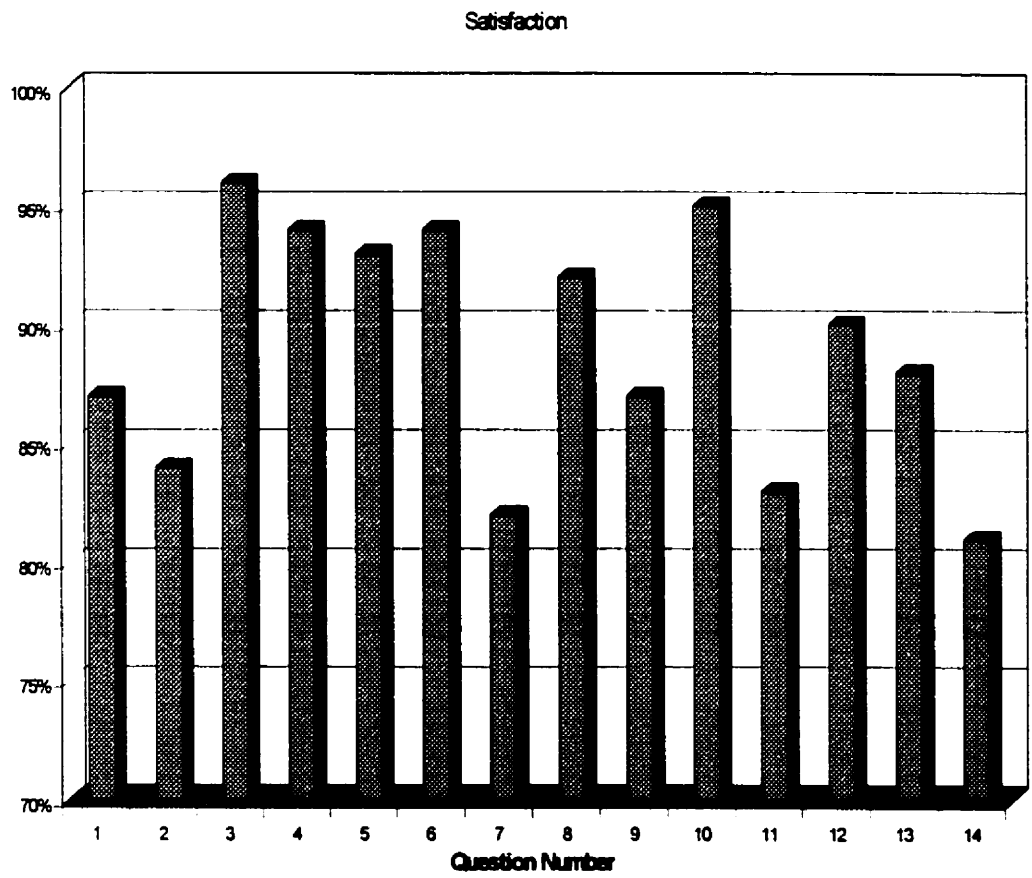


Figure 5.9 Survey Section II
Satisfaction with the Counterpart Rotation as an Educational Experience

This appears to demonstrate that the Counterparts perceived they were satisfied with their learning experience as all responses for questions #1-14 are over 80%.

Section III Responses:

When asked to suggest changes to the Counterpart Rotation, answers included the following:

- 25.83% 31 No response
- 11.66% 14 Counterpart should take place in employing hospital
- 15.83% 19 Make counterpart rotation more realistic, more effective, use new approaches and better equipment and materials.
- 12.5% 15 Decrease the number of weeks of the rotation
- 23.33 28 More emphasis on treatment and practical skills
- 7.5% 9 Provide more specialised placements
- 3.3% 4 No change
- 4.16 5 Choose the Canadian to work with

The remaining responses were suggested by between two and three persons, (1.66% - 2.5%):

- more inservices or more case presentations
- visit other hospital physiotherapy departments
- more follow-up of counterpart
- participate in research
- work with another team

The suggestions that had one response only were not reported.

Section IV data indicated that a response of 3 or 4 indicated that the physiotherapists perceived that they had improved in their clinical abilities and theoretical knowledge base. The percentages were as follows:

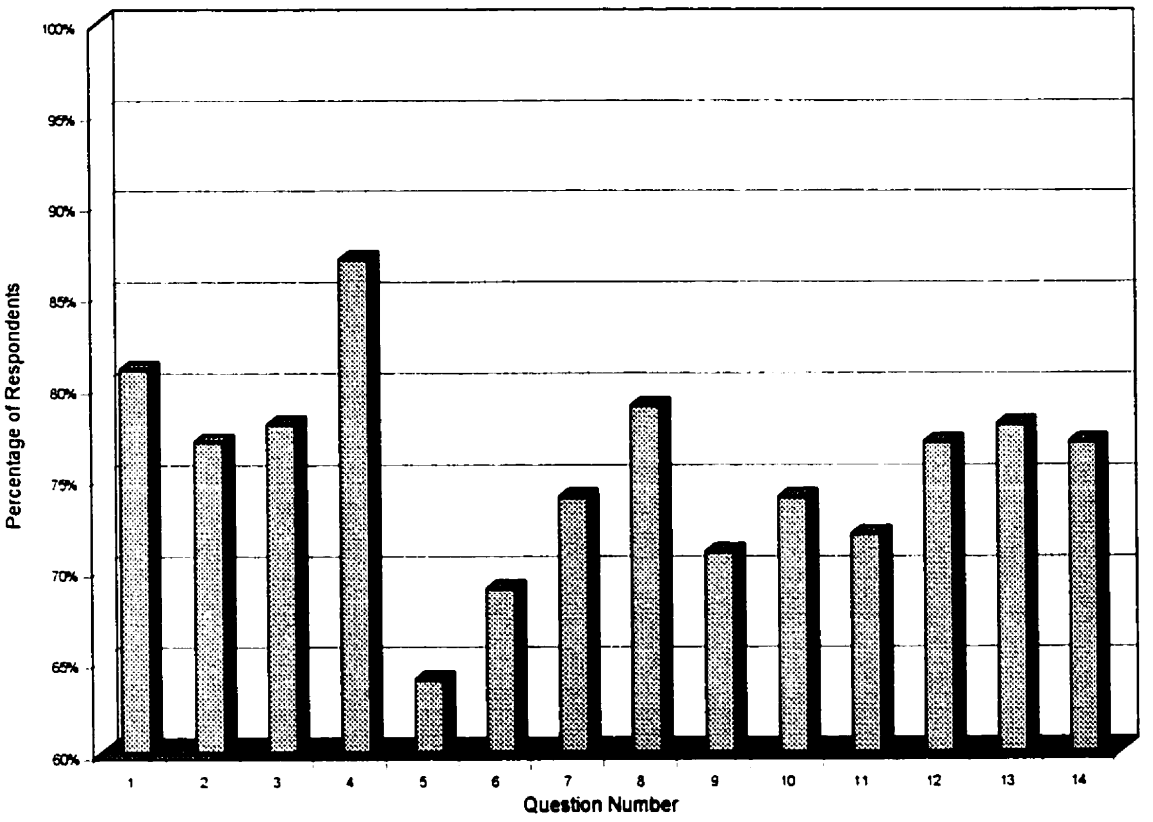


Figure 5.10 Survey Section IV

Perceived Improvement in Counterpart Clinical Skills and Knowledge Base

Questions 5 and 6 scored the lowest but all were well over 60% indicating that over 60% of the counterparts felt that they had improved in their clinical skills and knowledge base.

Testing the Assumptions

Chart Audit

Objective #1 - To determine if there were improvements in standards of clinical practice for Kuwaiti physiotherapists after one 8-week Counterpart Rotation. The data collected to respond to this objective was through the two chart audits conducted in May and October 1999. The assumptions were that:

- Chart audit scores from October will be higher than in May. Seven out of ten hospitals (70%) had improved scores in total charting (see Appendix D) between May and October 1999.
- Chart audit scores for counterparts will be higher than those for non-counterparts. In May 1999, the counterparts in seven out of ten (70%) hospitals had higher scores for total charting than the non-counterparts. (See Appendix E) One hospital had no non-counterparts and in two hospitals the non-counterparts had the same scores or higher (13%) than the counterparts. Nine out of ten hospitals (90%) had higher scores for the counterparts for total charting in October 1999 and the tenth hospital had no non-counterparts. (See Appendix F)

Physiotherapy Survey

Objective #2 -To determine the level of satisfaction perceived by the physiotherapists with the Counterpart Rotation as an educational experience. The data collected to respond to this objective was through a survey (Appendix C) to all past Counterparts conducted in April 2000, sections II and III. The assumptions were that:

- Scores will be high for satisfaction with the counterpart program. The responses from Section II were all over 80% with responses to questions 2, 7, 11, and 14 the lowest at 84, 82, 83 and 81% respectively. All the other responses were over 85%. The scores were high for satisfaction.

Objective # 3 - To determine if the Counterpart Rotation Program met the Kuwait physiotherapists perceived learning needs. The data collected to respond to this objective was through a survey to all past counterparts conducted in April 2000, Sections IV and I. The assumptions were that:

- Physiotherapists will perceive that they have improved in their clinical abilities and theoretical knowledge base.

Responses to questions in Section IV were well over 60% indicating that over 60% of the counterparts felt that they had improved in their clinical skills and knowledge base.

Section I scores indicated perceived improvement in skills or knowledge. If the respondent answered yes to questions two through six. The average 'yes' answer to the questions was 83.78%. This indicated that the physiotherapists felt they had improved their performance.

CHAPTER SIX

Discussion

Chapter Six begins with a summary of the study. The study is described and is followed by an overview of the methodology used and a presentation of the study's significant findings. The results are then discussed, ending with the limitations of the study.

Summary of the Study

The purpose of this study was to evaluate the effectiveness of the Counterpart Rotation Program and it attempted to respond to the questions:

- has the Counterpart Rotation Program been an effective way to improve theoretical knowledge of the Kuwaiti physiotherapists?
- has the Counterpart Rotation Program been an effective way to improve the clinical skills of the Kuwaiti physiotherapists?

To meet the objectives of the Kuwait-Dalhousie Project, a clinical teaching model for practising physiotherapists was developed and evaluated. Models of internship and clinical rotations have been used for new graduates entering not only physiotherapy, but also other health professions. The use of a Counterpart Rotation Program for practising post-graduate physiotherapists to upgrade or improve standards of physiotherapy practice

in a country has never been previously implemented. Education programs that developed in other parts of the world have incorporated clinical rotations for physiotherapists re-entering the profession, but not to upgrade the knowledge and skills of practising physiotherapists. For the purpose of this thesis and in order to respond to the research questions, two methods of data collection were selected, a chart audit and a physiotherapist survey.

Overview of Methodology

The first objective of the study was to determine if there were improvements in standards of clinical practice for Kuwaiti physiotherapists after one eight-week Counterpart Rotation. The data to respond to this objective was collected through the two chart audits conducted in May and October, 1999. The assumptions were that:

- Chart audit scores from October will be higher than in May
- Chart audit scores for counterparts will be higher than those for non-counterparts

If the counterparts have continued to practice and chart according to their counterpart objectives then their scores will be higher than those that were not exposed to the rotation experience, or those that had discontinued these practices. The information from these chart audits indicated that there appeared to be a difference in score between these two populations of physiotherapist-counterparts versus non-counterparts. This will identify if

there were any changes in Standards of Practice as a result of the Counterpart Rotation. The Chart Audit scores, May and October 1999, from each Ministry of Health hospital were analysed by the investigator.

The second objective was to determine the level of satisfaction perceived by the physiotherapists with the Counterpart Rotation as an educational experience. The third objective was to determine if the Counterpart Rotation Program met the Kuwait physiotherapists' perceived learning needs.

The data collected to respond to these objectives was through a survey to all past counterparts conducted in April 2000. The assumptions are that:

- Scores will be high for satisfaction with the Counterpart Rotation Program
- Physiotherapists will perceive that they have improved in their clinical abilities and theoretical knowledge base.

The purpose of surveying all past counterparts was to gain information about the counterpart's perceived satisfaction with the education processes provided in the Counterpart Rotation and their perception of any improvement in skills and knowledge gained as a result of the counterpart experience.

Scores

Chart Audit

The scores for Total Charting complete for May varied from 22-67% while the same for October varied from 11-88% (Appendix D). Four hospitals improved their scores from 24-45% between May and October, 1999. Three hospitals improved their scores between 7-10%. Their scores in May were higher than the previous hospitals mentioned, so it was not expected to see any further increase in score. Three hospitals did not improve their scores between May and October 1999, but showed a decrease of 1-11%. The hospital that had a 1% decrease in score (hospital #3) was charting at 67% in May which was the highest score for that period. The hospital that showed a decrease of 2% (hospital #4) was charting at 58% in May which was higher than 80% of the hospitals for that audit period. The investigator presented the results of both chart audits (May and October, 1999) to staff and super-intendents at all ten hospitals, and answered any concerns raised. The decreases in score at hospitals #3 and 4 were understood and were not seen to be problematic as the physiotherapists and the superintendents in these two hospitals were very motivated to improve their scores and had accepted the chart audit as a method of quality improvement for their departments. The investigator met with each department to explain the scores for both

audit periods. The hospital that demonstrated a decrease of 11% (hospital #9) between May and October 1999 had the lowest scores for both audits.

The scores for Chart Audit Results May 1999 for all hospitals (Appendix E) demonstrated that in most hospitals the counterparts achieved higher scores than the non-counterparts. One hospital demonstrated that counterparts achieved a lower score than the non-counterparts. One reason for this was the high level of achievement of the one non-counterpart; an Egyptian national trained in Cairo.

The scores for Chart Audit Results October 1999 for all hospitals (Appendix F) continue to indicate that the counterparts' scores were higher than the non-counterparts. Most of the hospitals had sent all of their Kuwaiti physiotherapists and some of their expatriate staff to the Counterpart Rotation Program. The majority of the staff had had some exposure to the Canadian Team and at the same time were working towards achieving Canadian accreditation standards.

One hospital (#9) continued to attain low scores, with the non-counterparts achieving a total score of zero. The superintendent at this hospital did not attend accreditation or chart audit information meetings and did not appear to engage in the acceptance of Canadian standards. There did not seem to be any consequences for low scores in the chart audit. The physiotherapy department was largely female with a female superintendent. It was the first department to allow the Canadian team to have access to their facilities early in 1997. When the KDPRC space was ready the team

left this department. The prestige of having a Western team in the department was regarded highly and they preferred to have the team continue there. Upon reflection, there may have been some loss of face for the department when the Canadians left and this may have contributed to their lack of compliance with the achievement of Canadian standards for their department. This coupled with the fact that women traditionally place more emphasis on their family responsibilities and the amount of study and preparation that was necessary to achieve higher scores in the audit was not valued. Any extra time in the department that could be used for charting or reading articles, etc. was observed by the investigator to be used for reading the Koran. These writings were seen as the only real study (Sarkhou, 2000). The majority of women in this department were raising young children and that is where their priority lay. These are some of the issues that are present in all departments but seemed prevalent in hospital #9 and may explain the low scores. The superintendent was reluctant to discuss the scores, their implications and solutions with the investigator and this may have been an issue of shame or loss of face. It is a Western value to address the issues and to work towards improvement in performance.

Upon a closer examination of two sections of the Chart Audit data, the Assessment and Progress Note categories, an improvement in scores for most hospitals was seen during this time period.

The counterparts had higher scores over all but both groups (counterparts and non-counterparts) improved between May and October 1999.

Physiotherapy Survey

The data from Section II indicated over 80% satisfaction with the Counterpart Rotation as an educational experience. This suggests that the counterparts were satisfied with their learning experience. Analysing Section III, the data showed that 25% of the respondents did not complete this section. This could be concluded that no changes were deemed necessary or that the respondent was reluctant to write a response. Verbal communication is more valuable in Kuwait and this may explain some of the reason for no response from 25% of the counterparts. Written responses in English were difficult for many of the respondents as most of their schooling and their family, social and work life is conducted in Arabic. Reading and writing in English continues to be a challenge, the only requirement for its use is medical charting. 12.5% suggested that the counterpart rotation time period be increased which is another indication that the counterparts were satisfied with the experience. Other suggestions such as "provide more practical information" and "emphasise treatment and skills" were made, which indicate that there was interest in this as a satisfactory learning experience.

Section IV data indicated that all of the physiotherapists perceived that they had improved their clinical abilities and theoretical knowledge base by more than 60%. 83.78% of the physiotherapists in Section I felt they had improved their performance.

Discussions and Conclusions

The use of a Counterpart Rotation Program appeared to improve the standards of practice of the physiotherapists in Kuwait. They perceived that their clinical skills were more effective and efficient and their theoretical knowledge was stronger. This model appeared to have a positive effect on practising clinicians. This model may be appropriate for upgrading practising physiotherapists to meet improved standards of practice.

Limitations

- Expatriate physiotherapists had a variety of work and educational experiences that were less homogenous than the Kuwait physiotherapy educational experiences.
- The model that was tested was one eight-week period and other time periods were not considered.
- Physiotherapists in Kuwait worked in an environment that did not value effective and efficient communication, as practised in the Western world.

Verbal communication in Kuwait was used more than written, and polite verbal responses were used often as there was care taken not to offend. English was a second language for the counterparts and it was difficult to understand whether an apparent lack of knowledge or response was a language issue.

- Statistical testing of data was not done due to the lack of confidence in the ability to control all variables.
- The Counterpart Rotation Program did not stand alone as there were continuing education activities including seminar, workshops, lectures and case presentations that were provided at all the hospitals for all staff interested. These variables may have influenced the results.

Cultural Considerations

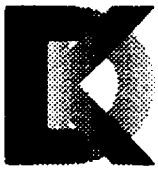
The frame of reference for the counterparts was different than the Canadian team members and this was considered at all times during the educational experience. The Project attempted to bring Kuwait physiotherapists into Canadian culture. This was a blend of trying to adapt to Arabic culture while imposing Canadian culture. Cross-cultural supervision required more time, slower, clearer speech and careful communication construction. In the Counterpart Rotation this was taken into consideration and the counterpart was expected to treat three or four patients per day.

This allowed ample time for discussion, reading and the integration of new information that was translated cognitively by the counterpart into English.

These differences defined some of the parameters of the rotation. The use of time was a parameter that spanned most of the issues. Time was necessary each day during the rotation for prayer; all time after the workday was for family, social duties and prayer, and not for reading or study associated with work; and the number of hours in the workday was almost 50% less by Western standards. Scheduling for patients was largely disregarded as patients were free to appear for treatment as they desired.

In this study, then, the counterpart made the decisions to change practice in light of the new knowledge and skills gained. This new knowledge was compared with the individual's existing system of beliefs and values. If new knowledge or ideas were incongruent with their belief system, new information was rejected. If continued reading or study was one of the expectations then it must be deemed necessary or important so that the individual made time either at work or at home. The use of a new patient assessment tool took more time and the counterpart must be convinced of the benefit for quality patient care before this was incorporated into their treatments. The viability of the use of a patient schedule to ensure that each patient received adequate time for treatment and the physiotherapist could complete all patient and administrative duties during the day was experienced. It was ultimately up to the counterparts to deal with many different cultural issues and make changes to their practice.

As previously stated, physiotherapists in Kuwait worked in an environment that did not value effective and efficient communication, as practised in the Western world. Verbal communication in Kuwait was used primarily and written communication was far less valued. Written patient reports, intra-team communication and medical charting did not meet Canadian standards and was a large part of the Project effort in preparation for accreditation. The above issues contributed to the difficulties Kuwaiti physiotherapists experienced in adapting to change. Independent learning was not valued and was not part of their work or social life. These values: adaptation to change, independent learning and written and efficient communication presented challenges during the Counterpart Rotation Program of over 170 counterparts. The Canadians had to have an understanding of the culture to promote meaningful and dialogue that was appreciative of Arabic culture. Once these differences were understood, realistic learning and an exchange of ideas took place between the Kuwaitis and the Canadians.



Kuwait-Dalhousie
Physiotherapy and Rehabilitation Centre

EVALUATION OF CLINICAL COMPETENCE

EVALUATION FORM

Name of Counterpart: _____

Name of Canadian Specialist: _____

Placement Dates:

(Please Print) from _____/_____/19___ to _____/_____/19____

Specialty of Placement:

_____

_____

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

A. Patient Evaluation

1. In gathering data relevant to a patient's status, the counterpart's knowledge of related anatomy/physiology/pathology/evaluation procedures:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	is not adequate when questioned.
____	____	is adequate, but the counterpart needs prompting to apply knowledge to the data gathering.
____	____	is used to guide self through the data-gathering process.
____	____	is used to justify the choice and performance of the data gathering procedures.

2. To gather patient data from the medical records prior to the PT evaluation, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	does not gather patient information unless told to do so.
____	____	gathers irrelevant/incomplete patient information, when no assistance/correction is given.
____	____	independently gathers relevant information, but makes minor omissions.
____	____	accurately and objectively gathers all pertinent information from the medical records.

3. To gather data from a patient/family interview, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	does not conduct a patient interview unless told to do so.
____	____	gathers irrelevant/incomplete information, when no assistance or correction is given.
____	____	independently gathers relevant information, but makes minor omission(s).
____	____	accurately and systematically gathers all pertinent information from a patient/family interview.

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

A. Patient Evaluation (cont'd)

4. In selecting the PT evaluation procedures appropriate to a patient's disability, age and personality, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent correction to choose the appropriate evaluation procedures.
____	____	needs minimal correction to selectively choose the most appropriate evaluation procedures.
____	____	needs reminding due to minor omission(s) made in choosing evaluation procedures.
____	____	chooses the evaluation procedures appropriate to the patient and circumstances.

5. When evaluating a patient, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent assistance/correction to perform the selected evaluation procedures safely.
____	____	performs the evaluation procedures safely, but needs frequent assistance/correction to ensure completeness.
____	____	performs the evaluation procedures safely and completely, but makes minor errors or omissions in procedure.
____	____	performs a complete evaluation in a safe, accurate, and systematic manner.

6. In being sensitive to patient apprehension throughout a patient evaluation, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	does not observe signs of apprehension of the patient/family.
____	____	observes signs of apprehension of the patient/family, but does not respond to ease it.
____	____	observes signs of apprehension of the patient/family and is reassuring
____	____	eases the apprehension of the patient/family by explaining aspects of the evaluation procedures and findings, as appropriate.

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

B. Program Planning [this section includes the evaluation of the data gathered from medical records, patient/family, and the PT evaluation.]

7. When planning a treatment program, the counterpart's knowledge of related anatomy/physiology/pathology:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	is not adequate when questioned.
____	____	is adequate, but the counterpart needs prompting to apply knowledge to the planning process.
____	____	is used to guide self through the planning process, i.e. is used to identify problems, determine goals, and select PT treatment.
____	____	is used to determine the implications of the evaluation findings to the probable PT treatment course/prognosis.

8. To identify the limiting factors which may be alleviated by PT, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent correction to identify the primary problems.
____	____	needs minimal correction to complete the primary problem list.
____	____	identifies the primary problems

9. To identify the secondary problems which may be alleviated by PT and/or require referral to other health care services, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent correction to identify the secondary problems.
____	____	needs minimal correction to complete the secondary problem list.
____	____	identifies the secondary problems

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

B. Program Planning (cont'd)

10. To determine the goals of PT treatment which are realistic to the probable discharge situation, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent correction to determine the short and long-term goals.
____	____	needs minimal correction to determine short-term goals, but still needs frequent correction to determine long-term goals.
____	____	determines short-term goals, but needs minimal correction to determine long-term goals.
____	____	determines both short-term goals and long-term goals.

11. When selecting PT treatment procedures appropriate to the patient's physical and psychological needs and goals, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent correction to choose the appropriate treatment procedures.
____	____	needs minimal correction to selectively choose the most appropriate treatment procedures.
____	____	selects appropriate treatment procedures, but needs minimal correction to select suitable sequence/frequency/duration of these procedures.
____	____	selects appropriate treatment procedures including sequence, frequency and duration.

12. To justify the choice of treatment procedures, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	does not demonstrate a sound knowledge of the physiological effects of treatment procedures when questioned.
____	____	demonstrates an adequate knowledge of the physiological effects, but prompts are needed to help the counterpart to apply this knowledge to a rationale for treatment.
____	____	uses sound knowledge of the physiological effects as a sound rationale for treatment.
____	____	suggests and defends variations or changes to the treatment program which will be effective and/or interesting for the patient.

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

C. Implementation of the Treatment Program

13. When implementing the PT treatment program, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent assistance/correction to perform the selected treatment or procedures safely.
____	____	performs the selected treatment procedures safely, but needs frequent assistance/ correction to ensure effectiveness.
____	____	performs the selected treatment procedures safely and effectively, but is makes minor error(s) or omission(s) in technique.
____	____	performs the selected treatment procedures in a safe, effective and systematic manner.

14. To observe the patient's clinical signs and responses to treatment with respect to the patient's disability/age/tolerance, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent correction to observe the patient's signs and responses.
____	____	needs reminding to observe the patient's signs and responses.
____	____	observes the patient's signs and responses, but does not consistently interpret them correctly.
____	____	always observes the patient's signs and responses and interprets them correctly.

15. Following the observations and ongoing evaluations, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent assistance/correction to modify and/or progress treatment procedures appropriately.
____	____	needs reminding to modify and/or progress treatment procedures appropriately.
____	____	modifies and/or progresses treatment procedures appropriately, but does not consistently obtain the patient's optimal performance.
____	____	modifies and/or progresses treatment procedures appropriately and consistently obtains the patient's optimal performance.

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

C. Implementation of the Treatment Program (cont'd)

16. To ensure safety when applying equipment, modalities, and treatment procedures, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent assistance/correction to adhere to safety precautions.
____	____	needs reminding to adhere to safety precautions.
____	____	adheres to safety precautions at all times.
____	____	ensures the patient's comfort, as well as safety, at all times.

17. To prepare for discharge from PT services, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	does not include preparation for discharge, unless told to do so.
____	____	inadequately prepares the patient/family for discharge, when no assistance/correction is given.
____	____	organizes suitable post-discharge plans and instructs the patient/family how to proceed with them.
____	____	adequately prepares the patient/family for discharge in collaboration with other disciplines and services, as necessary.

D. Communication with Patient/Family

18. To educate the patient/family/others regarding the patient's status, the patient's PT treatment, its importance and progression, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent assistance/correction to explain these aspects to the patient/family/others.
____	____	needs reminding to explain these aspects to the patient/family others.
____	____	explains these aspects at a level appropriate to age, education and comprehension of the patient/family/others to ensure their understanding.
____	____	gives explanation in a manner which inspires confidence and motivates the patient/family/others.

19. To instruct the patient/family/others during the PT treatment procedure, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	gives dull/unclear instructions/demonstrations.
____	____	gives motivating instructions/demonstrations, but they are not always clear to the patient/family/others.
____	____	gives motivating and clear instructions/demonstrations but they are not concise.
____	____	gives motivating, clear, and concise instructions/demonstrations, thereby gaining the patients'/families'/others' best efforts and co-operation.

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

20. To assist the patient/family/others to assume responsibility for implementing treatment, the counterpart:

MID	FINAL	
_____	_____	is not observed/is not required to perform.
_____	_____	does not teach the patient/family/others the ward or home therapy.
_____	_____	needs reminding to teach the patient/family/others the ward or home therapy.
_____	_____	teaches patient/family/others the ward or home therapy.
_____	_____	in addition to Rating (3) above, teaches the patient/family/others to monitor their own therapy, and conveys the importance of compliance.

E. Communication/Management Skills

21. In establishing professional relations as a member of the health care team, the counterpart:

MID	FINAL	
_____	_____	is not observed/is not required to perform.
_____	_____	is not aware of the functions of team members and does not communicate.
_____	_____	is aware of the functions of team members, but does not communicate.
_____	_____	is aware of functions of team members and communicates effectively, but needs reminding to collaborate with team members.
_____	_____	communicates effectively, and collaborates fully with the team to provide comprehensive care.

22. In telling the results of the PT evaluation and treatment to the Canadian counterpart /physician/team, the counterpart:

MID	FINAL	
_____	_____	is not observed/is not required to perform.
_____	_____	does not show initiative to provide patient information.
_____	_____	shows initiative to provide patient information, but reports incomplete/inappropriate information.
_____	_____	reports all appropriate information, but manner is inappropriate for the situation.
_____	_____	presents oral reports in content and manner appropriate for the situation.

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

23. To managing a treatment schedule, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent assistance/correction to organize a treatment schedule and to co-ordinate the times with the patient/PT staff/other disciplines.
____	____	needs reminding to organize a treatment schedule and to co-ordinate the times with the patient/PT staff/other disciplines.
____	____	organizes a treatment schedule and co-ordinates the times with the patient/PT staff/other disciplines, but needs reminding to keep self on schedule.
____	____	organizes the treatment times and schedules self the appropriate amount of time for the preparation, completion and documentation of treatment.

F. Documentation

24. In recording the initial evaluation and treatment plan, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent correction to document accurate, objective, relevant, and complete evaluation data.
____	____	documents the evaluation data accurately/objectively, but needs minimal correction to ensure its relevancy/completeness.
____	____	documents accurate, objective, relevant, and complete evaluation data, but needs reminding to ensure that it is completed according to the format/conciseness and the time limits of the facility.
____	____	documents accurate, objective, relevant, and complete evaluation data according to the format/conciseness and the time limits of the facility.

25. In recording the progress or effectiveness of the treatment, the counterpart:

MID	FINAL	
____	____	is not observed/is not required to perform.
____	____	needs frequent correction to document accurate, objective, relevant, and complete treatment data.
____	____	documents the treatment data accurately/objectively, but needs minimal correction to ensure its relevancy/completeness.
____	____	documents accurate, objective, relevant, and complete treatment data, but needs reminding to ensure that it is completed according to the format/conciseness and the time limits of the facility.
____	____	documents accurate, objective, relevant and complete treatment data in the correct format and according to the time limits of the facility.

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

Mid-Placement Summary

1) Strengths:

2) Objectives for the remainder of the rotation:

3) Ideas for meeting the above objectives:

Canadian Specialist's Signature: Date:

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

Final Summary

1) Strengths:

2) Proposed Objectives for Follow-up at the Employing Hospital:

3) Ideas for meeting the above objectives:

4) Final Review of the Counterpart's Learning Objectives:

Were the learning objectives of the rotation met? Yes No

Comments:

Canadian Specialist's Signature: Date:

KUWAIT-DALHOUSIE PHYSIOTHERAPY AND REHABILITATION CENTRE

Certification of Successful Completion of the Counterpart Rotation

Signature of Counterpart:

_____ Date: _____

Signature of Canadian Specialist:

_____ Date: _____

Signature of Centre Coordinator of Clinical Education:

_____ Date: _____

KDPRC PHYSIOTHERAPY TRIAL CHART AUDIT FORM – May 16, 1999

(Modified for Concurrent Charts Only)

Site: _____ Auditor: _____ Out-Patient: ____ In-Patient: ____

	1	2	3	4	5	6	7	8	9	10
Counterpart (Y or N)										
Chart Number or Room Number										
1. Present Demographic Data										
❖ Patient Name										
❖ Address/Phone No.										
❖ Age/Date of Birth										
❖ File No.										
❖ Sex										
❖ Occupation (N/A for Paeds only)										
2. Referral Information										
❖ Physicians Referral										
❖ Referral Date										
❖ Referring Diagnosis										
3. Assessment/Treatment										
❖ Start Date of PT (IP or OP)										
❖ Assessment Note Within 3 Visits or Explanation Why Not										
❖ History Present Illness										
❖ Past History										
❖ Social/Employment History										
❖ Functional Status/ADL										
❖ Pain Assessment (N/A for Paeds only)										
❖ Observations (Physical Assessment)										
❖ Cognitive/Mental Status Assessment										
❖ Sensory System										
❖ Range										
❖ Strength/Motor Control										
❖ Developmental Skills										
❖ Gait Analysis/Ambulation										
❖ Outcome Measures are Present										
❖ Precautions and Contraindications										
❖ Patient Problems Identified										
❖ Analysis										
❖ Treatment Plan										
❖ Treatment Goals										
4. Recorded Progress Notes										
❖ IP Minimum One Note Per Week ❖ OP Minimum One Note Per Week or Each Visit if Less Frequent										
❖ Progress Notes Relate to Problems										
❖ Progress Notes Relate to Treatment Plan										
❖ Goals Achieved Are Documented										
❖ Progress Notes in the Soap Format										
❖ Outcome Measures are Present										
5. Discharge Planning										
❖ Discharge Planning is Evident										
6. Process Mechanics										
❖ Acceptable Abbreviations										
❖ Legible Ink Pen										
❖ Appropriate Signatures										
❖ All Entries Dated										

✓ if present; blank if not present; N/A if not appropriate or applicable

Kuwait-Dalhousie
Physiotherapy and Rehabilitation Centre

P.O.Box 64333, Shuwaikh (B), Kuwait, 70454; Tel: (965) 487-9342 Fax: (965) 487-6193

COUNTERPART ROTATION SURVEY

Objective: The Kuwait Dalhousie Project has been providing Counterpart Rotations for the past two and a half years and now would like to assess its process and outcomes. You can help by providing feedback on: a) your satisfaction with your counterpart rotation and b) your improvement in skills, abilities, knowledge and understanding gained as a participant in the counterpart experience.
This questionnaire is comprised of five sections. Please read the instructions provided in each section.

SECTION I: **Place a check mark next to the appropriate response in the space provided.**

1. Was it your idea to attend the counterpart rotation?
   Yes ____ No ____
   If No, why? _____

Since completing the Counterpart Rotation:

2. Are you more satisfied with your job?
   Yes ____ No ____
   If No, why? _____
3. Are you more confident about your role as a physiotherapist?
   Yes ____ No ____
   If No, why? _____
4. Would you consider yourself to be a more effective clinician?
   Yes ____ No ____
   If No, why? _____
5. Have you started a new program or service in your department?
   Yes ____ No ____
   If No, why? _____
6. Do you participate regularly in continuing education activities in your department?
   Yes ____ No ____
   If No, why? _____

SECTION II: **Indicate your level of satisfaction with the following statements, using the scale of "1" to "5" provided below. Please read each statement and circle the number that best indicates your level of satisfaction.**

Not at all satisfied	Not much satisfied	Fairly satisfied	Much satisfied	Very much satisfied
↓	↓	↓	↓	↓
1	**2**	**3**	**4**	**5**

I am satisfied with:

1. the orientation I had at the beginning of the Rotation
   1 2 3 4 5
2. the practice of setting objectives at the beginning of the Rotation
   1 2 3 4 5
3. the communication I had with the team
   1 2 3 4 5
4. the feedback I received from my Canadian Counterpart
   1 2 3 4 5
5. the time set aside for discussion and problem-solving
   1 2 3 4 5
6. the opportunity to attend inservices, lectures and team meetings
   1 2 3 4 5
7. the patient caseload helped me to meet my learning objectives
   1 2 3 4 5
8. the amount of assistance my Counterpart gave me
   1 2 3 4 5
9. the team's ability to meet my needs
   1 2 3 4 5
10. the opinions and comments I was able to give as a member of the team
    1 2 3 4 5
11. the follow-up plan I set with my Counterpart
    1 2 3 4 5
12. the counterpart rotation as a learning experience
    1 2 3 4 5
13. my role as a physiotherapist since the Counterpart Rotation
    1 2 3 4 5
14. my Department's willingness to make the changes I suggest
    1 2 3 4 5

SECTION III: **If you were to do a counterpart rotation again, what changes would you like to see?** _____

SECTION IV:

Indicate your level of agreement with the following statements, using the scale of "1" to "4" provided below. Please read each statement carefully and then circle the number that best indicates your level of agreement.

Strongly Disagree	Disagree	Agree	Strongly Agree
↓	↓	↓	↓
1	**2**	**3**	**4**

1. I have improved my ability to assess my patients.
   1 2 3 4
2. I have improved my problem solving skills.
   1 2 3 4
3. I have improved my ability to determine a clinical analysis.
   1 2 3 4
4. I have improved my charting and documentation skills.
   1 2 3 4
5. I have improved my treatment skills.
   1 2 3 4
6. I have improved my skills in planning patient care.
   1 2 3 4
7. I have improved my discharge planning skills.
   1 2 3 4
8. I have increased my clinical knowledge.
   1 2 3 4
9. I have improved my clinical practice.
   1 2 3 4
10. I have improved my ability to re-evaluate patients and modify their treatment programs.
    1 2 3 4
11. I have improved my ability to treat patients on the basis of their needs.
    1 2 3 4
12. I have a greater understanding of outcome measures.
    1 2 3 4
13. I have a greater understanding of the concept of standards of practice.
    1 2 3 4
14. I am more skilled in my area of specialization.
    1 2 3 4

SECTION V:

For question 1, please write your response in the space provided. For all other questions, place a check mark next to the most appropriate response.

1. When did you begin your counterpart rotation? (give month & year)
   Month _____ Year _____

2. With which team did you work?

   1. Neurology _____
   2. Orthopedics _____
   3. Cardiovascular/ Respiratory _____
   4. Burns and Plastics _____
   5. Paediatrics _____

3. What is your nationality?

   1. Kuwaiti _____
   2. Non-Kuwaiti _____

4. What is your age?

   1. Less than 25 years _____
   2. 25-29 years _____
   3. 30-39 years _____
   4. 40-49 year _____
   5. 50-59 years _____
   6. 60 years and over _____

4. What is your sex?

   1. Male _____
   2. Female _____

6. Are you married?

   1. Yes _____
   2. No _____

7. What is the highest credential you have attained?

   1. Diploma _____
   2. Bachelor's degree _____
   3. Master's degree _____
   4. Doctoral degree _____

8. How many years in total have you worked as a physiotherapist?

   1. Less than 1 year _____
   2. 1 – 5 years _____
   3. 6 – 10 years _____
   4. 11 – 15 years _____
   5. 16 – 20 years _____
   6. Over 20 years _____

9. With which types of patients do you work? (Answer each section):

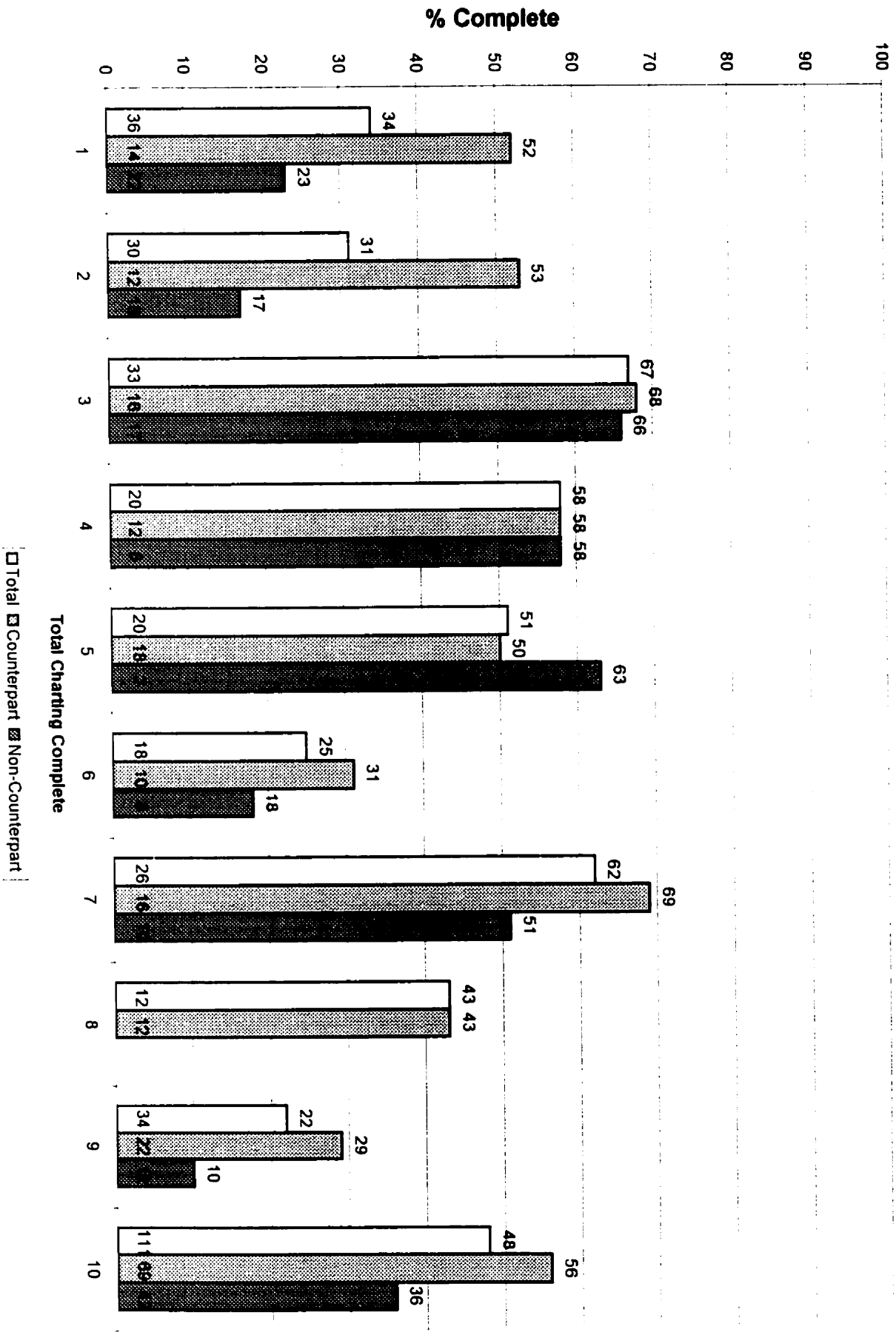
   A:
   1. Inpatients _____
   2. Outpatients _____
   3. Both in and outpatients _____

   B:
   1. Acute care patients _____
   2. Chronic care patients _____
   3. Both acute and chronic care _____

   C:
   1. Adults _____
   2. Pediatrics _____
   3. Both adults and pediatrics _____

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY!


Chart Audit Results for All Hospitals
% Total Charting Complete
0
10
20
30
40
50
60
70
80
90
100
1
2
3
4
5
6
7
8
9
10
36
27
34
61
30
35
31
75
33
28
67
66
20
21
58
56
20
14
51
58
18
12
25
49
26
19
62
72
12
16
43
88
34
24
22
11
111
108
48
58
May 1999
October 1999


All Hospital Chart Audit Results May 1999
% Complete
0
10
20
30
40
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70
80
90
100
1
2
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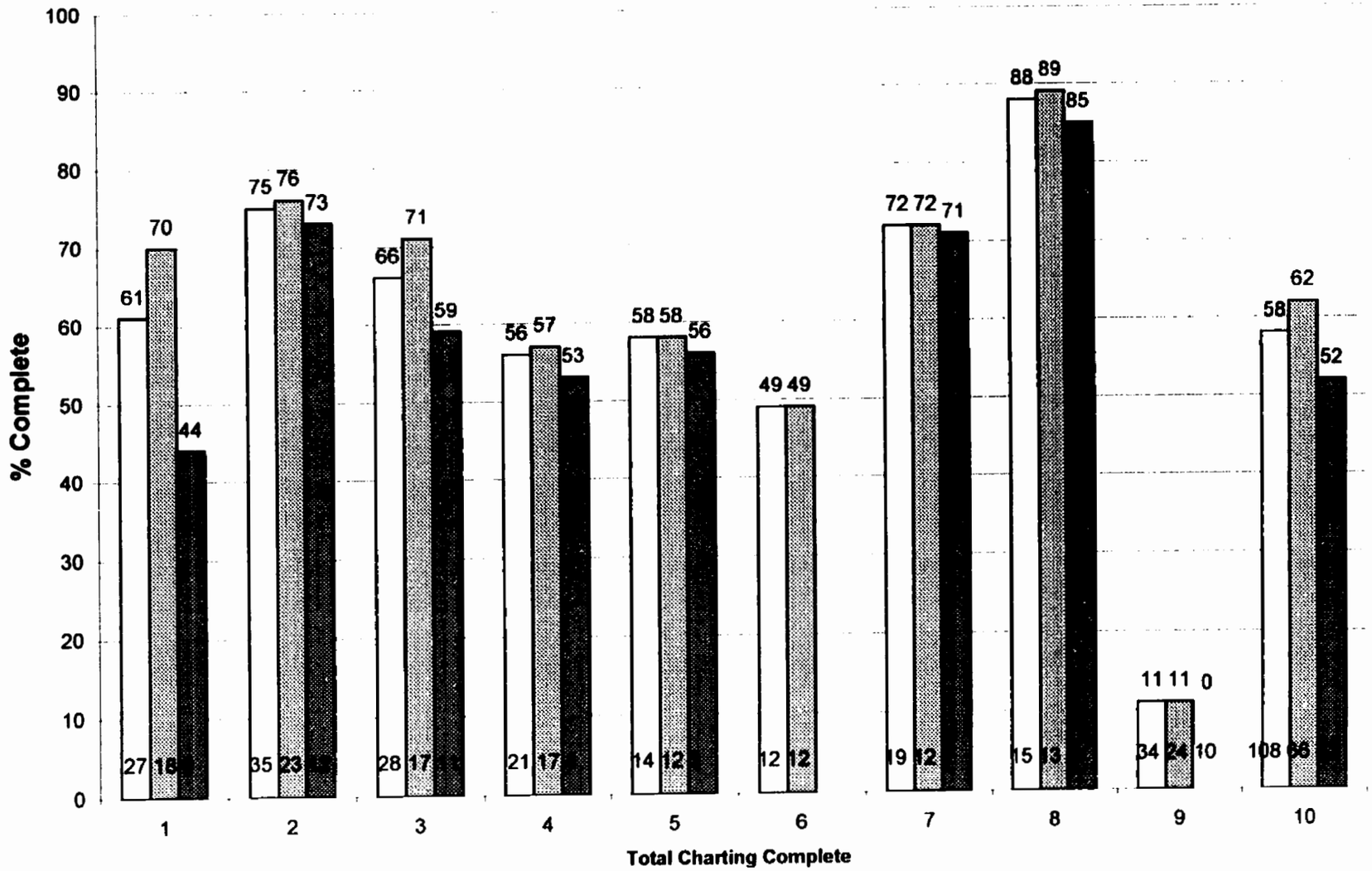
4
5
6
7
8
9
10
Total Charting Complete
Total
Counterpart
Non-Counterpart

All Hospital Chart Audit Results October 1999



BIBLIOGRAPHY

Al-Momen Y. Chair, High Committee for Abroad Treatment. Ministry of Health. Kuwait

Al-Refai AM. Exploring Models of Cooperation. *Medical Education* 1995; Volume 29 (Supplement 1): 53-55.

Bassett S. Physiotherapy...What Is It? *NZ Journal of Physiotherapy* August 1995; 7.

Beggs C. & Sumsion T. After the Workshop: A Model to Evaluate Long-Term Benefits of Continuing Education. *Physiotherapy Canada* Fall 1997; 279-283, 291.

Benner, P. From Novice to Expert. *American Journal of Nursing* March 1982; 402-407.

Bork C.E. *Research in Physical Therapy*. Philadelphia: J.B. Lippincott; 1993

Carpenter C. The Evolving Culture of Physiotherapy - Barbara Edwardson Lectureship 1995. *Physiotherapy Canada* Winter 1996; Volume 48, No 1: 11-15.

Cox J. *Your Opinion Please! How to Build the Best Questionnaires in the Field of Education*. California, Corwin Press; 1996,

Cox P.D., Beaton C., Bossers A., Pepper J. & Gage M. Interdisciplinary Pilot Project in a Rehabilitation Setting. *Journal of Allied Health* Spring 1999; 28, No 1: 25-29.

Cross V. The Same But Different- A Delphi Study of Clinicians' and Academics' Perceptions of Physiotherapy Undergraduates. *Physiotherapy* January 1999; Volume 85, No 1: 28-38.

Dillman D. Mail and Other Self-Administered Questionnaires. *Handbook of Survey Research* 1983; 360-368, 373-377.

El-Din D. Peer Review. *Physiotherapy* February 1991; Volume 77, No 2: 92-94.

Farrell J.P. In Search of Clinical Excellence. *Journal of Orthopaedic and Sports Physical Therapy* September 1996; 24, No 3: 115-121.

Gibson P.G., Nair B.R., Davies C. & Saunders N.A. Development and Implementation of an Innovative Intern Training Programme. *Medical Education* 1995; 29: 220-224.

Gosling S. Continuing Professional Development-Creating a Framework. *Physiotherapy* November 1997; Volume 83, No 11: 563-565.

Graham C.L. Conceptual Learning Processes in Physical Therapy Students. *Physical Therapy* August 1996; Volume 76, No 8: 856-865.

Harden R.M. Early Postgraduate Education and the Strategy of the Dolphins. *Medical Teacher* 1999; 21, No 4: 365-369.

Higgs J. & Titchen A. The Nature, Generation and Verification of Knowledge. *Physiotherapy* September 1995; Volume 81, No 9: 521-530.

Higgs J. A Programme for Developing Clinical Reasoning Skills in Graduate Physiotherapists. *Medical Teacher* 1993; 15, Nos 2/3: 195-205.

Higgs J. Developing Clinical Reasoning Competencies. *Physiotherapy* August 1992; Volume 78, No 8: 575-581.

Higgs J. Managing Clinical Education: The Program. *Physiotherapy* April 1993; Volume 79, No 4: 239-246

Hunt A., Higgs J., Adamson B. & Harris L. University Education and the Physiotherapy Professional. *Physiotherapy* June 1998; Volume 84, No 6: 264-273.

Knowles, M. *The Modern Practice of Adult Education: From Pedagogy to Andragogy.* New York Cambridge 1980, 40-52.

Ladyshewsky R. Cross Cultural Clinical Supervision. In: Leavitt R. (ed) *Cross-Cultural Health Care: An International Perspective for Rehabilitation Professionals*. London: W.B. Saunders Company Ltd.; (in press).

Ladyshewsky R. East Meets West: The Influence of Language and Culture in Clinical Education. *Australian Journal of Physiotherapy* 1996; Volume 42, No 4: 287-294.

Ladyshewsky RK, Barrie S.C. & Drake V.M. A Comparison of Productivity and Learning Outcome in Individual and Cooperative Physical Therapy Clinical Education Models. *Physical Therapy* December 1998; 78, No 12: 1288-1297.

Leavitt R. Physical Therapy in a Different Culture. *Physiotherapy Theory and Practice* December 1995; 113-117.

Lincoln M.A. & McAllister L.L. Peer learning in Clinical Education. *Medical Teacher* 1993; 15, No 1: 17-25.

Makrides L. Ministry of Health, State of Kuwait, Kuwait-Dalhousie Project, Contract 2-96. May 1996-May 2000.

Makrides L., Turnbull G., Belanger S., O'Shea B., Wainwright G. Needs Assessment. Kuwait-Dalhousie Project, Kuwait. August 1996.

Malik G.M. How We Teach Practical Skills in an Undergraduate Medical Curriculum: 5 Years of Experience at Gezira Medical School (Sudan). *Medical Teacher* 1991; 13, No 1: 67-71.

Mathews J.S. The 1989 Presidential Address - Preparation for the Twenty-First Century: The Educational Challenge. *Physical Therapy* November 1989; Vol 69, Number 11: 981-986.

McCormick G. & Marshall E. Mandatory Continuing Professional Education. A Review. *Australian Physiotherapy* 1994; Volume 40, No 1: 17-22.

Michels, E. Using and Understanding Surveys: An Introductory Manual. *American Physical Therapy Association* October 1985.

Monekosso G.L. The Teaching of Medicine at the University Centre for Health Sciences Yaounde, Cameroon: Its Concordance With the Edinburgh Declaration on Medical Education. *Medical Education* 1993; 27: 304-320.

Nemshick M.T. & Shepard K.F. Physical Therapy Clinical Education in a 2:1 Student-Instructor Education Model. *Physical Therapy* September 1996; 76, No 9: 968-981.

Oldmeadow L. Developing Clinical Competence: A Mastery Pathway. *Australian Journal of Physiotherapy* 1996; Volume 42, No 1: 37-44.

Parfitt B. *Working Across Cultures - A Study of Expatriate Nurses Working in Developing Countries in Primary Health Care.* From the Series: Burnard P. (ed) Developments in Nursing and Health Care 17. Aldershot, Hampshire, England: Ashgate Publishing Limited; 1998.

Porter B. A Community Pre-Registration Year: The Continuation of a Community-Oriented Medical School Curriculum. *Medical Education* 1991; 25: 151-154.

Rivett D. & Higgs J. Experience and Expertise in Clinical Reasoning. *NZ Journal of Physiotherapy* April 1995; 16-21.

Sarkhou H. Interview. Physical Medicine and Rehabilitation Hospital, Kuwait. Feb. 23, 2000.

Schon, D. *Educating the Reflective Practitioner*. San Francisco, Ca, Jossey-Bass. 1987

Sheatsley P. Questionnaire Construction and Item Writing. *Handbook of Survey Research* 1983; 200-225.

Simpson J.M. How Good Is Your Documentation? *Physiotherapy* October 1998; Volume 84, No 10: 469-471.

Tobin A. & Judd M. Understanding the Barriers. *Physiotherapy* November 1998; Volume 84, No 11: 527-529.

Tobin A. & Judd M. Beyond the Barriers. *Physiotherapy*. February 1999; Volume 85, No. 2: 61-63.

Young L.J. & Willie R. Effectiveness of Continuing Education for Health Professionals: A Literature Review. *Journal of Allied Health* May 1984; 112-123.