Continuing Professional Education: A Case Study of Paediatric Physiotherapists in Quebec

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ABSTRACT

Continuing Professional Education:

A Case Study of Paediatric Physiotherapists in Quebec

Noëlla Shorgan

Continuing education is seen as an important aspect of professional life. There is no regulation that currently obliges physiotherapists to engage in continuing education.

A survey questionnaire was developed to look at participation in various continuing education activities this year (1995) and over the past five years. In addition, questions addressed factors that facilitated and deterred participation. What motivates people to engage in continuing education was also addressed.

The sample chosen was 35 practising paediatric physiotherapists. The return rate was over 85%. Participation in all forms of continuing education was low, below the minimum requirements in areas where such activity is mandatory. The older therapists tended to be the less involved. The main deterrent to greater participation was seen to be non-availability of courses at an advanced level. The principal motivation to take courses was to maintain competence.

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INTRODUCTION AND LITERATURE REVIEW

INTRODUCTION

Physiotherapy or physical therapy is a health science profession involved in the rehabilitation of physically disabled children and adults, using physical means including manual therapy, electrotherapy, hydrotherapy and exercise therapy. It is a profession that is relatively young, beginning in the 1920's and developing rapidly after World War II. Basic training is provided at the university level and is complemented by practical experience during hospital affiliations and internships.

The university program has evolved, beginning with a diploma program in physical therapy, first offered in 1929 at the University of Toronto. In 1943 this two-year diploma program was replaced at McGill University by a four-year Bachelor of Physical Therapy. By the early 70's this program was again upgraded to a Bachelor of Science in Physical Therapy. Post-graduate degree programs were developed in the mid-seventies. Presently Masters and Doctoral level programs in physical therapy are offered at various Canadian Universities.

In addition to these formal programs, opportunities for professional development are available. Courses, seminars and conferences are offered by various groups in Quebec including the Canadian Physiotherapy Association, l'Ordre des Physiothérapeutes du Québec, and le Syndicat Professionnel des Thérapeutes en Réadaptation Physique du Québec. Participation in such learning activities is voluntary. At the present there

is no coordination between the various organisations, making educational delivery haphazard.

Education on an on-going basis is essential. The half-life for a physical therapist's competence was estimated to be between five (5) and fifteen (15) years depending on the person's area of practice (Kirby and Bate, 1989; cited by Grant, 1992). [1] Half-life was defined as the time, following completion of professional training, when professionals had become approximately half as competent as they were upon graduation because of new developments. [2] Education on a continuous basis is seen by many as the way to maintain one's level of competence.

Several issues concerning on-going education will be addressed in this thesis. Theoretical models of continuing education delivery will be compared and contrasted with actual levels of participation, motivational factors and perceived deterrents identified by a sample population of practising therapists.

Preview:

This thesis will be presented in several sections. The literature review in this chapter will present a summary of the literature available in the following areas: adult education, continuing education, continuing professional education, knowledge, competence, performance, professionalism, participation in continuing education, motivational factors, mandatory continuing professional education, learning projects, deterrents and evaluation. Four terms will be defined. These are: continuing education, competence, physiotherapist, and physiatrist.

The Methodology chapter will outline the sample description, the instrument developed, the survey questionnaire, the pilot study conducted, the procedure employed, ethical issues and assumptions made. Finally, this section concludes with a description of the design and data analysis.

The discussion chapter will review the data gleaned from the survey questionnaire and consider the results of the data analysis. In addition, these results will be compared with those anticipated by the literature. An attempt to place the results of the sample population in the larger frame of physiotherapy will be made in order to draw conclusions.

The final chapter, conclusions, will discuss the relationships discovered between variables and suggest possible explanations for these. Areas for further investigations will be enumerated.

DEFINITION OF TERMS

1. Continuing education: will be defined as educational opportunities after compulsory, formal schooling and initial entry into the profession to ensure the development of proficiencies that can be translated into professional performance to improve the quality of service to clients.

For the purposes of this study, this included organised courses, workshops, seminars, in-services and non-formal activities such as literature readings and peer-mentoring or consulting.

2. Competence: will be considered as relating to the mastery of knowledge, the proficiency of practice, the provision of a high level of service to the client, and the professional attitudes which include knowledge of professionalism and emotive commitment to professionalism.

3. Physiotherapist or physical therapist: will be defined as being a member in good standing of "l'Ordre des Physiothérapeutes du Québec".

4. Physiatrist: will be defined as a medical specialist in the field of physical medicine and rehabilitation.

PERSONAL STATEMENT

Participation in continuing education has always been an important responsibility for me. In pursuing studies in education, I have sought to make links between educational theory and the practice of physiotherapy. Because there is no obligation for physiotherapists of Québec to participate in continuing education, these professionals provide a sample population for the study of voluntary participation frequencies, motivations and deterrents to such participation.

ISSUE STATEMENT

The issue of this thesis was to determine the level of voluntary participation by physiotherapists in the chosen sample and whether there was a positive correlation with any of the independent variables: year of graduation, employment status, teaching and mentoring responsibilities. With only two males in the sample, gender was not studied as an independent variable. In addition a comparison between theoretical and reported motivational factors and deterrents was made.

LITERATURE REVIEW

The literature in the area of continuing professional education was reviewed. The information has been summarised and will be presented under the following headings: adult education, continuing education, continuing professional education, knowledge, competence, performance, professionalism, participation in continuing education, motivational factors, mandatory continuing professional education and alternatives, learning projects, deterrents and evaluation.

Adult Education:

Adult education is defined by Houle as a process by which people individually or in groups seek to improve themselves or their society by increasing their skills, knowledge or sensitivity; or as any process by which individuals, groups or institutions try to help people improve in these ways. [3]

Andragogy, or the study of the education of adults, is premised on several crucial assumptions. The central proposition is that adults are capable of learning. Indeed the research to date clearly indicates that the basic ability to learn remains unimpaired throughout the lifespan. [4] Malcolm Knowles, as presented in - Education for Adults: Vol.1. Adult Learning and Education states that as people mature their self-concepts move from being dependant towards being self-directed. The accumulation of a growing reservoir of experience becomes an increasing resource for learning. Over time the readiness to learn becomes oriented to the developmental tasks of social roles. Time perspectives change, with younger students focusing on postponed application of

knowledge and mature learners focusing on the immediacy of application. Orientations similarly shift from self-centredness to problem-centredness. [5] These assumptions were initially stated by Malcolm Knowles and developed further by Malcolm Tight.

Lifespan education is defined by the International Review of Education in 1994 as a comprehensive concept including formal, non-formal and informal learning that extends throughout the lifespan of an individual to attain the fullest possible development in one's personal, social and professional life. [6] Lifespan learning includes the idea that humans learn throughout life from birth to death; that learning experiences are a blend of formal/informal and traditional/non-traditional. [7] Definitions of these will follow in the next section. Let us now examine a specific part of adult education.

Continuing Education:

Continuing education is a part of lifespan education. It is that learning which results from educational opportunities which are taken up after compulsory schooling has ceased. [8] Adult learners surveyed by Penland in 1977 reported that topics adults studied included (in order) things related to personal development, home and family. hobbies and recreation, general education, job, religion, volunteer activity, public affairs agriculture and technology. (Patrick R. Penland "Individual Self Planned Learning in America" Washington D.C. U.S. Office of Education, Office of Libraries and Learning Resources, 1977). [9]

Such education includes formal, non-formal and informal education. Formal education can be defined as that which is provided by an education or training system, set up or sponsored by the state for the express purpose of education. Non-formal education comprises the many deliberate educational enterprises operating outside the education system with primary objectives to which education is subordinate (for example: trade unions, churches). Informal education, which includes unplanned or incidental learning, is the vast area of social transactions in which people deliberately inform, persuade, tell, influence, advise and instruct each other. [10] Learning by health professionals can occur in a number of informal ways. Professionals have learned through books (by scanning journals and literature to keep abreast of the latest developments), discussions with colleagues with special expertise and the rigors of everyday practice. [11] As well there are opportunities provided by departments through in-service presentations. Attendance at courses, symposium and conferences offer further possibilities.

For U.N.E.S.C.O., adult education is important for the lifelong development of human beings and the diffusion in society of such values as peace, intellectual progress, and democracy. [12]

A specialised area of continuing education is that of continuing professional education. The literature in this area will now be considered.

Continuing Professional Education:

The area to be highlighted in this thesis is continuing professional education. The goal of continuing professional education is to ensure the development of

proficiencies that can be translated into professional performance. L'Office des Professions du Québec further develops this concept. The major objective of continuing professional education is the maintenance of the quality of professional services at a level that guarantees the protection of the public. [13] The World Health Organisation listed, as the primary purpose of continuing education, making health professionals more competent in their existing employment. Continuing education attempts, as well, to prepare health professionals to adapt to change and to participate actively in change. [14] Peter Jarvis lists other purposes of continuing education: giving practitioners the opportunity to update their knowledge of new developments in the profession; to undertake an additional course so that participants can move from one branch of the occupation to another; to acquire additional specialist knowledge. [15] Continuing education is seen as a method of improving health care delivery by improving the knowledge, competence or performance of health care workers. [16] Each of these three areas will now be examined.

Knowledge:

Knowledge is seen as a level of awareness, consciousness or familiarity gained by experience, learning or thinking. [17] The Oxford dictionary defines knowledge as knowing, familiarity gained by experience; a person's range of information; theoretical or practical understanding; the sum of what is known. [18] A basic requirement for safe and effective practice is the possession and use of current general health care and professional knowledge. Currently it is estimated that the body of knowledge doubles at least every eight (8) years, [19] this includes the expansion of basic information and the development of technology. Manpower experts indicate workers will require retraining four to five

times during their employable life, due to technical innovation. [20]

Competence:

Competence is an issue that arises frequently in the literature. One theory of clinical competence employs three overlapping constructs, involving medical knowledge, clinical problem solving and a general competence factor. [21] General competence includes intelligence, motivation, learning skills, general knowledge base and personality. Clinical problem solving, assessed by considering clinical performance during real or simulated patient encounters, is the ability to apply cognitive knowledge in clinical settings. [22] For David Leat, the conceptualisation of competence has three components: cognition - what is known; the affective - what is felt; and behaviour - what is done. [23]

Peter Jarvis (1983) defines three elements of professional competence: knowledge, skills and professional attitudes. Knowledge relates to the understanding of the academic discipline, of psycho-motor elements, of interpersonal relationships and of moral values. Skills are required to perform psychomotor procedures and to interact with others. Professional attitudes encompass knowledge of professionalism, emotive commitment to professionalism and the willingness to perform professionally. [24] In the study of clinical competence, seven different methodological approaches have been used: 1) reflective/philosophical; 2) task analysis; 3) descriptive standards; 4) standards of diagnostic thinking; 5) consumer opinions; 6) epidemiological and quality of care concerns; and 7) theory development and evaluation process.[25] Spencer and Spencer (1993) see competence as an underlying characteristic of an individual that is causally related to criterion-referenced effective and/or superior performance.[26]

Have the professions established such criterion-references norms? Generally speaking, the answer is no. In fact, "there is no evidence of the existence of mechanisms in health insurance schemes for monitoring the quality of care and the competence of physicians in order to encourage doctors to maintain their competence". [27] Others consider the attainment of competence to be evidenced by an individual's ability to apply the necessary knowledge, skills and judgement in his practice. The knowledge, skills and judgement must meet both professionally accepted standards and the expectations of the community or society. [28] Communication skills can also be essential to the achievement of competence, requiring that professionals be able to explain to clients their reasoning and possible consequences of their service, allowing clients to actively participate in decision-making. [29] Unfortunately, the evaluation of competence remains a subjective judgment that is difficult to quantify.

Performance:

The third aspect of health care improvement by continuing education is the improvement of performance. Performance can be considered the execution phase. Performance is a function of both ability and motivation. [30] The mode of performance is defined by Houle (1980) as the process of internalising an idea or using a practice habitually so that it becomes a functional part of the way in which a learner thinks about and undertakes his or her work. [31] Continuing education can provide opportunities for performance enhancement by allowing for the acquisition or improvement of psychomotor skills, for example through practical sessions.[32]

Professionalism:

Because this thesis deals with professional continuing education, a survey of what the literature says about professionalism and its relationship with continuing education is provided.

A profession has been defined by Carr-Saunders as an occupation based on specialised, intellectual study and training, the purpose of which is to supply skilled service or advice to others for a definite fee or salary. [33] Sultz, Sawner and Sherwin referred to a professional as being a person with unique knowledge, skills and abilities related to learned moral and ethical tenets who enjoyed a privileged position in society with responsibility for acts of omission and/or commission and a requirement for lifelong learning. [34] Houle's list of professional responsibilities is more detailed. These include: keeping up with new knowledge and skills, continually evaluating one's practice of the profession, using and acquiring knowledge to problem solve, clarifying new missions, defining functions, creating new values in response to changing social conditions, and growing as people as well as professionals. [35]

Professionals traditionally group together in exclusive associations in which a set of rules of conduct govern their practice. Professional associations serve a variety of functions. They answer the need for status and a sense of commitment. They serve a regulatory function, share in policy formation and implementation. They have a leadership role in professional development and contribute to the development of the knowledge base by such activities as professional journals. [36] In the Mary MacMillan Lecture for 1993, Gary L. Soderberg stated that a profession "1) assumes

responsibility for autonomy, 2) aspires to a set of attitudes and values that are exemplified in numerous ways and 3) possesses a systematic body of knowledge." [37] With the advancement of technology and the speed of scientific development, physiotherapy is constantly evolving. No longer is it adequate to expertly practice techniques learnt in basic training, but questioning their very value and effectiveness may compel abandoning certain procedures altogether. The current economic situation demands cost-effectiveness and the rationalisation of service delivery. The preferred treatments must be those which are cheaper and quicker and less labour-intensive. With the impact of the changing organisation of work, the introduction of new technologies and the process of industrial restructuring is a growing demand for adult education in industrialised areas to maintain professional standards. [38] Let us now turn the issues involved in the participation of professionals in continuing education.

Participation in Continuing Education:

Continuing professional education has gained widespread importance. Has participation evolved? Participation levels are increasing dramatically. In 1981, one-fourth to one-half of the practising professionals in the United States attended one or more formal continuing education activities: Forty-three percent (43%) of those in allied health professions, forty percent (40%) of physicians, thirty-five percent (35%) of teachers and sixteen percent (16%) of all employed persons. [39] In the late 1980's the annual investment of all United States employers in executive and professional education, as well as blue collar training, was estimated at sixty billion dollars - or twice what all fifty states appropriated for public higher education and half of the cost of education from kindergarten to grade twelve. [40] In 1989 it was predicted that approximately 25 million

Americans would have taken part in some form of organised learning, constituting fourteen percent of the country's total adult population. [41] The 1993 participation figures represent a 50% increase over those of 1988. [42] Professional and related services including health and education services represent 13.6% of the economy, but received 20.8% of the formal company training budget. [43] Unfortunately, there were no figures available for the Canadian market for the same period.

Participation figures in continuing education courses offered by l'Ordre des Physiothérapeutes are available and are summarised in Table I. These represent figures for the past four years. In that period, participation more than doubled. The number of courses offered tripled. This increase reflected l'Ordre des Physiothérapeutes response to demands for more courses, particularly in the field of orthopaedics. Courses are also offered by the Canadian Physiotherapy Association and the Syndicat Professionnel des Thérapeutes en Réadaptation Physique du Québec. The budget of the S.P.T.R.P.Q. for education for the past three years was $324,000.00.

Motivational Factors:

Several factors influence participation in continuing education. Factors which motivate professionals to engage in continuing professional education need to be examined. Obsolescence has been defined as a growing threat to competence. Because of the ageing of the population, the average time since basic training is increasing. Career re-orientation is a major aspect of working lives. The average

**EVOLUTION OF CONTINUING EDUCATION
OF L'ORDRE DES PHYSIOTHÉRAPEUTES DU QUÉBEC
BY FINANCIAL YEAR SINCE 1991**

Information by year	1994-95	1993-94	1992-93	1991-92
Number of courses	36	25	11	11
Number of participants in courses	1267	761	453	598

Translation of the Annex 1 of the 1994-95 Annual Report of l'Ordre des Physiothérapeutes du Québec.

TABLE I

American male makes seven career changes in his lifetime, changes which often require new job skills. [44] Statistics relating to female workers were not found, nor were any found for the Canadian reality.

At the very least, the professional who desires growth must be willing to take on new job responsibilities. Specialisation may be required to maintain employability. Seeking specialisation may motivate participation.

The stage of one's career as well as the phase of one's life development both interact in the decision to engage in education and in the extent of participation in the education process. K. Patricia Cross summarises works of several authors in her description of life cycle phases. In the 29 to 34 age group, the search for stability may entail a return to school to progress in one's career. The 37 to 42 year old's quest to become one's own person involves a pruning of dependant ties to mentors and, particularly for women, a new educational start. Older people finding themselves at the cap of their career and competence, in the 45 to 55 age group, turn educational pursuits to leisure activities. Whereas, the over fifty individual prepares for retirement. [45] Since these concepts were developed in the 1980's, changes in society may have modified the picture. Unemployment and the large number of baby-boomers reaching middle age may have generated changes. However, the concept of differing educational needs in different life phases probably remains valid.

For those practising in socially or geographically isolated settings, the need for continuing education is stronger and often more difficult to meet. [46] Opportunities for peer-interactions are fewer. Access to continuing education is limited and often requires travel. Thus

geographic location and social context are motivational factors.

Another powerful motivation is accountability. Society demands competence. Malpractice litigation is an ever-present threat. Misconduct has been defined as the improper or unlawful conduct of a professional in regard to the performance of his duties or responsibilities. Malpractice has been defined as the failure to render proper service through ignorance, negligence or through criminal intent. [47] Participating in continuing education may be used in defence of professionals seeking to prove their commitment to competence. Some malpractice insurers offer lower premiums to lawyers practising in States where there is mandatory continuing education requirement for relicensure. [48]

Prevention of burnout has also been seen as a motivation for engaging in professional development. Donohue et al. (1993) state that a physiotherapist is less likely to experience burnout if the job is challenging, interesting and exciting and provides the opportunity for further education. [49] Forrester et al. (1995) also echo this, claiming that the taking of a sabbatical year and the participation in a training program during that year have an effect in reducing total feelings of burnout. [50]

Beyond the technical dimensions of work, professional education helps professionals understand ethical as well as political dimensions of their work. [51] If society is examined from a conflict viewpoint, professionals are seen to be in conflict with other groups in society for power, status and money. [52] Education becomes a tool to gain an upper-hand. Physiotherapists have had a history of political and judicial manoeuvring. The quest for exclusive right to practice, the definition of roles between physical therapists

and physiatrists (medical specialists in rehabilitation), the issue of direct access to physiotherapy services, the jostling between chiropractors and physiotherapists over areas of practice, and the articulation of the practice of rehabilitation technicians and physiotherapists have all required investment in education.

A further reason for participation in continuing education is the development of professional identity. Rubbing shoulders with other practitioners in various conferences and seminars strengthens one's identity as a professional physiotherapist. Continuing education contributes to the fostering of professional attitudes. These include knowledge of professionalism and one's profession, the emotive commitment to these and the internalisation of the willingness to perform professionally. [53] Collective identity characteristics reinforced by continuing education include: the professional's development of a sense of belonging to a discrete occupational group, creating a professional subculture, seeking legal reinforcement, gaining public acceptance, developing ethical codes of practice, enhancing relations with other vocations, and clarifying professional relationships with clients. [54]

Society is increasingly demanding that professionals engage in continuing development as a way to ensure competence. Why do professionals choose to participate? A 1984 study by Kicklighter published a summary of professionals' goals: avoiding professional obsolescence; keeping abreast of new developments, repairing deficiencies of knowledge or skill; maintaining or improving competency; serving society by improving the health care delivery system; improving the quality of health care; improving the status of the profession; self-improvement; self-serving; improving social

relations; relief from routine; and assuming success of educational institutions. [55]

Mandatory continuing professional education and alternatives:

Not all participation is on a voluntary basis. Let us now turn to the issue of mandatory or obligatory involvement. Beyond personal motivation, some professionals are compelled to engage in continuing education by regulations of their professional corporations.

The issue of mandatory professional education has been highlighted in the literature. Mandatory continuing professional education was first introduced for medical practitioners in the United States in 1971. By 1978, twenty states had introduced a program. [56] By 1991, nineteen states had introduced mandatory professional education for occupational therapists. [57]

The trend was slower in physiotherapy. By 1988 only four states required it, with only a further three of thirty-six states considering its implementation. [58] By 1990, in only twelve states was continuing education required for relicensure. [59] Currently, in Australia there are no requirements for mandatory continuing education relevant to the general practice of health professionals. [60] The same holds true for physiotherapy in all provinces of Canada.

Generally, when it is introduced, regulations require 30 to 50 hours of formal continuing professional education annually in order to renew professional licenses. [61] What motivates such legislation? The move from voluntary to mandatory continuing education was stimulated by the belief that not all professionals were equally conscientious in keeping up with their field. It was believed that forced

participation in continuing education would upgrade professional standards and assure accountability. [62] And yet, when such regulations came into effect in a profession, such as nursing, approximately 75% of its members were found to be already participating in continuing education at levels exceeding the minimum requirement. [63] Furthermore, research has yet to prove that such regulation leads to more competent practitioners, [64] nor that it ensures that the public is protected against incompetent professionals. [65] One thing that is not controlled by mandating participation is the learner's involvement and attention. Attendance does not preclude mental absenteeism. [66] Participation in continuing education does not necessarily mean learning has occurred. Examinations are not required at the end of the education sessions.

Not all professional associations have gone the route of mandatory continuing education. A working group studying research on this questions for the Professional Organisations Committee of Ontario in 1979 was not convinced that such an orientation was necessary. It found that there was no evidence that suggested that the professions studied required such measures to ensure maintained competence nor to glean other profit. [67] In Quebec the legislators opted instead for a system of professional inspection as an intermediary between lifelong permits and permits renewable only after mandatory professional continuing education. [68]

In the 1994-1995 Annual Report of "l'Ordre des Physiothérapeutes du Québec" the activities of the professional inspector, Liliane Asserof-Pasin, included the co-ordination of inspection services, accreditation, admission and internship committees. As a complement to these processes, the "syndic", Paul Marcoux, conducted inquiries into physiotherapists accused of infractions of the professional

code. These included complaints concerning the confidential relationship between therapist and client, the lack of professionalism, double billing, failure to implement a recommendation of upgrading, offering advice without all the requisite information, inadequate explanation of the nature of a treatment, inadequate record keeping, involvement in the private affairs of a client, consultation with a person of inappropriate training, injury during a treatment, lack of availability and attention. There were 13 formal complaints. Five of these were transferred to the professional inspector. The total membership of l'Ordre des Physiothérapeutes du Québec, as of March 31, 1995, was 2797. It is thus evident that the percentage of therapists directly affected by an investigation by the professional inspector was minimal. Whether this reflects an incredibly high level of competence or a lack of complaints is not discussed in the annual report. However, the principle mandate of l'Ordre is the assurance of the public's protection by the control of the practice of its members.

Learning Projects:

Participation in continuing education to improve competence assumes learning has occurred. Let us now consider learning. Tough (1977) defined a major learning effort to be "a highly deliberate effort to gain and retain certain definitive knowledge and skill, or to change in some way". [69] To be included, a series of related learning sessions (episodes in which the person's primary intention is to learn) must add up to at least seven hours. For Tough, a typical learning effort requires 100 hours, with the average adult conducting up to five of these a year. Although some projects rely on instructors and classes, up to 75% are self-planned and rely on friends and peer groups. [70] The New York State Board for Public Accountancy did a study on the minimum number

of hours of education that were required to make a difference in knowledge. When the study material was of a general nature, 40 hours of continuing education were required. When the subject matter was specific, only 24 hours were necessary. [71] With these as guidelines, it will be interesting to compare the level of voluntary participation in our chosen sample.

What adults study includes a vast spectrum, from personal development to general education to technology. In Penland's study, reasons for choosing to study independently included in rank order: to set one's own pace, to give one's own structure to learning, to use one's own style of learning, to keep the learning strategy flexible, not willing to wait until the course was offered, did not know of a class available in the subject sought, lack of time to engage in group programs, dislike of formal classroom situation, lack of money for registration, transportation difficulties. [72]

What are the necessary ingredients for a successful adult learning project such as continuing education? Johnson (1987) highlights motivation. "Teaching what the learner is motivated to learn, wants to learn or perceives to be relevant to daily concerns" is crucial to motivation. [73] Certain conditions are more conducive to growth and development. Malcolm Knowles enumerates several: The learners feel a need to learn. The learning environment is characterised by physical comfort, mutual trust and respect, mutual helpfulness, freedom of expression and acceptance of differences. The learners perceive the goals of a learning experience to be their goals. The learners accept a share of the responsibility for planning and operating the learning experience and thus have a feeling of commitment toward it. The learners participate actively in the learning process. The process capitalises on the experience of the learners. The learners have a sense of progress toward their goals. [74]

Health care institutions can motivate professionals to participate in continuing education by offering reimbursement of expenses and promotion based on education, as well as on technical skills. [75] Another required ingredient for participation is opportunity. Without access to a variety of learning activities of acceptable calibre, no progress can be made. Professionals are offered a plethora of seminars, conferences and journals. Judicious selection ensures that time spent in continuing education is well-invested.

The success of learning also depends on the learner himself or herself. Certain traits characterise the self-directed learner. Ikager (1978) lists these traits: self-acceptance, planfulness, intrinsic motivation, internalised motivation and openness to experience. Self-acceptance is seen as a positive image of oneself as a learner. Planfulness describes the ability to diagnose one's learning needs, the capacity to set appropriate personal goals in the light of these needs, and the competency to devise effective strategies for accomplishing these goals. Intrinsic motivation drives the desire to continue learning outside formal learning institutions and to delay gratification to proceed with learning. Internalised motivation implies that one is capable of acting as one's own evaluative agent. Openness to experience encompasses curiosity, tolerance for ambiguity and preference for complexity. [76]

Deterrents:

We have reviewed factors that promote continuing education participation. What deters professionals from more active participation?

Disengagement which is reflected in general apathy to participation in continuing education is a serious

deterrent. Complaints about the quality of available professors and programs limit participation. Family constraints, conflicting demands on time and transportation difficulties are other deterrents. Cost also plays a factor. [77]

In Patricia Cross' book, Adults as Learners, deterrents are separated into situational barriers, institutional barriers and dispositional barriers. Reported in rank order of frequency from fifty-three percent to three percent, situational barriers include: cost, lack of time, home responsibilities, job responsibilities, lack of child care, lack of transportation, lack of place to study or practice, friends and family opposed to the idea. Institutional barriers, reported in frequency from thirty-five percent to five percent, include: no wish to return to full-time studies, the amount of time required to complete the program, conflicts with the scheduling of courses, the lack of information about available courses, strict attendance requirements, non-availability of desired courses, excessive administration red-tape, lack of basic entrance requirements, course not leading to credit or degree. Dispositional barriers were less often cited (from seventeen percent to three percent). These encompassed: fear that one was too old to begin, lack of self-confidence based on poor past performance, lack of energy and stamina, studying not enjoyable, tired of school, don't know what to learn or what it could lead to, hesitate to appear too ambitious. [78]

Evaluation:

Beyond participation, a crucial aspect of continuing professional education is outcome. Two aspects are involved: what has the person learned and how it impacts on practice. The overview of continuing education is incomplete without a consideration of results and, in particular, of the evaluative process.

Evaluation in education involves an appraisal of the desirability of events or conditions associated with learning and teaching. [79] The purposes of evaluation include: the ongoing improvement of the curriculum, the estimation of the merit or worth of the course, the identification of areas where revision is desirable, and the measurement of the attainment of the goals and objectives of the course. [80] Evaluation questions should address: the program design and implementation; the learners' participation; the learners' satisfaction; the learners' newly-acquired knowledge, skills and attitudes; the application of learning after the program; the impact of the application of this learning and the program characteristics associated with the outcome. [81]

The evaluation of the effectiveness of continuing education has evolved. Initially evaluation was directed at physical characteristics such as lighting, room temperature, food and hygiene factors, with no assessment of course content or relevance. Gradually issues concerning knowledge and skills acquired were incorporated. Later, the impact of participation in continuing education on patient outcomes and health status were addressed. [82] The Australian Physiotherapy Association recently introduced a system with a voluntary follow-up session six weeks to six months after a course which assessed the person's knowledge skills and attitudes related to the course objectives. [83] This project illustrates the way of the future. We must examine how one's practice has been changed following continuing professional education.

From this review of the literature, we have become familiar with the various themes and concepts involved. We have seen factors said to enhance and deter participation. The lack of Canadian data has been evident in many areas.

This case study will look at a group of paediatric physiotherapists of Quebec to obtain data on levels of voluntary participation, motivating factors and perceived deterrents to continuing professional education for the period of the last five years. This is a timely study because "l'Ordre des Physiothérapeutes du Québec" is currently considering implementing mandatory continuing education. This case study will provide data concerning participation levels and motivational aspects for the sample studied.

CHAPTER II

METHODOLOGY

Sample Description:

This research study was conducted to collect information on the level of participation in voluntary continuing education in a sample of physiotherapists currently employed in paediatric rehabilitation and to identify factors that are conducive and detrimental to participation.

The sample population chosen was the staff of the physiotherapy department of l'hôpital Marie Enfant, a paediatric rehabilitation facility in Montreal. This population was chosen for reasons of convenience and because it provided a maximum sample size of 35. Sampling was not random, but rather self-selected and all therapists choosing to complete the survey were included. Due to this selection process, representativity has not been provided, which seriously hampers generalising the results to the larger population of physiotherapists of Quebec. However, a comparison of some results with earlier surveys of Canadian and American physiotherapists will be made.

The total population of physiotherapists in paediatrics in Quebec is not known precisely. L'Ordre des physiothérapeutes du Québec lists 252 therapists whose caseload includes some paediatric clients. To estimate the number of therapists practising uniquely in this field, the number of therapists working in paediatric settings was compiled. To this total, another ten was added to account for those in private practice, bringing the total to 125. The target population of the study is thus approximately one quarter of paediatric physiotherapists of Quebec.

Instrument:

No published studies were found in the literature on the issue of voluntary participation of physiotherapists in continuing education in Canada. Unpublished results of a Canadian survey of physiotherapy practice which included some questions about continuing education have been obtained.

To generate data and descriptive statistics concerned with this issue, a survey questionnaire was developed based on key information suggested by the literature.

SURVEY QUESTIONNAIRE

The survey questionnaire consisted of 15 questions. (See Appendix A.) The first five dealt with identifying characteristics: year of graduation, number of years of practice in paediatrics, whether one taught at the university level, whether one was responsible for the supervision of students and interns in physiotherapy, and whether one currently held a temporary or permanent position.

In order to reflect the wide definition of continuing education, data was collected on a broad range of continuing education activities. Six questions addressed participation levels. Participants were asked how many courses were taken in formal (university) continuing education and in non-university education, the number of conferences and congresses attended, the number of in-service programs attended. Participants were asked to calculate the number of days (defined as seven hours) passed in continuing education. Participants were asked to respond to each question for the

period of this past year and the past five years. Participants were then asked to respond to how many informal activities they engaged in, using a three-point Likert scale of often, sometimes, never.

The last four questions were designed to probe what facilitated participation and what deterred it and the reasons for participation. Because the literature highlights cost issues, two questions revolved around this issue. The first was the amount the professional had personally paid for courses in the past year and in the past five years. The second requested the employers' contribution with respect to registration fees, travelling expenses, leaves of absence with and without pay. Respondents were again requested to respond using a three-point scale: always, sometimes or never. The last two questions requested that respondents assign a numerical rank to possible answers, of which the survey suggested possibilities and a category "other" permitting participants to add their own replies. The first question dealt with deterrents such as time, cost, availability and pertinence of courses. The final question of the survey asked the physiotherapists why they participated in continuing education. Responses suggested included: to maintain competence, to upgrade deficiencies, to develop new skills, to maintain professional status, to enhance one's professional identity and to prevent burn-out. These were based on J.R.Kicklighter's findings. In addition to providing data on motivation, these last two questions sought to ascertain the relative importance of deterrents and goals. Respondents could again pencil-in their own replies.

A survey format was chosen in order to generate descriptive statistics using a consistent format. This was felt to be an efficient and appropriate method to obtain the required data. Personal interviews were rejected as possibly

adding unnecessary bias. Using information solely from the hospital's continuing education department was rejected as being too narrow and as being ineffective in probing the motivations of individuals. Information compiled by the department of "formation continue" of l'hôpital Marie Enfant includes only the title of the course or seminar, and information concerning the number of participants the type of instruction and a satisfaction rating of the educational activity. No questions address the motivation of the individual in participating in the activity.

Pilot Study:

Four occupational therapists working in the same paediatric rehabilitation institution agreed to respond to the draft survey. Those therapists had 8, 11, 16 and 22 years of paediatric experience. They provided feedback as to the clarity of the questions and the ease of completing the survey. Following their input, revisions were made to the draft which included the addition of a question concerning informal education (reading of journals and consultation with peers) and the correction of several typographical errors. They then reviewed the revised questionnaire. These four therapists were not included in the final sample.

Procedure:

The survey and covering letter were distributed to all physiotherapists at l'hôpital Marie Enfant by internal mail with administrative approval. For those therapists on maternity or sick leave, the survey and a stamped return envelope were sent by regular mail. The survey questionnaire was thus distributed to 35 physiotherapists in the first week of December, 1995. See Appendix A and B for copies of the survey and covering letter.

The research sample consisted of all replies received by December 18, 1995. (Replies were requested by December 10 and an additional week was allotted for postal delivery delays during the Christmas season) The completed questionnaires were opened and the identifying number removed immediately; hence, the anonymity of respondents was assured while a control of non-returned questionnaires was provided. Those who had not replied were contacted by telephone in the week of December 10, as a reminder to return their questionnaires.

A total of 30 completed questionnaires were received including 2 of the 5 sent by regular mail. Of the five non-respondents, two people had moved and could not be located, one person was on an extended sabbatical and no longer in paediatric practice, the other two were experiencing serious personal crises and were unavailable. The questionnaires were reviewed by the researcher with a statistician. Data entry into the computer was done by this statistician.

Ethical Issues:

Because this study involved human subjects, ethical guidelines were followed. This project was cleared by this University's ethics committee. Participants were informed of the objectives of the survey and that participation was on a voluntary basis. Returning a completed questionnaire constituted consent. In addition, the charge physiotherapist had been approached to obtain official administrative consent to tap this population. To provide feedback, a copy of the final report will be made available to the physiotherapy department of l'hôpital Marie Enfant.

Assumptions:

That people tried to honestly recall and record their level of participation in continuing education for the previous five years when completing the survey.

That therapists' knowledge, skills and performance contribute significantly to their competency.

That there is a direct correlation between physiotherapists participation in continuing education and their level of physical therapy knowledge, skills and performance.

Design and Data Analysis:

The initial statistical design was of a descriptive nature to obtain frequencies of responses. The 15 survey questions were divided into their component parts to obtain 28 variables. To provide groups, responses to several variables were sub-divided. For example, in the first question concerning the year of graduation, respondents were arbitrarily divided by decade (group 1: 1960-69; group 2: 1970-79; group 3: 1980-89; group 4: 1990-). The answers to the second question concerning years of paediatric experience were analyzed. One third reported 0 to 14 years, one third 15 to 19 years and a final third 20 years or more. This final third was divided into two groups - 20 to 24 years and 25 years and over. The thirteen percent of respondents with greater than 24 years experience were separated because these therapists had an initial diploma program or bachelor in physical therapy program as their basic training. All, thus, had been required to return to university to upgrade their qualifications to Bachelor of Science in Physical Therapy. Perhaps this group

was different from the other groups because of having had to return to university to continue practising in the mid-1970's. The group with 15 to 19 years experience were hired during a short period of rapid expansion of physiotherapy services at l'hôpital Marie Enfant. To facilitate statistical manipulation, respondents were divided into these three even groups based on years of paediatric experience.

The second statistical manipulation of the data was cross-tabulation. Each of the independent variables (year of graduation, years of paediatric experience, university teaching, student supervision and employment status) were cross-tabulated with all the variables. These tables will be presented in the results section.

Cross-tabulation was also used to analyse the different types of continuing education activities done this year with all the other forms of these activities both this year and over the past five years.

Finally, the variables dealing with deterrents and motivation were cross-tabulated. In this analysis and in the frequency analysis, only the first and second choices of respondents were considered.

A chi-square analysis was then performed on all the variables to identify statistically relevant relationships. A separate content analysis of their pencilled-in-choices was also made.

CHAPTER III

DISCUSSION

Of the 35 questionnaires distributed, 30 were returned. We will now consider the results of this sample. Data analysis was performed on the 30 completed questionnaires.

Independent Variables Results:

The largest group of participants, 13 (44%) graduated between 1970-79. Seven graduated between 1960-69 and between 1980-89, three graduated in this decade. When considering the number of years working in paediatrics, the sample divided into 3 equal sections: 0 to 14 years experience, 15-19 years experience and 20 years or more, with 10 respondents in each.

Only two therapists in the sample currently teach at the University of Montreal. Both of these, interestingly, have between 15 and 19 years of paediatric experience and have thus attained the half-life of their knowledge.

Those who are more experienced have permanent positions. Of those with less than 15 years P.E., job status divides evenly between permanent and temporary positions.

Table II provides information concerning student mentoring, cross-tabulated with years of paediatric experience (P.E.). A majority of those with less than 19 years P.E. mentor students. Those with more experience tend not to be mentors.

Continuing Education Variables Results:

Table III presents the frequency of participation in university and non-university continuing education courses. This is also cross-tabulated with years of P.E.

No university continuing education courses were taken by 26 (86.7%) either this year or during the past 5 years. Participation in non-university courses was greater, with 19 (63.6%) this year and 23 (76.7%) over the past 5 years. Generally, those with 20 years of P.E. or more participated less in these courses, than their younger co-workers.

Participation in conferences and congresses and at in-service sessions was higher. (See Table IV) This year 21 therapists (70%) attended conferences and 22 (73%) in-service sessions. During the past 5 years, 27 (90%) attended conferences and 20 (66.6%) in-service sessions. The trend is for the less experienced taking more continuing education.

Because most mandatory continuing education requirements are based on the number of hours spent in the activity, this variable is an important one. The complete frequency breakdown is given in Table V. Mandatory continuing education regulations require 30 to 50 hours or 4 to 7 days. This year 24 (80%) of our survey respondents failed to participate in the minimum required hours. Over 5 years, 18 (60%) participated in fewer than 10 days, for an average of 14 hours. The literature indicated that when mandatory continuing education was imposed that a significant majority were already participating at higher than minimal mandatory levels. This is obviously not the case in our sample population. Do any of the subgroups achieve the minimum standard? Table VI presents the

breakdown by years of P.E. Only 4 (13.3) with less than 14 years P.E. participated in 4 or more days. No one with 20 to 24 years P.E. accumulated 4 days. In the two other groups, 15-19 years and more than 25 years, only one person (3.3%) attained this minimum. Over 5 years, 5 (16.5%)in the 0-14 years P.E., 3 (10%) in the 15-19 years P.E., 4 (13.6%)in the group with over 20 years P.E. spent 10 days or more in continuing education. Of the seven respondents with 10-20 days over 5 years, there was one respondent for each of the following totals: 24 days, 32 days, 45 days, 47 days and 57 days. Thus, only 5 of the 30 met the minimum 4 days a year for 5 years. The implications of this will be addressed in the conclusion chapter.

Because quantifying informal education participation is difficult a Likert scale was used, with the options being "OFTEN", "SOMETIMES", "NEVER". Answers to this section are difficult to compare because different people might assign "OFTEN"/"SOMETIMES" answers for the same frequencies. Three activities were targeted: reading professional journals cover to cover; reading articles in professionals journals and consultation with peers. Nineteen therapists (63.3%) "SOMETIMES" read journals cover to cover, 9 never did . Six therapists (20%) "OFTEN" read individual articles, 24 (80%) "SOMETIMES" did. Consulting with peers was done "OFTEN" by 15(50%) and "SOMETIMES" by 15 (50%). Table VII provides the breakdown of these informal education activities by years of P.E.. Of the 10 therapists with 0-14 years P.E., 6 (60%) "SOMETIMES" read journals cover to cover, 4 (40%) "NEVER" did. Of the 10 with 20 years or more P.E., 8 (80%) "SOMETIMES" did and 2 (20%) "NEVER" did. Reading individual articles was done "OFTEN" by 1 (10%) and "SOMETIMES" by 9 (90%) in the least experienced group. In the group with 14-19 years P.E., 3 (30%) "OFTEN" read an articles, 7 (70%) "SOMETIMES" did. In those with 20 years P.E., 2 (20%) "OFTEN" did, 8 (80%) "SOMETIMES"

did. The other informal activity surveyed was peer consultation. Again no trend was discerned according to years of P.E.. In the least experienced group, 6 (60%) "OFTEN" consulted, 4 (40%) "SOMETIMES" did. In the 15-19 years P.E. group this was reversed. Those with 20 or more years P.E. split evenly between "OFTEN" and "SOMETIMES". A certain level of participation in these informal activities is seen in all groups. This question was partially open-ended. Pencilled-in replies included reading reference books and research documents, preparing projects and courses and participation in special interest groups as further examples of informal education.

Deterrents and Motivation:

Participation in most continuing education requires payment of fees and associated expenses. In reply to how much the individual paid for continuing education, only one respondent paid for courses this year or over the past 5 years. When asked the frequency ("ALWAYS", "SOMETIMES", "NEVER") of the employer paying, 25 (83%) reported that the employer "ALWAYS" paid the registration fees; 9(36%) reported that the employer "NEVER" paid travelling expenses; 24(82.8%) were "ALWAYS" granted leave with pay and 9 (36%) were "NEVER" granted leave without pay. (See Table VIII)

When asked to rank the order of possible deterrents, five answers were suggested and space was left for write-in replies. Possible replies included: no leave from work, cost of course, non-availability of courses, non-pertinence of courses, course level too basic. An analysis was done of the replies to which a rank of one, two and of one or two was assigned. (See Table IX) Calculated as a percentage of the frequency the response was given as ranking either first of second, the most important deterrent was non-availability at

37% of replies. Pencilled-in replies included: fatigue, one's availability, lacking courage, departmental budget restraints, non-eligibility due to temporary status, lack of variety (courses already attended), courses held outside Montreal, and to allow others to participate.

The final question asked why survey respondents chose to participate in continuing professional education. Again, a rank ordering was requested and analysis was done on the first two choices. Pencilled-in replies were also permitted. Two questionnaires were missing answers to this section. Table X summarises the frequency of replies assigning a rank of one, two and either one or two. The most frequently chosen reply as a first response was "to develop new competencies" at 16 (55.1%)Pencilled-in replies included: personal development, prepare retirement, share experiences with others, stimulate interest in work. Two other suggested replies, to prevent burn-out and to improve professional identity, were chosen, but never as the number one or two choice.

Chi-square analysis of relationships between variables demonstrated only five strong relationships with a significance level of .05 or better. The first was a positive correlation between the year of graduation and the number of years of paediatric experience. This predictable relationship had a significance of 0.00002. A second positive relationship was between the year of graduation and employment status (the earlier the graduation date, the more likely the employment status to be permanent). This had a significance level of 0.040. Similarly, the number of years of paediatric experience correlated with permanent employment status (0.007 significance level). Teaching at university correlated with reading journals cover to cover (0.0006 significance level). The last correlation involved employment status and amount of

money spent on courses in the past year. The only person spending money had a permanent position.

Correlational analysis did not reveal many relationships, beyond the intuitive ones. It should be reiterated that due to the small sample size, many possible variable relationships which may have been identified by a Chi-square test or a regression test, using a larger sample size, may have escaped detection. Also with this in mind, it must be said that the overall findings of this survey have a high margin of error. However as a case study of a targeted group, it provides an accurate snapshot of reality.

Discussion and analysis:

In 1988 a membership profile survey was done by the Canadian Physiotherapy Association. The return rate was 50% of the total membership, or 3,243 questionnaires. A copy of the statistics obtained from this survey was provided by McGill University professor Edith Aston-McCrimmon, a co-chair of the ad hoc committee. Table XI summarises the years of experience and employment status of the therapists and contrasts this with the American Physical Therapy Association and the present study. In comparing with the survey results of this thesis, C.P.A. members with greater than 16 years since graduation represented 36.6%, this thesis survey had 67% in this group. The young graduate group in the present survey accounted for 23%, compared to 19.4% in the C.P.A. survey and 31% in the A.P.T.A. survey. In the C.P.A. survey, 6.9% of the population worked mainly in paediatrics. If this percentage is applied to the present Quebec population of physiotherapists, it can be estimated that 192 physiotherapists of Quebec practice mainly in paediatrics. This survey was distributed to 35 therapists or 18% of those estimated to be working mainly in paediatrics based on national statistics.

Continuing education participation was considered in the C.P.A. survey and contrasted with the A.P.T.A. survey (Table XII).In those surveys, a course was considered to be a 3 hour period. In the C.P.A. survey, 16% took no courses and 67.5% took 1 to 3. In this survey, 30% took no courses and 50% took 1 to 3 courses of 7 hours. This does not include conferences, in-service sessions and university courses.In the present study, a larger percentage take no courses than those in the two national surveys. However, the percentage taking 4 or more is higher.

Based on the minimal levels of participation required when continuing education is mandatory, the present sample has been shown to be wanting. The low rate of participation in continuing professional education in this survey is distressing. Links have been made in the literature between competence and continuing education. Are the physiotherapists at l'hôpital Marie-Enfant incompetent? When this question was addressed to their supervisor, the answer was a resounding "no". How can be discrepancy be explained? In paediatric physiotherapy, one of the principal continuing education courses is the neuro-developmental therapy (N.D.T.) approach. This course is an eight-week intensive training program. Of the 35 members on staff, 21 have successfully completed this course. Another one began this course in April 1996. Many continuing education courses in paediatrics are pre-requisites to the eight-week course or at a more basic level than it. Thus for these therapists who have their N.D.T. qualification, there exists little in the way of further continuing education in the field of paediatrics. This can serve as a partial explanation for the low numbers.

With low participation in continuing education how are these therapists maintaining and improving their competence? Several senior therapists were questioned with

respect to this question. Their answers were examples of learning by doing. All suggested that working on specialised multidisciplinary teams contributed to their competence. Interaction with other professionals led to their development and encouraged them to keep abreast of developments through literature reviews. Contact with students was seen as a further incentive. These young professionals are seen to bring up-to-date information to the workplace and, through their constant questioning, they compel the staff to delve deeper and to develop their competence. Through participation in conferences, where many therapists are called upon to present scientific papers, therapists also felt that competency was being maintained and improved. Seventy percent of the respondents participated in conferences or congresses this year. Preparation of presentations involves hours not calculated in this survey. Presentations made by the physiotherapy department of l'hôpital Marie Enfant this year included reports on functional improvements in Muscular Dystrophy patients following drug trials, seating and mobility needs of various clienteles, to name a few. In addition, there is preparation time for those presenting in-service education, where they share knowledge gleaned from courses and seminars with the other members of staff wh did not attend these.

A final observation concerns the ageing of the practising therapists. In the 1987 A.P.T.A. survey 55.4% had fewer than 10 years experience; in the 1988 C.P.A. survey 43.2% had fewer than 10 years experience; in this survey 67% had more than 15 years experience. In the 1960's, the majority of married therapists abandoned their career during their child-raising years. Now the overwhelming majority return to the work force after a very brief maternity leave. Thus there has been an increase of those who graduated many years ago who are currently employed. Using the rates of obsolescence, we can thus say that their knowledge is dated, at the least. This

group will require the most continuing education to upgrade its knowledge.

This consideration aside, continuing education for physiotherapists may soon have a much larger market. L'Ordre des Physiothérapeutes du Québec is currently studying the implementation of mandatory requirements. Should this come to be, the entire population of physiotherapists will be obliged to become consumers of continuing education and the ramifications of such legislation will have to be addressed. Thus there is an urgency to review the availability of continuing education and course contents.

MENTORING BY YEARS OF EXPERIENCE

Years of Paediatric Experience	Mentors	Does not Mentor
0-14	6(60%)	4(40%)
15-19	8(80%)	2(20%)
20-24	2(33%)	4(66%)
25+	2(50%)	2(50%)

TABLE II

PARTICIPATION IN CONTINUING EDUCATION COURSES BY YEARS OF EXPERIENCE

Years of Paediatric Experience	0-14	15-19	20-24	25+	Total
University Courses this year					
0	9	8	5	4	26 (87%)
1-3	1	2	1	0	4 (13%)
4-6	0	0	0	0	0
7-10	0	0	0	0	0
10 +	0	0	0	0	0
University Courses over 5 years					
0	8	9	5	4	26 (87%)
1-3	0	1	0	0	1 (3%)
4-6	0	0	0	0	0
7-10	0	0	0	0	0
10 +	2	0	1	0	3 (10%)
Non-university Courses this year					
0	2	4	3	2	11 (37%)
1-3	8	6	2	2	18 (60%)
4-6	0	0	0	0	0
7-10	0	0	0	0	0
10 +	0	0	1	0	1 (3%)
Non-university Courses over 5 years					
0	2	2	2	1	7 (23%)
1-3	4	4	2	2	12 (40%)
4-6	2	3	1	0	6 (20%)
7-10	1	0	0	1	2 (7%)
10 +	1	1	1	0	3 (10%)

TABLE III

CONFERENCE AND IN-SERVICE PARTICIPATION BY YEARS OF EXPERIENCE

Years of Paediatric Experience	0-14	15-19	20-24	25 +	Total
This Year Conferences and Congresses Attended					
0	2	3	3	1	9 (30%)
1-3	8	7	3	3	21 (70%)
4-6	0	0	0	0	0
7-10	0	0	0	0	0
10 +	0	0	0	0	0
This Year In-Service Lecture Attended					
0	3	1	2	2	8 (27%)
1-3	1	5	2	1	9 (30%)
4-6	3	1	0	1	5 (17%)
7-10	0	2	2	0	4 (13%)
10 +	3	1	0	0	4 (13%)
Past 5 Years Conferences and Congresses Attended					
0	1	1	0	1	3 (10%)
1-3	6	5	5	2	18 (60%)
4-6	1	4	1	1	7 (23%)
7-10	0	0	0	0	0
10 +	2	0	0	0	2 (7%)
Past 5 Years In-Service Lectures Attended					
0	3	3	2	2	10 (33%)
1-3	1	1	0	0	2 (7%)
4-6	0	0	1	1	2 (7%)
7-10	0	1	1	0	2 (7%)
10 +	6	5	2	1	14 (47%)

TABLE IV

NUMBER OF 7-HOUR DAYS SPENT IN CONTINUING EDUCATION

This Year	Frequency	Percent
0	9	30
1-3	15	50
4-6	5	17
7-10	0	0
10 +	1	3

Past 5 Years	Frequency	Percent
0	2	7
1-3	5	17
4-6	2	7
7-10	9	30
10 +	12	40

TABLE V

YEARS OF EXPERIENCE BY DAYS SPENT IN CONTINUING EDUCATION

Years of Paediatric Experience	0-14	15-19	20-24	25 +	Total
This Year					
0	1	2	4	2	9 (30%)
1-3	5	7	2	1	15 (50%)
4-6	3	1	0	1	5 (17%)
7-10	0	0	0	0	0
10 +	1	0	0	0	0

Years of Paediatric Experience	0-14	15-19	20-24	25 +	Total
Past 5 Years					
0	1	1	0	0	2 (7%)
1-3	0	2	2	1	5 (17%)
4-6	1	0	0	1	1 (7%)
7-10	3	4	2	0	9 (30%)
10 +	5	3	2	2	12 (40%)

TABLE VI

YEARS OF EXPERIENCE BY PARTICIPATION IN INFORMAL CONTINUING EDUCATION

Years of Paediatric Experience	0-14	15-19	20-24	25 +	Total
1. Journals: Cover to Cover					
Often	0	0	0	0	0
Sometimes	6	5	5	3	19 (63%)
Never	4	3	1	1	9 (30%)

Years of Paediatric Experience	0-14	15-19	20-24	25 +	Total
2. Journal Articles					
Often	1	3	2	0	6 (20%)
Sometimes	9	7	4	4	24 (80%)
Never	0	0	0	0	0

Years of Paediatric Experience	0-14	15-19	20-24	25 +	Total
3. Peer Consultation					
Often	6	4	3	2	15 (50%)
Sometimes	4	6	3	2	15 (50%)
Never	0	0	0	0	0

TABLE VII

FREQUENCY OF REIMBURSEMENT BY EMPLOYER

	Always	Sometimes	Never
Registration fees	25 (83%)	4 (13%)	1 (3%)
Travelling expenses	3 (12%)	13 (52%)	9 (36%)
Leave with pay	24 (83%)	3 (10%)	2 (7%)
Leave without pay	2 (13%)	4 (27%)	9 (60%)

TABLE VIII

FREQUENCY OF DETERRENTS

Rank Order: 1	
Non-availability	14 (48.3%)
Cost of course	8 (27.6%)
Non-Pertinence	5 (17.3%)
No leave from work	1 (3.4%)
Level too basic	1 (3.4%)

Rank Order: 2	
Non-pertinence	7 (28%)
Non-availability	6 (24%)
Cost of course	5 (20%)
No leave from work	4 (16%)
Level too basic	3 (12%)

Rank Order: 1 or 2	
Non-availability	20 (37.1%)
Cost of course	13 (24.1%)
Non-Pertinence	12 (22.2%)
No leave from work	5 (9.2%)
Level too basic	4 (7.4%)

TABLE IX

MOTIVATION TO PARTICIPATE
FREQUENCY OF RESPONSES

Rank Order: 1	
Develop new competencies	16 (55.1)
Maintain competence	11 (37.9%)
Fill in gaps	1 (3.5%)
Improve professional identity	1 (3.5%)

Rank Order: 2	
Fill in gaps	12 (42.9%)
Develop new competencies	7 (25.0%)
Maintain competence	6 (21.4%)
Maintain professional status	3 (10.7%)

Rank Order: 1 or 2	
Develop new competencies	23 (40.4%)
Maintain competence	17 (29.8%)
Fill in gaps	13 (22.8%)
Maintain professional status	3 (5.2%)
Improve professional identity	1 (1.8%)

TABLE X

DISTRIBUTION OF PHYSIOTHERAPISTS (PERCENTAGE)

Years as Physical Therapist	Current survey	C.P.A. 1988	APTA 1987
1-5	23	19.4	31.0
6-10		23.8	24.4
11-15	43	20.8	17.2
16-20		15.6	10.3
21-25	23	10.0	6.6
26-30		6.6	5.0
30 +	10	4.4	3.5

Employment Status	C.P.A. 1988	APTA 1987
Full-Time Salaried	52.6	62.7
Part-Time Salaried	21.7	10.4
Full-Time Self-employed	11.1	15.8
Part-Time Self-employed	5.3	7.7
Casual Worker	3.7	-
Other	7.1	3.4

C.P.A.: Canadian Physiotherapy Association

APTA: American Physical Therapy Association

TABLE XI

NATIONAL CONTINUING EDUCATION PARTICIPATION

Number of 3-hour Courses in Past 12 Months	C.P.A. 1988	APTA-1987
0	16.0%	18.2%
1-3	67.5%	64.5%
4 +	16.5%	17.3%

Number of 7-hour Courses in Past 12 Months	Current survey
0	30%
1-3	50%
4 +	20%

TABLE XII

CHAPTER IV

CONCLUSIONS

Continuing professional education is playing an increasingly important role in the workplace. The Quebec provincial government has recently enacted legislation, Bill 90, dealing with the provision of continuing education in the workplace. In this, minimal levels of budget allocation are set. Of the total budgetary allotment for salaries, one percent must be set aside for continuing education. If the required amount is not spent on its own staff, the organisation must reimburse the difference to the provincial fund.

In 1995, the budget for continuing education in the physiotherapy department of l'hôpital Marie-Enfant was $4,000.00. The total salary budget for this department was $796,420.00. Thus, the one percent requirement was not met unless the salaries paid during courses are included. In fact, an equivalent of only .5% of the salary budget was allocated to continuing education with salaries excluded. Including salaries in the calculation of continuing education costs penalises departments with a higher proportion of older workers, as their salaries are higher than new-graduates. Yet, the legislation includes salaries in the 1% quota.

A review of the survey results raises important questions for the development and provision of continuing education for physiotherapists working in paediatrics. As it is a highly specialised field, most workers have many years of experience, indeed significantly higher than the national averages. Having obtained this specialisation and with the present context of hospital closures, few will seek to change employment. What could be done to increase participation in

continuing education? One answer is to look at what respondents listed as principal deterrents. The majority (48.3%) cited non-availability. A further 17.3% noted that courses and conferences offered were not pertinent and 3.4% stated, as their first reason for not participating, that courses were too basic. Considering the choices rated second, non-pertinence was chosen by 28%, non-availability by 24% and too basic by 12% for a total of 64%. There is a major problem in the delivery of continuing education for physiotherapists in paediatrics.

According to this study, there is a problem in the delivery of continuing education for paediatric physiotherapists. Whose responsibility is it to find a solution? To some extent, it is the providers who should be concerned. In the past three years, l'Ordre des Physiothérapeutes du Québec has significantly increased the number of courses available. Unfortunately, these were mainly in the area of orthopaedics. A corresponding three-fold increase was not seen in paediatric courses offered. Fortunately, l'Ordre des Physiothérapeutes du Québec will be participating this summer (1996) in a Masters of Education research project at the University of Quebec at Montreal to examine the needs in continuing education. Once the data is available, it can be hoped that adjustments will be made to the courses the Ordre des Physiothérapeutes du Québec offers.

Will that be enough? If the provincial government has enacted legislation to promote continuing education for its work force, does it not have some part to play? Surely it ought to see to it that courses are available and it should encourage the development of a broad spectrum of courses, including higher level offerings. At the very least, the government should encourage providers of continuing professional education to concert their efforts.

Attendance at university level courses has been seen to be meagre. Why is this? Presently the University of Montreal and McGill University, the two Montreal universities to offer courses in physiotherapy, offer little in the way of continuing education. Indeed their principal offering is at post-graduate levels. Both universities require full-time attendance for master level education. This orientation is a major draw-back for those who require regular income. Few people can opt to take a full-time leave of absence for studies. Perhaps the universities could be encouraged to show more flexibility.

Currently continuing education courses in physiotherapy are not accredited. In the United States, professionals have the option of accumulating continuing education units (C.E.U.), which recognise their efforts and can be amassed for credits. No such system is in place currently in Quebec. To do so would require the co-operation of l'Ordre des Physiothérapeutes du Québec and the two universities, which, to date, has not been fruitful. Perhaps the government's intervention could facilitate this process by acting as a catalyst and thereby make continuing education participation more attractive.

Several directions for future research can be suggested. With 90% of this survey's sample replying that participation in continuing education is motivated by a desire to maintain or improve competence, the relationship between competence and continuing education must be explored. In addition, methods to enhance improvement in competence acquisition must be explored. Other factors that contribute to competency must be identified, in order that these can be exploited fully.

A more comprehensive needs assessment is also required. Providers must know what consumers want to see offered and at what level.

In the 1960's and 1970's, the work span of physiotherapists was generally limited to that period prior to child rearing. Now the majority choose to continue in their profession with only a brief pause for 30-week maternity leaves. Practising therapists are getting older. In this sample, the older therapists were less likely to engage in continuing education. A further study is required to see if this trend is general. With their knowledge base becoming obsolete, the half-life being a maximum of fifteen years, it would be important to zero in on this lack of participation. Such a study would need to illuminate how continuing education providers ought to modify their approach to make participation more attractive and relevant for those with 20 or more years experience. Most therapists are participating in some form of continuing education, yet are not within minimum hours per year when such activity is mandatory. There is interest in upgrading themselves, but enhanced participation must be encouraged.

Finally, research is required in the area of evaluation. How effective is the method of delivery? Does participation in continuing education have an impact on practice? Does participation have a long-term impact on competency?

From this case study, we see that the paediatric physiotherapists at l'hôpital Marie Enfant are engaged in a variety of continuing professional education activities, as well as learning by doing. In fact, they participate in all the various facets highlighted in the literature. The main

motivation to participate revolves around the issue of competence. The level of participation this year is higher than that over the past five years. This also supports what was seen in the literature. This case study raises the issue of relevance, reaffirming that one must teach adults what they are motivated to learn and perceive to be important.

The therapists in this study did not generally list the deterrents suggested by the literature- at least not as their first or second choices. Lack of time, transportation or day-care facilities were rarely an issue. Only the non-availability of courses was chosen by as a major deterrent from the list suggested by the literature.

It is hoped that this case study can serve as a starting point to examine issues related to continuing education in physiotherapy in Quebec. As well, by distributing the results to providers, it is hoped that it will serve as a stimulus to them to improve their programs.

NOTES

1. R. Grant, "Obsolescence or lifelong education: choices and challenges" Physiotherapy, 78 (3): 167-171.

2. Ibid, p. 168.

3. Cyril O. Houle, The Design of Education, (San Francisco: Jossey Bass, 1972), p. 32.

4. Malcolm Tight, ed., Education for Adults. Vol. 1 Adult Learning and Education, (London: Croom Helm, 1983), p. 66.

5. Ibid, p. 60.

6. International Review of Education, Vol. 40 (1994): p. 384.

7. Charles A. Wedemeyer, Learning at the Back Door, (London: University of Wisconsin Press, 1981), p. 170.

8. Peter Jarvis, Professional Education (London: Croom Helm, 1983), p. 18.

9. Wedemeyer, Op. Cit., p. 77.

10. Tight, Op. Cit., p.6.

11. Sharon B. Merriam and Phylis M. Cunningham, eds, Handbook of Adult and Continuing Education (San Francisco: Jossey Bass, 1989), p. 513.

12. Tight, Op. Cit., p. 17.

13. _____, La Formation des Professionnels: Mémoire de l'Office des Professions à la commission d'étude sur les universités, (Quebec: 1979), p. 49.

14. Charles E. Engel, Josef Vysobled, Victor A. Vodorateki, Continuing Education for Change, (WHO Regional Publications: 1990), p. 5.

15. Jarvis, Op. Cit., p. 19.

16. Merriam and Cunningham, eds., Op. Cit., p. 518.

17. Jarvis, Op. Cit., p. 66.

18. Sykes, J.B. ed., The Concise Oxford Dictionary, (Oxford: University Press, 1976), p. 599.

19. John R. Verduin Jr. et al. The Lifelong Learning Experience, (Springfield: Charles C. Thomas, 1986), p. 50.

20. Ibid, p. 50.

21. Sherry L. Willis and Samuel S. Dubin, eds, Maintaining Professional Competence, (San Francisco: Jossey Bass, 1990), p. 114.

22. Ibid, p. 114.

23. David Leat, "A conceptual model of competence", British Journal of In-Service Education 19: 2 (1993): p. 35.

24. Jarvis, Op. Cit., p. 35.

25. Sherry L. Willis and Samuel S. Dubin eds., Op. Cit., p. 99.

26. Lyle M. Spencer & Signe M. Spencer, Competence at Work, (New York: John Wiley, 1993), p. 9.

27. _____, Continuing Education of Health Personal: Report of a Working Group, Regional Office for Europe: World Health Organisation, 1977), p. 11.

28. Barbara Sanford, ed., Strategies for Maintaining Professional Competence, (Toronto: Canadian Scholars' Press, 1989), p. 10.

29. Ibid., p. 10.

30. Gary Dessler, Improving Productivity at Work, (Virginia: Reston Publishing Co., 1983), p. 177.

31. Cyril O. Houle, Continuing Learning in the Professions, (San Francisco: Jossey Bass, 1980), p. 32.

32. Stanley M. Grabowski, ed., Strengthening Connections between Education and Performance, (San Francisco: Jossey Bass, 1983), p. 66.

33. Jarvis, Op. Cit., p. 21.

34. H.A. Sultz et al. "Determining and maintaining

competence: an obligation of allied health education", Journal of Allied Health, (November 1984), pp. 272-279.

35. Cyril O. Houle, Continuing Learning in the Professions, pp. 40-73.

36. Merriam and Cunningham, eds. Op. Cit., p. 113.

37. Gary L. Soderberg, "Mary MacMillan Lecture", Physical Therapy 73:10 (October 1993): p. 802.

38. Paul Bélanger, "Lifelong learning: the dialectics of lifelong educations", International Review of Education, Vol. 40 (1994): p. 362.

39. Philip M. Nowlan, A New Approach to Continuing Education for Business and the Professions, (New York: MacMillan Publishing Co., 1988), p. 1.

40. Ibid, p. 2.

41. Sean Courtny, Why Adults Learn: Towards a Theory of Participation in Adult Education, (London: Routledge, 1992), pp. 1-2.

42. Richard C. Sorenson and Herbert J. Walberg, "Preface", International Journal of Educational Research, Vol. 19 (1993), p. 329.

43. Anthony P. Carneval and Ellen S. Carneval, "Growth patterns in workplace training", Training and Development, Vol. 48 No. 5 (May, 1994), p. 528.

44. Merriam and Cunningham, Op. Cit., p. 6.

45. K. Patricia Cross, Adults as Learners, (San Francisco: Jossey Bass, 1981), pp. 174-175.

46. Sanford, ed. Op. Cit., p. 113.

47. Ibid. p. 12.

48. Grant McCormick and Elfreda Marshall, "Mandatory continuing professional education: a review", Australian Physiotherapy, Vol. 40 No. 1, (1994), p. 49.

49. Eileen Donohue et al., "Factors associated with burnout of physical therapists in Massachusetts Rehabilitation Hospitals", Physical Therapy, Vol. 73 No. 10 (October 1993) p. 755.

50. Keith Forrester, John Payne and Kevin Ward, "Lifelong

education and the workplace: a critical analysis", International Journal of Lifelong Education, Vol. 14 No. 4, (August, 1995), p. 335.

51. Merriam and Cuningham, eds., Op. Cit., p. 519.

52. Ibid. p. 519.

53. Jarvis, Op. Cit., p. 35.

54. Stephen D. Brookfield, Understanding and Facilitating Adult Learning, (San Francisco: Jossey Bass, 1986) p. 171.

55. J.R.Kicklighter "Continuing education for health care professionals: A state of the art review", Journal of Allied Health, 1984, pp. 169-180.

56. P. O'Reilly, C.P. Tifft and C. De Lena, "Continuing medical education: 1960's to the present", Journal of Medical Education, 57 (1982), pp. 819-826.

57. R. Garrahy et al, "Continuing education requirements to maintain occupational therapy licensure", American Journal of Occupational Therapy, 46 (1992), pp. 939-942.

58. C. Finley, "Mandatory continuing education: A survey of current activity. A special communication", Physical Therapy 68 (1988), pp. 374-377.

59. Ruth Grant, "Continuing education - does it make for a more competent practitioner?", Australian Physiotherapy, 40th Jubilee Issue (1994), p. 34.

60. McCormick and Marshall, Op. Cit. p. 19.

61. Merriam and Cunningham, eds., Op. Cit. p. 521.

62. J.M. Horne, Physical Therapists' Participation in Continuing Education, Thesis, Central Michigan University, 1993.

63. L.E. Phillips, "Is mandatory continuing education working?", Möbius, 7, (1987), pp. 57-64.

64. Madeleine Blais, L'Éducation Continue Obligatoire pour les Professionnels, (Montreal: La Librairie de l'Université de Montréal, 1983) p. 46.

65. Sharan B. Merriam and Phyllis M. Cunningham, eds. Op. Cit. p. 521.

66. Brookfield, Op. Cit., p. 174.

67. Blais, Op. Cit. p. 46.

68. Ibid., p. 48.

69. Allan Tough, Major Learning Efforts: Recent Research and Future Directions, (Toronto: Ontario Institute for Studies in Education, 1977) cited in Charles A. Wedemeyer, Op. Cit., p. 76.

70. Ibid. p. 76.

71. L. Phillips et al. "Growth of M.C.E. continues in 1993. Newsletter pp. 1-4, cited in J.M. Horne Physical Therapists's Participation in Continuing Education, Thesis, Central Michigan University 1993.

72. Patrick R. Penland, Individual Self-Planned Learning in America (Washington D.C.: U.S. Office of Education, Office of Libraries and Library Resources, 1977) cited in Wedemeyer Op. Cit. p. 77.

73. Pauline T. Johnson, "Concept and theory in continuing education for nurses", Möbius, Vol. 7 No. 3 (1987), p. 34.

74. Malcolm Knowles, The Modern Practice of Adult Education : From Pedagogy to Andragogy (Cambridge: Cambridge Book Co., 1970), cited in Tight, Op. Cit., p. 69.

75. Johnson, Op. Cit. p. 34.

76. R. Skager, Lifelong Education and Evaluation Practice, (Oxford: Pergamon Press, 1978), pp. 115-116.

77. Ronald M. Cervero, Effective Continuing Education for Professionals, (San Francisco: Jossey Bass, 1988), p. 66.

78. Cross, Op. Cit., p. 99.

79. Skager, Op. Cit., p. 24.

80. Michael Scriven, The Methodology of Evaluation, (Indiana: Indiana University, 1966), pp. 5-22.

81. Cervero, Op. Cit., p. 134.

82. O'Reilly, Op. Cit. pp. 819-826.

83. R. Grant, Op. Cit., pp. 167-171.

84. P. Johnson, Op. Cit., p. 34.

BIBLIOGRAPHY

Bélanger, Paul. "Lifelong learning: The dialectics of lifelong educations." International Review of Education. 40 (1994).

Blais, Madeleine. L'Éducation Continue Obligatoire pour les Professionnels. Montreal: La Librairie de l'Université de Montréal, 1983.

Brookfield, Stephen D. Understanding and Facilitating Adult Learning. San Francisco. Jossey Bass, 1986.

Carneval, Anthony P. and Ellen S. Carneval. "Growth patterns in workplace training." Training and Development. 48:5 (May, 1994).

Cervero, Ronald M. Effective Continuing Education for Professionals. San Francisco: Jossey Bass, 1988.

Courtny, Sean. Why Adults Learn: Towards a Theory of Participation in Adult Education. London: Routledge, 1992.

Cross, K. Patricia. Adults as Learners. San Francisco: Jossey Bass, 1981.

Dessler, Gary. Improving Productivity at Work. Virginia: Reston Puglishing Co., 1983.

Donohue, Eileen; Alys Nawawi; Leslie Wilker; Thomas Schindler and Diane U. Jette. "Factors associated with burnout of physical therapists in Massachusetts Rehabilitation Hospitals" Physical Therapy. 73:10 (October, 1993).

Engel, Charles E.; Josef Vysobled and Victor A. Vodorateki. Continuing Education for Change. WHO Regional Publications, 1990.

Finley, C. "Mandatory continuing education: a survey of current activity. A special communication." Physical Therapy. 68 (1988).

Forrester, Keith; John Payne and Kevin Ward. "Lifelong educatioı and the workplace: a critical analysis" International Journal of Lifelong Education. 14:4 (August, 1995).

Garrahy R.; Thibodaux L., Hickman C., Caldwell D. "Continuing education requirements to maintain occupational therapy licensure". American Journal of Occupational Therapy. 46 (1992).

Grabowski, Stanley M. ed. Strengthening Connections between Education and Performance. San Francisco: Jossey Bass, 1983.

Grant, Ruth. "Continuing education - does it make for a more competent practitioner?" Australian Physiotherapy. 40th Jubilee Issue (1994).

_____. "Obsolescence or lifelong education: choices and challenges." Physiotherapy. 78:3 (1992).

Horne, J.M. Physical Therapists' Participation in Continuing Education. Thesis. Central Michigan University, 1993.

Houle, Cyril O. Continuing Learning in the Professions. San Francisco: Jossey Bass, 1980.

_____. The Design of Education. San Francisco: Jossey Bass, 1972.

Jarvis, Peter. Professional education. London: Croom Helm, 1983.

Johnson, Pauline T. "Concept and theory in continuing education for nurses". Möbius 7:3 (1987).

Kicklighter, J.R. "Continuing education for health care professionals: a state of the art review." Journal of Allied Health. 1984.

Knowles, Malcolm. The Modern Practice of Adult Education: Pedagogy to Andragogy. Cambridge: Cambridge Book Co., 1970.

Leat, David. "A conceptual model of competence". British Journal of In-Service Education. 19:2, 1993.

Madsen, David. Successful Dissertations and Theses. San Francisco: Jossey Bass, 1983.

Manheimer, Martha L. Style Manual: A Guide for the Preparation of Reports and Dissertations. New York: Marcel Dekker, 1973.

McCormick, Grant and Elfreda Marshall. "Mandatory continuing professional education: a review." Australian Physiotherapy. 40:1, 1994.

Merriam, Sharon B. and Phylis M. Cunningham, eds. Handbook of Adult and Continuing Education. San Francisco: Jossey Bass, 1989.

Nowlan, Philip M. A New Approach to Continuing Education for Business and the Professions. New York: MacMillan Publishing Co., 1988.

O'Reilly, P.; C.P. Tifft and C. DeLena. "Continuing medical education: 1960's to the present." Journal of Medical Education. 57, 1982.

Penland, Patrick R. Individual Self-Planned Learning in America. Washington D.C.: U.S. Office of Education, Office of Libraries and Library Resources, 1977.

Phillips, L.E. "Is mandatory continuing education working?" Möbius. 7, 1987.

Sanford, Barbara, ed. Strategies for Maintaining Professional Competence. Toronto: Canadian Scholars' Press, 1989.

Scriven, Michael. The Methodology of Evaluation. Indiana: Indiana University, 1966.

Skager, R. Lifelong Education and Evaluation Practice. Oxford: Pergamon Press, 1978.

Sodenberg, Gary L. "Mary MacMillan Lecture". Physical Therapy. 73:10 (October 1993).

Sorenson, Richard C. and Herbert J. Walberg. "Preface". International Journal of Educational Research. 19 (1993).

Spencer, Lyle M. and Signe M. Spencer. Competence at Work. New York: John Wiley, 1993.

Suetz, H.A. "Determining and maintaining competence: an obligation of allied health education." Journal of Allied Health (November 1984).

Sykes, J.B. ed. The Concise Oxford Dictionary. Oxford: University Press, 1976.

Tight, Malcolm, ed. Education for Adults Vol. 1 Adult Learning and Education. London: Croom Helm, 1983.

Verdiun, John R. The Lifelong Learning Experience. Springfield: Charles C. Thomas, 1986.

Willis, Sherry L. and Samuel S. Dubin, eds. Maintaining Professional Competence. San Francisco: Jossey Bass, 1990.

Wedemeyer, Charles A. Learning at the Back Door. London: University of Wisconsin Press, 1981.

_____ Continuing Education of Health Personal: Report of a Working Group. Regional Office for Europe: World Health Organisation, 1977.

_____ La Formation des Professionnels: Mémoire de l'Office des Professions à la commission d'étude sur les universités. Québec, 1979.

APPENDIX A

SONDAGE SUR LA FORMATION CONTINUE

1. En quelle année avez-vous été gradué en physiothérapie?

_____

2. Depuis combien d'années travaillez-vous en pédiatrie?

_____

3. Enseignez-vous à l'Université?

Oui _____ Non _____

4. Avez-vous eu à superviser des étudiants ou internes en physiothérapie cette année?

Non _____

Oui _____ Combien? _____

5. Avez-vous actuellement un poste?

Temporaire _____

Permanent _____

6. Combien de cours universitaires crédités de formation continue avez-vous pris?

Cette année : _____

Depuis 5 ans : _____

7. Combien de cours de formation continue en physiothérapie avez-vous pris? (Non universitaires)

Cette année : _____

Depuis 5 ans : _____

8. A combien de congrès ou de conférences d'une journée ou plus, avez-vous assisté?

Cette année: _____

Depuis 5 ans : _____

9. A combien de séances de perfectionnement dans le service de physiothérapie, avez-vous assisté?

Cette année : _____

Depuis 5 ans : _____

10. Combien de journées de 7 heures avez-vous passées en formation?

Cette année : _____

Depuis 5 ans : _____

11. A combien de ces activités informelles participez-vous?

	Souvent	Parfois	Jamais
Lecture intégrale de revues en physiothérapie :	_____	_____	_____
Lecture d'articles de revues en physiothérapie :	_____	_____	_____
Consultation avec collègues expérimentés :	_____	_____	_____
Autres : spécifiez _____ :	_____	_____	_____
_____ :	_____	_____	_____
_____ :	_____	_____	_____

12. Combien avez-vous déboursé pour ces formations?

Cette année : _____

Depuis 5 ans : _____

13. Qu'est-ce que votre employeur vous a déboursé ou accordé?

	Toujours	Parfois	Jamais
Frais d'inscription			
Déplacements			
Congé avec solde			
Congé sans solde			

14. Quels sont les facteurs qui vous empêchent de faire plus de formation? (Veuillez les numéroter par ordre prioritaire, soit de 1 à 6)

Libération du travail : _____

Coût des cours/conférences : _____

Disponibilité des cours/conférences : _____

Cours offerts non pertinents : _____

Niveau de cours pas assez avancé : _____

Autres (spécifier) : _____

_____

15. Pourquoi participez-vous en formation continue? (Veuillez les numéroter par ordre prioritaire, soit de 1 à 7)

- Maintenir compétence _____
- Combler des lacunes _____
- Développer de nouvelles compétences _____
- Maintenir statut professionnel _____
- Améliorer son identité professionnelle _____
- Prévenir "burn-out" _____
- Autres (spécifier) _____

Merci de votre participation.

APPENDIX B

Le 1er décembre 1995

Cher(e) collègue,

Dans le cadre d'une maîtrise en études éducatives, je fais une étude de la formation continue des physiothérapeutes en pédiatrie. Afin de recueillir des données, j'ai préparé le sondage ci-joint. Votre participation est entièrement sur une base volontaire. Je serais reconnaissante si vous pouviez prendre le temps de le compléter et de me le retourner par courrier interne pour le 10 décembre 1995. Afin de pouvoir faire le suivi, un numéro a été assigné à votre copie. Celui-ci sera supprimé dès la réception et avant la collecte des données. Un résumé de ces données vous sera envoyé dès qu'il sera disponible.

Je tiens à remercier Marie Fournier et l'Hôpital Marie Enfant pour leur appui dans ce projet.

Je vous remercie à l'avance de votre collaboration ainsi que du temps que vous y accorderez.

Noëlla Shorgan, B.Sc.
Physiothérapeute

NS/jl