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Public School Physical Therapists

Role Definition and Educational Needs

PAMELA K. LEVANGIE, MS

Questionnaires returned by 328 physical therapists were analyzed to 1) establish a role definition for public school therapists and 2) determine the educational needs of therapists preparing for public school service. The therapists ranked 15 skills in importance to the role of the public school physical therapist and in urgency of their need to develop each skill. They also indicated which educational format they believed would be most appropriate for developing each skill. The respondents were divided into four groups matched by experience in treating children and by exposure to public school physical therapy. Rank-order correlations within each of these four groups showed little similarity in their perception of the public school therapist's role or in their own educational needs. On the other hand, between-group correlations based on averaged role definitions and educational needs were high. Generated role definitions indicated the tendency of therapists to perceive themselves as part of the traditional medical model, rather than as participants in the educational process. Responses to questions about educational needs produced data useful for organizations developing educational programs.

Key Words: *Education, special; Physical therapy; Role.*

Physical therapy services in past years have operated comfortably along traditional lines within what has been termed the medical service model.[1] As specialties in physical therapy have developed, however, many therapists have moved away from the environment of the hospital or health center and away from the profession's customary alliance with its medical compatriots. With the passage of federal and state right-to-education legislation, physical therapy services in public schools have been introduced. The practice of physical therapy in the public schools is probably moving as far from the traditional sphere as any specialty within the profession. Physical therapy has, in fact, been placed in an entirely new context, in which services are provided to support the *educational* rather than the *medical* well-being of the client. Without legislative guidelines, and failing to recognize this critical change in context, many therapists are merely performing traditional functions in new physical environments. This has led to the use of what may be, at best, "crisis service models" and, more generally, inappropriate and outmoded systems for providing service.[2] The most compelling issue facing physical therapists in the public schools is the need to adjust or redefine their functions and goals to meet the expectations both of the public and of their profession. As the context of service changes, physical therapists in the public schools must provide services not only in accordance with state or federal right-to-education legislation but also with the state's practice act and the profession's standards of practice.

The main purpose of this study was to clarify the newly emerging role of the public school physical therapist, based on physical therapists' ranking of 15 performance responsibilities or skills.

A secondary purpose of this study was to assess the professional educational needs of present and future public school therapists with different types of experience. The data collected should allow organizations to develop educational opportunities based on the

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real rather than the perceived needs of therapists seeking educational opportunities.

METHOD

A total of 1,140 survey questionnaires were mailed to the entire active membership of the Massachusetts Chapter of the American Physical Therapy Association. Of the 446 questionnaires returned (39%), 328 (29%) were completed and therefore included in the study.

The questionnaire included demographic items on employment, education, and professional experience of the respondent. Most of the questionnaire concerned 15 skills, or competencies, that had developed as the performance responsibilities of physical therapists in a public school environment.[3-5] Each respondent was asked 1) to rate his ability to perform each skill, 2) to order the skills from what he perceived to be the most important skill for the practice of public school therapy to the least important skill, and 3) to order the skills from his most urgent educational need to his least urgent educational need. Respondents were also asked to identify the educational format they believed would be most appropriate for developing or improving each of the given skills.

Respondents were 1) pediatric physical therapists experienced in implementing Massachusetts right-to-education legislation (Chapter 766), 2) pediatric physical therapists inexperienced in public school therapy, and 3) nonpediatric physical therapists. For the purpose of the study, the pediatric physical therapists with experience in implementing Chapter 766 were assumed to be the experts on public school physical therapy.

Each respondent was coded as belonging to one of four groups: 1) therapists who had some experience with a caseload consisting of children only and who had been involved in implementing Chapter 766 (PED/766), 2) therapists who had had similar clinical experience but who had not been significantly involved with Chapter 766 (PED), 3) therapists who had had only an occasional child as a patient and had no experience with Chapter 766 (NON-PED), and 4) those therapists who were not experienced in treating children but who had been involved in the formulation or implementation of individualized educational programs (NON-PED/766).

Frequencies for all data were tabulated. Within each group, means and standard deviations were established for each skill according to 1) its rank as a priority for public school therapists and 2) its rank as an educational need. The group mode for each skill was used to determine the educational format most appropriate for acquiring the skill. Data on respondents' ability to perform each skill are not reported in this study.

TABLE 1
Respondents' Experience as Physical Therapists

Length of time	% of Respondents	# of Respondents (N=328)
<1 yr	7.01	23
>1 yr <3 yrs	17.68	58
>3 yrs <5 yrs	19.51	64
>5 yrs <10 yrs	33.54	110
>10 yrs	22.26	73

The mean rank of each skill-priority within a group was used to obtain a representative role definition for that group. The mean rank of each skill as an educational need was used to obtain a representative ranking of educational needs for each group. Appropriate statistical procedures were used to assess the consistency of rankings within groups (Kendall's coefficient of concordance) as well as the consistency between groups (Spearman's rank-order correlation).

The educational format deemed appropriate for the acquisition of each skill within a group was ascertained by assigning a number to each format and determining the mode. The formats ranged from least formal time commitment to greatest formal time commitment: independent study packages, one-day workshop, three-day workshop, one- to two-week workshop, college-credited course-work, and full-time degree program.

RESULTS

Of the therapists responding in the study, 69.21 percent (204) were employed full-time as physical therapists and 21.65 percent (71) were employed part-time. The number of years of physical therapy experience of the respondents is summarized in Table 1. The distribution of respondents in the four groups is given in Table 2.

The consistency of the ranking of skill-priorities for public school therapists within each of the four groups and the consistency of the educational needs within

TABLE 2
Distribution of Respondents Within Pediatric and Nonpediatric Groups

Group	# of Respondents	%
PED/766	65	20
PED	43	13
NON-PED	183	56
NON-PED/766	36	11

TABLE 3

Values of Kendall's Coefficient of Concordance[a] for Pediatric and Nonpediatric Groups

Group	W for Skill-Priorities	W for Educational Needs
PED/766	.17	.11
PED	.24	.32
NON-PED	.33	.31
NON-PED/766	.22	.28

[a] $p \leq .001$ in all cases.

each of the four groups are given in Table 3. Data showed little agreement among the individuals within any group on a role definition for the public school physical therapist. There was also little agreement within groups on the educational needs of the respondents.

Representative role definitions for each group as determined by rank ordering the skill-priorities by mean are presented in Table 4. Representative educational needs of each group, similarly determined by rank-ordering each skill by its mean as an educational need, are presented in Table 5. Correlations between each group for representative role definition and for representative educational need are shown in Table 6. Data indicated a high degree of agreement between groups on both representative role definitions and on representative educational needs.

One- or three-day workshops were chosen by all groups as being most appropriate for learning the following skills: organizing and implementing screening programs, interpreting and understanding tests in other specialties, formulating an educational plan, setting up and implementing physical therapy services, directing to and using appropriate resources, writing and interpreting educational objectives, consulting on architectural barriers, consulting on adaptive equipment, consulting on adaptive physical education, and interacting on formal and informal levels. Skills on which there was no consensus are summarized in Table 7.

DISCUSSION

Role Definition

Since the time that therapeutic services first became available in the public schools, integration of services into the educational framework has been a major problem. Some therapists have apparently feared that modification of the medical therapeutic service model would lead to a loss of professional identity. Other therapists have been unable to deal with the change in context and goal-orientation. All have suffered from the lack of professional and legislative guidelines that should have been available to provide some basis for defining the responsibilities of public school physical therapists. The confusion about and disparity in services being offered is illustrated in this study. Not only was there little agreement within any one group on a role definition as stated, but the PED/766 group, with the highest level of expertise, showed so little consistency within the group that the ranking of skills approached randomness. The NON-PED group, with the lowest level of expertise, had the highest consistency of role definition with any group (.33 correlation). Although group representative role definitions were statistically similar, those of the two 766 groups were the least similar. Presumably, the responses of subjects in the PED/766 and NON-PED/766 groups reflect their practice. Experience in

TABLE 4

Ranking of Skill-Priorities[a] by Mean for Pediatric and Nonpediatric Groups

Skill	PED/766	PED	NON-PED/766	NON-PED
Administer and interpret pediatric evaluative procedures	1	2	1	1
Know legal responsibilities of physical therapists in public schools	2	3	5	4
Know regulations of Chapter 766	3	1	3	2
Select, implement, and modify pediatric treatment procedures	4	6	4	5
Organize and implement screening programs	5	4	2	3
Interact on formal and informal levels	6	10	13	9
Set up and implement physical therapy services	7	5	7	7
Interpret tests in other specialty areas	8	8	6	8
Consult on adaptive equipment	9	12	14	14
Formulate an educational plan	10	7	8	6
Write and interpret educational objectives	11	15	11	12
Direct to and use appropriate resources	12	9	10	10
Consult on architectural barriers	13	11	15	15
Consult on adaptive physical education	14	14	12	13
Develop and conduct educational programs	15	13	9	11

[a] Skills are listed in abbreviated form.

TABLE 5

Ranking of Educational Needs[a] by Mean for Pediatric and Nonpediatric Groups

Skill	PED/766	PED	NON-PED/766	NON-PED
Know legal responsibilities of physical therapists in public schools	1	2	2	2
Know regulations of Chapter 766	2	1	3	1
Interpret tests in other specialty areas	3	5	5	6
Organize and implement screening programs	4	8	4	4
Formulate an educational plan	5	7	6	7
Develop and conduct educational programs	6	11	9	10
Administer and interpret pediatric evaluative procedures	7	4	1	3
Direct to and use appropriate resources	8	3	8	8
Write and interpret educational objectives	9	6	10	9
Set up and implement physical therapy services	10	10	11	11
Consult on adaptive equipment	11	12	12	13
Consult on adaptive physical education	12	13	13	12
Select, implement, and modify pediatric treatment procedures	13	9	7	5
Consult on architectural barriers	14	14	14	14
Interact on formal and informal levels	15	15	15	15

[a] Skills are given in abbreviated form.

public schools seemed to confuse role definitions rather than to clarify them.

The failure of therapists to identify themselves as practitioners within the educational context can be seen in their group role definitions. The top six skills for all groups were 1) know the regulations of Chapter 766; 2) know the legal responsibilities of public school physical therapy; 3) administer and interpret pediatric evaluative procedures; 4) select, implement, and modify pediatric treatment procedures; and 5) organize and implement screening programs. The high placement of "knowledge of Chapter 766" and of "legal responsibilities" reflects the acknowledgment by most therapists that public school service is a new area, with a new set of rules to be learned. The traditional skills of evaluation, treatment, and screening, however, can be performed with or without regard to the context of services. Support for the medical rather than the educational orientation of responding therapists is found in the placement by all groups of "treatment" ahead of "formulating an educational plan." The latter skill reads in full: "formulate an educational plan as defined by Chapter 766, including physical therapy goals that are part of a child's educational program." Goals and goal-priorities for each child need to be established by all members of an educational team before an appropriate treatment program can be selected or implemented. In public school service, physical therapy goals cannot be held apart from educational goals. Yet, the separation in rank between "treatment" and "formulate an educational plan" was widest between the two 766 groups.

The following skills were considered low priority by all groups: developing and conducting in-service training and educational programs for parents, school personnel, and community; consulting with physical educators on developing adaptive physical education programs; and writing and interpreting educational objectives. All three of these skills exemplify important nontraditional functions, and possessing them is critical to the physical therapists' acceptance of their new role. The first two skills also represent ways in which a therapist may influence the provision of services to a much larger number of children than would be possible by providing physical therapy as traditionally defined. The skill "write and interpret educational objectives" reflects the therapist's attempt to communicate not only with the classroom teacher but with the public as well. Without using medical jargon, the therapist specifies realistic short-term goals for each child that can be understood and assessed by the layman. The National Advisory Committee on the Handicapped indicated in its 1976 annual report a trend in public school health services toward demanding accountability and documentation of program success.[6] Continuation of physical therapy services in the public schools may well depend on the ability of physical therapists to communicate effectively to the public both their intent and their results.

TABLE 6

Rank-Order Correlations Between Pediatric and Nonpediatric Groups[a]

	PED	NON-PED	NON-PED/766
Skill-Priority			
PED/766	.86	.85	.74
NON-PED/766	(. . .)	.94	(. . .)
Educational Needs			
PED/766	.80	.79	.84
NON-PED/766	(. . .)	.97	(. . .)

[a] $p \leq .001$ in all cases.

TABLE 7
Educational Formats for Skill Development for Pediatric and Nonpediatric Groups

Skill	Independent Study	One-Day Workshop	Three-Day Workshop	College Course
Administer and interpret pediatric evaluative procedure			NON-PED NON-PED/766	PED/766 PED
Select, implement, and modify pediatric treatment procedure		NON-PED/766	PED	NON-PED PED/766
Know legal responsibilities of physical therapists in public schools	NON-PED/766	NON-PED PED NON-PED/766		
Know regulations of Chapter 766	NON-PED/766 PED	NON-PED PED/766		

The role definition for the public school therapist that should have, but did not, evolve from this study was that of a participant in the educational process. Participants should identify themselves as independent professionals with therapeutic skills, but who also contribute to and become part of the ongoing educational program.[7] Ideally, the therapist should "carry out this work in such a way that it will reinforce, and, in turn, be reinforced by appropriate educational activities in the total school program."[7] This is not to say that traditional approaches are always inappropriate. For many children, achievement of one or more motor skills may be a primary educational objective. Use of traditional therapist-to-patient assessment and intervention, however, should depend not only upon the needs of the child but upon the requirements of the classroom and the school.

The role definition of the public school therapist may ultimately be shaped by the clamor for accountability, as well as by the demand for cost-effectiveness. The use of outmoded service models has increased the cost and reduced the availability of many professional services.[2] The medical service model requires a large number of therapists to provide one-to-one intervention and frequently results in a duplication of treatment services provided at a medical facility. The therapist who uses an appropriate educational model can use available resources effectively and expediently, to the benefit of the child, the public, and the profession.

Educational Needs

When respondents ranked the 15 skills by what they believed to be their most-urgent to least-urgent educational needs, the greatest variability was within the PED/766 group (correlation of .11). The greatest consistency in perception of educational needs was within the PED and NON-PED groups. It might be expected that the tremendous variation in public school experience in the PED/766 group would create quite dissimilar backgrounds and, therefore, dissimilar perception of needs. The lack of public school exposure in the PED and NON-PED groups probably gave each of those groups a relatively consistent background from which to assess their needs.

Although the representative educational needs for all groups were quite similar, the greatest similarity was between the NON-PED and NON-PED/766 groups (correlation of .97). The group needs were almost identical. That is, even though the NON-PED/766 group had experience in implementing Chapter 766, the group responded as if that experience had not occurred. More likely, the experience had primarily served to point out their deficiencies. For example, the NON-PED/766 group identified "pediatric evaluation" both as the skill most valuable to a public school therapist and as the skill they most urgently needed to acquire. A similar phenomenon occurred in other groups. "Knowledge of Chapter 766" and "knowledge of legal implication for public school therapists" were ranked in the top five skill-priorities and in the top three educational needs for all groups. The groups and personnel in institutions developing educational opportunities for physical therapists preparing to work in public schools must address such issues that were identified as having high importance/high need.

All but the NON-PED group seemed to reflect a participant-oriented set of priorities in ranking skills by educational need. In each of the three participant-oriented groups, "formulating an educational plan" preceded "selecting and implementing treatment" in urgency of need. "Treatment" in these groups never

ranked higher than seventh. "Developing educational programs" and "writing educational objectives" placed more variably within all groups as an educational need than as a skill-priority and averaged a higher placement. The change in rankings was in all likelihood a function of the respondents' familiarity with basic pediatric procedure. These responses show that educational programs can be planned around the priorities of public school therapists while meeting the requirements of therapists who would seek educational opportunities. For the educational programs, the formats chosen by the four groups should be considered in developing new educational opportunities.

Educational Format

There was agreement among all groups that a formal time commitment of one or three days was needed to update their knowledge on all but four of the skills. It is interesting, and of some concern, to note that, in suggesting the most appropriate teaching method, the NON-PED/766 group consistently selected the format with the shortest time commitment. The NON-PED/766 group indicated that three days was the most time it was willing to spend on acquiring any of the 15 skills. This included "pediatric evaluation procedures," which the group ranked as its most urgent educational need. Both pediatric groups indicated that a college-credited course was appropriate for the development of evaluation skills. The skills "know legal responsibilites" and "know regulations of Chapter 766" were ranked second and third in urgency of educational need by the NON-PED/766 group, yet independent study was deemed adequate for skill acquisition. This group, with little or no experience in treating children, indicated that the necessary skills in treating children could be acquired in one day; the PED/766 group again chose a college-credited course.

In spite of the incongruous responses of the NON-PED/766 group, the one- or three-day workshop format was chosen consistently enough by the groups to give a clear indication of the needs and desires of potential participants in educational programs. There was also enough interest in college-credited preparation, especially by the PED/766 group, to indicate support for such course work.

CONCLUSIONS

Although a common role definition was not clearly established in the study, the confusion in the provision of physical therapy services in the public schools was clearly highlighted by the variation in role perception with each group. Although group role definitions were similar, the roles appeared to reflect the more traditional, medically oriented service model, which may be quite inappropriate for public school service. The need still exists to develop a realistic and appropriate role definition of the public school therapist that will meet the needs of the therapists providing services in the educational environment, as well as meet the requirements of the professional standards of practice and the state and federal right-to-education legislation.

The responses of the NON-PED/766 group could certainly be used to support state or professional involvement in qualifying public school physical therapists. The group, while actually involved in providing services to public school children, has identified very basic educational needs; they also showed little commitment to redressing such deficits. For the most part, however, this study's identification of educational needs should stimulate the development of educational opportunities in line with the needs and desires of a majority of potential participants. In most states it continues to be the responsibility of individual therapists to assess, by their own criteria, their competency to practice in the public schools; they must then both seek and demand appropriate remedial programs. Until action is taken by the states or the profession, it remains largely in the hands of the individual to prepare for and establish services in the public schools that are both efficient and effective.

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