Abstract. [Purpose and Methods] A postal survey was conducted to investigate professional role and autonomy of 500 Japanese physiotherapists in conjunction with their implications concerning identity and work as a professional. The questionnaire’s content centred on role expectation and role conflict of the physiotherapist. [Results] The respondents considered physiotherapy practice to be specific in its objectives and varied rather than monotonous, but ill defined in its role. Half of the respondents believed that the physician primarily expected them to be an active member of the healthcare team, and one third of them expected to receive their referrals from the physician. The majority of physiotherapists were independent in their treatment methods and regarded their work as being important to others, but felt restricted in their selection of clients; little conflict arose in working relationships with medical practitioners and other healthcare workers, and they experienced a certain degree of autonomy. Only a small number of respondents carried out any systematic self-evaluation of treatment, so little objective feedback was acquired on the outcome of their work, a professional procedure that is essential to treatment quality, a physiotherapist’s motivation, job satisfaction, and autonomy. [Conclusion] Physiotherapy still lacks definition as a discipline and requires autonomy if it is to be recognised as a profession.

Key words: Physiotherapy, Role concept, Autonomy

INTRODUCTION

The number of privately owned physiotherapy educational institutions in Japan has increased considerably in recent years. From one aspect this situation is due to the increasing demands of society, but there are on-going criticisms against this trend vis-à-vis quality of treatment, namely, biomedical/disease-oriented practice, disproportionate emphasis on techniques and excessive paternalism¹). Such a situation creates a vacuum and requires us to reconsider the way in which physiotherapists fulfill their roles, for the physiotherapy field is increasingly expanding beyond that of medical institutions. Consequently, in order to function as a physiotherapist in the future a physiotherapist must be able to exercise autonomy to fulfil his/her expected roles²).

Professional autonomy is defined as professional practice being carried out not by decision-making outside of the profession, but based on decisions made by experts within the profession itself. Also, the degree of autonomy held by a profession is a reflection of how the society grades that profession...
as such\(^3\). However, in Japan, the law permits both qualified and un-qualified physiotherapists to practice physiotherapy. Physiotherapy has not yet fully exerted its autonomy as an established profession, for it still remains vague as to the definition of itself and in its ability to stand alone as a profession in its own right.

The role theory, which is useful in the linking of individuals and organisations, was used as a conceptual scheme for the current study. Bergman stated the following\(^4\): “One aspect of the relationship between the role and the individual actor is that people play more than one role. This applies in the case of the physiotherapist who may also be a family member, a parent, or specialist in one area of the profession and simultaneously be involved in other aspects of physiotherapy. Playing these multiple roles opens the way to potential conflict in the work and home environment. Since organisational structure is one of the major determinants of social behaviour, the conflict or demands on people within such a structure can lead to role stress. Consequently, this may generate role strain with feelings of frustration and anxiety. Increased strain within a professional role can eventually interfere with achievement of the goal itself, for its effect may lead to impaired quality or a reduction in the quantity of treatment.”

There have been no studies carried out on the roles and autonomy of physiotherapists in Japan, and therefore, the authors considered it useful to explore and verify this aspect more fully by means of a postal survey. The findings from a study such as this would help to clarify the current situation in Japanese physiotherapy. In addition, this study may assist in contributing to the development of an area of research that would possibly lead to future improvement in quality and satisfaction of a physiotherapists’ work environment.

**METHODS**

**Participants**

Using a systematic sampling method, 500 respondents were selected from the 2007 membership directory of the Japanese Physical Therapy Association. This number was eventually reduced to 229 (45.8 per cent or %) practising physiotherapists because some of the respondents did not adhere to the instructions on the questionnaire.

**Procedures**

This study was a cross-sectional, self-administered postal survey that focused on physiotherapy from the perspective of the social sciences. A questionnaire was selected as the appropriate tool for data collection.

The authors used a questionnaire that was originally written in English and designed by Bergman\(^5\). It was translated into Japanese with minor amendments (see Appendix). Following this, the physiotherapists at the University of Kanazawa Hospital, Department of Physical Therapy critically examined the questionnaire for its wording and phrasing. The questions and statements in the questionnaire were based on variety of skills, entirety, importance for others, autonomy, and feedback. These five core dimensions of a measurement tool for the Job Diagnostic Survey (JDS) can be used when redesigning a work environment in order to optimise job modification and satisfaction\(^5\). The details of JDS can be read elsewhere\(^5\).

The content of the questions and statements were centred on the role expectation and role conflict of the respondent physiotherapists. Specifically, the authors attempted to determine the following: a) demographic characteristics of the physiotherapist; b) working competency; and c) grading by the respondent of their own status in comparison with three other healthcare workers: nurses, clinical psychologists (Bergman selected physicians\(^5\) instead) and medical social workers. The respondents were asked to indicate their rating on a bipolar decimal scale, measuring status from low to high. Similarly, the measurement scale for the characteristics of physiotherapy practice was a decimal scale from routine to creative, and for professional competency, a decimal scale from low to high. As for the question concerning role expectation, the respondents were asked to select from the list only one item that they considered most important to them. As for the question related to the personal and work characteristics of the respondents, they were asked about their gender, age, family relationships, years of physiotherapy practice, field of clinical work and academic background.

The survey took approximately 20 min to complete, and a letter explaining the purpose of the study accompanied it with a return stamped addressed envelope. The instructions to respondents included a guarantee of confidentiality, that the
questionnaires would remain anonymous and the necessity to respond to every statement. The study was carried out in November of 2007, and an interim period of two weeks was allowed before the survey was to be returned by the respondents to the investigators. No reminder, by telephone or otherwise, was necessary. Approval by the research ethics board for this type of survey was not mandatory at the location of the principal investigator.

The statistical analyses were carried out on all five aspects of this study: physiotherapy characteristics and competency, role expectations, role conflicts, authority and decision-making, and professional status. As well as descriptive statistics, Student’s t-test, Welch’s test, analysis of variance, the chi-square test, Mann-Whitney U test, and Kruskal-Wallis test were also employed depending on the nature of the analyses. Responses to the questionnaires were coded and entered into a data file using Microsoft Excel 2003. A probability value of <0.05 was considered statistically significant.

RESULTS

The number of returned questionnaires was 236 (47.2%), out of which 229 (45.8%) could be processed for the study. Of these 229 questionnaires, the number of questions answered by the respondents for each category are listed as follows: 226 (98.7%) on age, 222 (96.9%) on marital status, 221 (96.5%) on years of physiotherapy practice, 227 (99.1%) on academic qualification and 229 (100.0%) on area of physiotherapy practice. From these figures, precise analyses could be carried out. The characteristics of the respondents are shown in Table 1.

Physiotherapy characteristics and competency

The respondents regarded physiotherapy as varied rather than monotonous, very specific in its objectives, but ill defined in its role (Fig. 1). The women respondents significantly regarded physiotherapy as varied rather than monotonous in comparison to the men respondents, and their mean (SD) score was 7.4 (1.4) vs. 6.9 (1.8). The diploma and associate degree holders significantly regarded physiotherapy as well-defined in its objectives in comparison to the baccalaureate and graduate degree holders, and their mean (SD) scores were 5.0 (2.2) vs. 4.2 (2.5). There were no significant differences in the scores between the areas of practice. As for

<table>
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<th>Table 1. Characteristics of the respondents</th>
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<td>Married/Cohabitation</td>
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<td>Divorced/Separated</td>
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<td>Work experience (years):</td>
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<td>Area of practice:</td>
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<td>Education/Research</td>
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<td>Public administration</td>
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<tr>
<td>Other</td>
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<td>*For the discrepancy in the total number of the respondents, see Results.</td>
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Fig. 1. Respondents’ mean scores with standard deviation of characteristics of physiotherapy and physiotherapist competency on bipolar decimal scales (N=227). *1p<0.05 (gender); *2 and *3p<0.05 (academic qualification).
the respondents’ opinion on whether or not they attained competency during their formal training, there was no difference of opinion between genders and area of practice, but the baccalaureate and graduate degree holders significantly estimated their competency as being low in comparison to the diploma and associate degree holders (mean value of 2.3 with an SD of 1.7 vs. mean value of 3.0 with an SD of 2.0).

Role expectations
There was no difference in the scores of the respondents for role expectations among gender, academic qualification and area of practice. The majority (91.9%) of the respondents considered physiotherapy to be indispensable to the treatment of clients. Moreover, 92.1% of the respondents regarded physiotherapy as an important complementary treatment to other forms of treatment, and 98.1% regarded it particularly important for certain categories of clients.

The majority (89.2%) of the respondents believed that their departmental head considered physiotherapy to be indispensable to the client’s care. There was no significant difference in the respondents’ judgment concerning the aforementioned fact between academic qualification and area of practice. The women respondents significantly believed that physiotherapy was more indispensable to the client’s well being in comparison to the men respondents (98.7% vs. 87.8%), in addition to physiotherapy being indispensable to the client’s overall treatment (95.9% vs. 85.5%). In general, all of the respondents considered their work to be meaningful.

Approximately half (47.3%) of the respondents believed the physician primarily expected the physiotherapist to be an active member of the healthcare team. Furthermore, 40.1% of the respondents believed in receiving clients referred by the medical practitioner for treatment. The number of respondents who believed in assessment of the client following a referral from the medical practitioner and in selecting which client to treat by oneself amounted to 7.7% and 1.8%, respectively. Few (0.4%) believed that the physician had any other expectation of them or no expectation at all (0.0%). Physiotherapists’ view of the expectations of them, as physiotherapists, of other healthcare workers was very similar to the one that they perceived medical practitioners had of them. Specifically, 71.1% of the respondents believed that the other three healthcare workers expected them to be an active member of the healthcare team, and 19.6% of the respondents believed that other healthcare workers expected physiotherapists to receive clients referred by the medical practitioner for consultation, assessment or treatment.

As for the question What was the foremost expectation of the client from the physiotherapist?, 78.0% of the respondents believed that the client’s expectation of them was to see an improvement in their condition as a result of the treatment, and 10.8% of the respondents believed that the client expected complete restoration of their functions. Only a minority of the respondents believed that their clients expected any direction and/or guidance (2.2%) and any preventive measures to be carried out (5.6%) vis-à-vis their condition.

Role conflicts
Diploma and associate degree holders significantly experienced conflicts within their family in comparison to that of the baccalaureate and graduate degree holders, and the median (SD) value was 2.0 (0.9) vs. 1.0 (0.1) (p<0.05). In addition, physiotherapists who were mothers significantly experienced conflicts in their family in comparison with those who were fathers, and the median (SD) value was 2.0 (1.1) vs. 1.0 (0.9) (p<0.01).

In the working environment the respondents rarely experienced conflicting expectations from medical practitioners or nurses, and the median (SD) values were 2.0 (0.7) and 2.0 (0.7), respectively. Although the respondents rarely experienced conflict with the other healthcare workers in the hospital environment, it was evident in other areas of practice; i.e., those working in welfare and other institutions significantly experienced role conflicts compared to those working in medical institutions: median (SD) value of 2.0 (0.8) vs. 2.0 (0.7). However, the respondents never experienced conflicting expectations from clients in any area of their working environment: median (SD) value of 2.0 (0.8). There was also no significant difference in role conflicts among the genders, academic qualifications and areas of practice. Table 2 shows the median and SD value of the scores related to the various role conflicts.
Authority and decision-making

The respondents, in general, believed that they could freely decide on a treatment strategy (median value of 3.0 with an SD of 0.8), freely choose a specific treatment method (median value of 3.0 with an SD of 0.7) and freely initiate it (median value of 3.0 with an SD of 0.8). However, they felt that they were very limited in their choice of clients (median value of 1.0 with an SD of 1.0). They reported that they could occasionally discontinue treatment at their own discretion (median value of 2.0 with an SD of 0.9), although, in general, they continued treatment until clients were discharged from the hospital (median value of 3.0 with an SD of 1.0). They reported that they could occasionally discontinue treatment at their own discretion (median value of 2.0 with an SD of 0.9), although, in general, they continued treatment until clients were discharged from the hospital (median value of 3.0 with an SD of 1.0). Concerning these responses on decision-making, there were no statistically significant differences among the genders, academic qualifications and areas of practice.

One half (52.7%) of the respondents reported carrying out some form of systematic evaluation of their own treatment during working hours, but, for approximately one third (17.7%) of them, it was unsuccessful. The reasons stated for its unsuccessful implementation were time constraints during working hours (26.6%) and lack of knowledge on research methodology (20.7%). Although there was no statistical difference between the academic qualifications and areas of practice of the respondents, the men were significantly more successful in carrying out systematic evaluation of their own treatment compared to women respondents (p<0.01).

Professional status

Concerning the respondents’ opinion of professional status among the four healthcare workers, nurses were placed highest on the scale. Physiotherapists, on the whole, placed themselves on a lower scale than nurses, but higher than clinical psychologists and medical social workers. The women respondents significantly placed medical social workers on a higher status scale (mean value of 5.6 with an SD of 2.1 vs. mean value of 4.8 with an SD of 2.1) compared to the men respondents who placed them on a lower scale than physiotherapists. There was no statistical difference between academic qualifications and areas of practice concerning autonomy.

DISCUSSION

Physiotherapy characteristics and competency

The findings in Fig. 1 are, in general, in agreement with that of the Swedish study4), which pressures physiotherapists to be familiar with multiple skills and up-to-date scientific knowledge, unceasing responsibility as a healthcare worker and latest treatment methods. The variety of skills required is viewed as a positive job dimension, which raises motivation and the degree of job satisfaction, but must not become excessive so as to cause a feeling of inadequacy4).

Today, physiotherapy continues to be a semi-profession in Japan because it is historically one of the later-developed healthcare disciplines. Only in 1966 was state registration introduced and, prior to that, masseurs and bone-setters were practising it long before formal institutional training commenced. Also, at the present time, the majority of educational programmes are at the diploma level, and there are still few evidence-based treatment strategies6). The fact that, by law, physiotherapy practice remains open to anyone who wishes to practise it remains a barrier to its professional status, and one implication of this is that physiotherapy cannot, as yet, fully define itself professionally or socially and,
therefore, become firmly established as a fully accepted professional body. This state of affairs may explain why the respondents in this study felt somewhat uncertain as to the definition of their own work.

In Japan students can be trained as a physiotherapist in a 4-year college, 3-year junior college or 3- or 4-year vocational school. Education in a 4-year college focuses on cultivating a high academic level including research methodology, in addition to hands-on practice. Therefore, those respondents who were baccalaureate degree holders and dissatisfied with their practical capability may have felt that they did not attain sufficient practical skills during their training. One factor for this finding is that the level of their academic potential and expectations are high when they enter college in comparison to the majority of diploma students. The vocational schools tend to concentrate more on technical instruction. Therefore, students of vocational schools may have been satisfied with carrying out treatment procedures with lesser understanding of theoretical background and importance of evidence-based practice. Consequently, these educational experiences were possibly reflected in the respondents’ view of their professional competency. However, the fact that all of the respondents estimated their professional competency rather low suggests an inadequacy in the present physiotherapy education programme in Japan. Thus, there are still some obstacles to be overcome, some of which are inexperienced teaching staff in schools, insufficient numbers of hospitals and institutions for students’ clinical placements and insufficient numbers of clinical supervisors experienced in teaching. These can be attributed to an indiscriminate increase in private training schools resulting in a possible lower quality of both teachers and graduating physiotherapists. Universal introduction of an objective structured clinical examination should be instituted to help solve the first problem and the roofing tile method of teaching and instruction for the latter is desirable, in addition to teaching of pedagogics for both teachers and clinical instructors.

Role expectations
In general, physiotherapists perceived the medical practitioners’ and other healthcare workers’ awareness and understanding of physiotherapy as inadequate. It is, therefore, necessary for physiotherapists to demonstrate their expertise to healthcare workers, so as to firmly establish their raison d’être as a member of the healthcare team.

Role conflicts
The findings on role conflicts among the respondents who were mothers can be interpreted as a difference in gender roles in the home environment.

The opinion of one respondent was There are few physiotherapists who are concerned in a positive manner with the decision of the treatment strategy made by the medical practitioner. These findings may indicate that the physiotherapists do not challenge any medical authority by making explicit their own expert opinions. In order to validate the expertise of physiotherapy the following points have been suggested: a) establishment of concrete treatment methods based on scientific evidence, b) demonstration of physiotherapy outcome, and c) self-direction. The absence of any role conflicts may indicate a low professional profile on the part of the physiotherapists by showing no assertiveness. This can be understood from the fact that physiotherapy is not regarded as being so specific in its objectives.

Authority and decision-making
The findings on treatment strategy and choice of clients suggest that physiotherapy lacks entirety as well as decision-making, which are in agreement with the Swedish study.

The findings on systematic self-evaluation of physiotherapists’ own treatment may be related to the fact that women respondents had more conflict between their family and work and, therefore, their time restraint was severer. Responsibility for the outcome of one’s own work is pertinent to decision-making. The fact that only a limited number of the respondents were engaged in self-evaluation is not conducive to establishing a clear definition of a physiotherapists’ role, in addition to the development of physiotherapy as a fully recognised profession.

Professional status
The finding on professional status differed from that of the Swedish study in which the respondents placed all of the other healthcare workers lower than themselves except for medical practitioners. Some of the respondents in this study were in doubt about how to assess professional status among healthcare
workers because each discipline has its own specific role. According to a study by Whitfield, et al. in 1996 concerning professional status among healthcare workers in the United Kingdom, physiotherapy students placed physiotherapists high, while design undergraduates (public sector) placed nurses higher than physiotherapists, but considered physiotherapists as being equal to osteopaths. According to the authors of the above study, this result indicated that physiotherapy in the United Kingdom is not yet regarded as a profession. This statement can also be applied to the findings of the current study because of the relatively low perception by the public of physiotherapy in Japan, which may have influenced the responses to this study.

The findings of the current study clearly suggest that physiotherapists must systematically evaluate the outcome and efficacy of treatment procedures to show their professional responsibility, which will lead to an increase in both work motivation and satisfaction. In this way, physiotherapy will become better defined as a distinct healthcare discipline and lead to its autonomy and recognition as a profession.

ACKNOWLEDGEMENTS

The authors thank the respondents for their participation in this study.

REFERENCES

APPENDIX: Summary of the Questionnaire

Characteristics of physiotherapy and physiotherapist competency
1. Please indicate on a decimal scale your opinion of physiotherapy regarding the following: Routine or Creative; Monotonous or Varied; Undefined or Well-defined; and Unspecific in objectives or Specific in objectives.
2. Please indicate on a decimal scale whether or not you had become competent during your formal training.

Role expectations
1. Is physiotherapy indispensable to the treatment of clients?
2. Does your superior think that physiotherapy is indispensable to the treatment of a client?
3. Is physiotherapy an important complement to other forms of treatment?
4. Is physiotherapy important for certain client categories?
5. Please indicate from the list below physicians’ foremost expectation of a physiotherapist.
   a) To be an active member of the team.
   b) To choose whom to treat.
   c) To receive clients referred by the doctor for consultation or assessment.
   d) To treat clients after referral from, or discussion with, the physician.
   e) Physician does not have any other expectation.
   f) Physician has no expectation at all of the physiotherapist.
   g) Other:

Role conflicts
1. Have you ever experienced any conflict between your family and your own occupational role?
2. Have you had conflicting expectations from doctors concerning occupational matters?
3. Have you had conflicting expectations from nurses concerning occupational matters?
4. Have you had conflicting expectations from other healthcare workers?
5. Have you had conflicting expectations from your clients?

Authority and decision-making
1. Do you feel that you have sufficient control over your treatment method?
2. Are you free to choose a specific therapeutic method?
3. Are you free to initiate a specific therapeutic method?
4. Are you able to decide whom to treat?
5. Are you able to decide when to terminate treatment?
6. Have you carried out any kind of systematic evaluation of your treatment of clients during working hours?
   a) Yes, successfully.
   b) Yes, but unsuccessfully.
   c) No, because of the lack of knowledge of methodology.
   d) No, because of insufficient time during working hours.
7. Are you able to follow through the client’s treatment completely until discharge?

The physiotherapist’s rating on the status of nurses, clinical psychologists, medical social workers and physiotherapists