Work Pattern and Job Satisfaction among Thai Physical Therapists in Public and Private Sectors

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Abstract

In Thailand, health system has increasing concerns on physical therapy (PT) workforce planning for aging population. The workforce projection study should also cover on attrition and retention. To determine work pattern, job mobility, satisfaction of Thai physical therapists and their determinants among public and private sector physical therapists were necessity. During January to April 2013, we conducted a cross-sectional survey on a subgroup of physical therapists (PTs) working in 360 healthcare facilities in 13 provinces of Thailand. A self-administered questionnaire was used to collect variables including socio-demographic characteristic, work status, job satisfaction, and professional mobility. Descriptive statistics such as frequency, mean, median were compared between public and private sectors. Factor analysis was also applied for 10 items of job satisfaction. Plan to leave the PT profession was compared with adjustment for the variables using logistic regression. From a total of 858 active PTs, there were 553 respondents (64.5%) in the study. Working status of private PTs was better than public one in terms of higher incomes, more permanent positions, less work load, and less involvement in prevention and research. However, PTs in the public sector had significantly higher work benefits. Job satisfaction of PTs was influenced by 3 main factors including professional fulfillment, job stress, and physical exhaustion. Within 5 years, one-quarter of the public PTs (23.5%) and one-third of the private PTs (36.1%) had a plan to leave the profession. For longer term, half of the public sector PTs (50.8%) were going to work until retirement. The private PTs were 2.4 times more likely to leave the profession after adjustment for age, income, and all 3 sub-domains of job satisfaction. In conclusion, the national health workforce planning in Thailand should improve the PT's working conditions in consequence of fulfilling and solving the problem of inadequate PT workforce and high attrition.

Keywords: *job satisfaction, physical therapist, Thailand, work pattern*

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สถานะการทำงานและความพึงพอใจในการทำงานของนักกายภาพบำบัดไทยในภาครัฐและภาคเอกชน

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ผู้รับผิดชอบบทความ: *สาริณี แก้วสว่าง*

บทคัดย่อ

ในประเทศไทยนั้น กำลังคนด้านกายภาพมีความสำคัญเพิ่มขึ้นเรื่อยๆ เนื่องจากการก้าวเข้าสู่สังคมผู้สูงอายุ การคาดการณ์กำลังคนด้านนี้ในอีก 10 ปีข้างหน้า (พ.ศ. 2569) ก็เป็นเรื่องสำคัญเพื่อเป็นข้อมูลสำหรับกระทรวงสาธารณสุขในการเตรียมการรองรับการก้าวเข้าสู่สังคมดังกล่าวในอนาคต การคาดการณ์กำลังคนด้านกายภาพบำบัด จำเป็นต้องอาศัยการศึกษาสถานภาพการทำงาน การเปลี่ยนงาน ความพึงพอใจในการทำงาน และปัจจัยที่มีผลต่อการทำงานของนักกายภาพบำบัดไทย ทั้งในภาครัฐและภาคเอกชน การศึกษานี้เป็นการวิจัยเชิงสำรวจ โดยเก็บข้อมูลจากนักกายภาพบำบัดที่ปฏิบัติงานอยู่ใน 360 โรงพยาบาลใน 13 จังหวัดของประเทศไทย ระหว่างเดือนมกราคมถึงเมษายน พ.ศ. 2556 ตัวแปรที่เก็บในงานวิจัยนี้ประกอบด้วย สถานภาพทางประชากรและสังคม สถานภาพการทำงาน ความพึงพอใจในการทำงาน และการวางแผนเปลี่ยนงาน ใช้สถิติเชิงพรรณนา เช่น ความถี่ ค่าเฉลี่ย หรือมัธยฐานของตัวแปรต่างๆ นำมาเปรียบเทียบระหว่างนักกายภาพบำบัดที่ทำงานในภาครัฐและภาคเอกชน การวิเคราะห์ปัจจัยนำมาใช้วิเคราะห์ความพึงพอใจในการทำงานของนักกายภาพบำบัดจาก 10 ข้อคำถามที่เกี่ยวข้อง และวิเคราะห์หาปัจจัยที่ทำนายการวางแผนลาออกจากวิชาชีพกายภาพบำบัดระหว่างนักกายภาพบำบัดทั้งสองกลุ่ม ภายหลังการปรับตัวแปรด้านต่างๆ แล้ว โดยใช้การวิเคราะห์การถดถอยโลจิสติก จากการสำรวจและสอบถามนักกายภาพบำบัดจำนวน 553 คน จากทั้งหมด 858 คน (ร้อยละ 64.5) พบว่า นักกายภาพบำบัดที่ทำงานในภาคเอกชนมีสถานภาพการทำงานที่ดีกว่า ในเรื่องของอัตราเงินเดือนที่สูงกว่า มีตำแหน่งเป็นพนักงานประจำมากกว่า ภาระงานน้อยกว่า และทำงานด้านป้องกันกับด้านวิจัยน้อยกว่านักกายภาพบำบัดที่ทำงานในภาครัฐ ขณะที่นักกายภาพบำบัดในภาครัฐได้รับสิทธิประโยชน์จากการทำงานมากกว่าภาคเอกชน ความพึงพอใจในการทำงานกายภาพบำบัด มี 3 ปัจจัยคือ ความภาคภูมิใจในวิชาชีพ ความเครียดจากการทำงาน และร่างกายเหนื่อยล้า ส่วนการศึกษาการวางแผนเปลี่ยนงานภายในระยะเวลา 5 ปี พบว่า นักกายภาพบำบัดที่ทำงานในภาครัฐเกือบ 1 ใน 4 คน (ร้อยละ 23.5) และ 1 ใน 3 (ร้อยละ 36.1) ของนักกายภาพบำบัดที่ทำงานในภาคเอกชน มีแผนที่จะลาออกจากงานกายภาพบำบัด ในขณะที่การศึกษาการทำงานกายภาพบำบัดในระยะยาว พบว่า ครึ่งหนึ่งของนักกายภาพบำบัดในภาครัฐมีแผนที่จะทำงานต่อไปจนเกษียณอายุราชการ นอกจากนี้ยังพบว่านักกายภาพบำบัดในภาคเอกชนมีแผนในการลาออกจากวิชาชีพมากกว่านักกายภาพบำบัดในภาครัฐสูงถึง 2.4 เท่า ภายหลังการปรับตัวแปรด้านอายุ รายได้และมิติทั้ง 3 ของความพึงพอใจในการทำงานแล้ว ข้อเสนอแนะคือ ประเทศไทยควรส่งเสริมสถานภาพการทำงานของวิชาชีพกายภาพบำบัดให้ดีขึ้น เพื่อก่อให้เกิดความภาคภูมิใจในวิชาชีพ อีกทั้งช่วยในการแก้ไขปัญหาความขาดแคลนนักกายภาพบำบัดและธำรงรักษากำลังคนไว้ได้

คำสำคัญ: *ความพึงพอใจในการทำงาน, นักกายภาพบำบัด, ประเทศไทย, สถานะการทำงาน*

Background and rationale

In Asia, Thailand is the most rapid aging society[1] and has a rapid changing pattern of the disease burden.[2,3] Transitions of both demographic and epidemiologic increase the need for health workforce, especially physical therapist (PT), for rehabilitation.[4,5] From previous studies, adequacy of PT in high income countries was not a major

problem.[6-8] However, there have been increasing concerns in low-and middle-income countries.[9-11] In Thailand, the need for PTs in rural area was recognized since late 1990s.[12,13] A report in 2005 was confined to number and distribution of PTs nationwide.[14] Physical therapy training institutes have then increased production. Yet, there is still shortage.[15] Work attrition was reported to be a problem,[16] but underlying causes were not known.

The objective of this study was to document the current situation of Thai PTs with analysis of work profiles, geographical distribution of their workplace, occupation mobility, job satisfaction between those in public and private sector. In addition, to predict possible factors related with planning to leave the profession.

Methodology

Study design and subjects

This was a cross-sectional study conducted during January to April 2013. All health service institutes in Thailand are registered by Bureau of Sanatorium and Art of Healing and Bureau of Policy and Strategy, Ministry of Public Health. In addition to public and private hospitals, there were 140 private physical therapy clinics reported from the Physical Therapy Council of Thailand (2012). Physical therapy training institutes are situated in 13 provinces where the PT workforces are also concentrated. Our study was confined to these 13 provinces for efficiency of data collection process.

For recruitment of the institutions, all districts of the 12 selected non-Bangkok provinces were surveyed. In Bangkok only 5 were randomly chosen from 50 existing districts in the list. Finally, there were a total of 360 target healthcare facilities in the study sample.

Tools

A survey instrument was developed based on healthcare provider survey instrument recommended by the World Health Organization.[17] Speakman's job satisfaction score for PTs, a 10 statement scoring with 7-points Likert scale (1=strongly disagree to 7=strongly agree) was also applied.[18] The questionnaire was divided into four parts. Part one consisted of individual PT profiles including demo-geographic data and educational background. Part two concerned current workplace, work status, condition, and qualification. Part three focused on job satisfaction, while the fourth part involved mainly occupation mobility. The questionnaire was translated from English into Thai by an epidemiologist. Two members of the Physical Therapy Council of Thailand were consulted to check and improve the Thai wording of the questions after back translation. Internal consistency of the Speakman's job satisfaction for Thai PTs was studied with a set of 11 PTs. Overall reliability coefficient (Cronbach's alpha) was 0.7.

Procedures

The head of physical therapy department in each service institution was visited and requested for facilitated data collection. Then, a finalized

questionnaire was sent to all PTs working in the institutes, and it was returned to the researcher by postal mail.

Data analysis

The data was computerized using EpiData 3.1. Statistical analyses were performed using R under epical package.[19] Comparisons of basic characteristics, work pattern, occupation mobility, and job satisfaction between public and private PTs were undertaken using translation followed by Fisher's exact test or Chi-square test analysis for categorical variables. Independent t-test and rank sum test were carried out on ordinal and ratio scale of the variables. Factor analysis was performed on items of job satisfaction of the physical therapy profession to determine sub-domains. A principle component extraction method with varimax rotation, with Eigen value greater than one, was used.[20] Logistic regression analysis was employed to identify predictors for planning to leave the profession within 5 years.

Ethical consideration

The study protocol was approved by the ethics committee of the Faculty of Medicine, Prince of Songkla University and the PT Council of Thailand. Informed consents were obtained from all participants before the data were collected.

Results

Among the 360 healthcare facilities that were approached and invited to participate, 266 (73.9%) had at least 1 PT. From these, a total of 858 working PTs were identified. We eventually received 553 (64.5%) completed questionnaires. Around three quarters of them worked in the public sec-

Table 1 Healthcare facility survey (n=360) on number of sample physical therapists (PTs) in 2012 and respondents

Type of facility (N=360)	With PT, n (%) 266 (73.9%)	Numbers of PT median (IQR)	Number of sample PTs	
			Respondents/ Approached N=553/858	Response rate (%) 64.5
Public (N=231)	177 (76.6)	–	392/593	66.1
Regional hospital (8)	8 (100.0)	10.5 (9-12)	63/87	72.4
Provincial hospital (7)	7 (100.0)	4 (3-5.5)	26/29	89.7
Community hospital (137)	122 (89.1)	2 (1-3)	165/272	60.7
Others in MOPH* (24)	14 (58.3)	0.5 (0-1)	15/30	50.0
Others public (55)	26 (47.3)	0 (0-4.5)	123/175	70.3
Private (N=129)	89 (69.0)	–	161/265	60.8
Hospital (93)	68 (73.1)	2 (0-3)	136/229	59.4
PT clinic (36)	21 (58.3)	0 (0-1)	25/36	69.4

*Ministry of Public Health, Thailand

tor, and 165 were in community hospitals. Table 1 summarizes the response rates by type of service institute. No significant difference in the rate was detected among various types of institution.

Table 2 presents the background characteristics of respondent PTs. Their median age was 29 years (inter-quartile range, IQR=25-35). Broken down into public and private sectors, there was no significant difference between the two groups in terms of gender, marital status, religion, or level of

Table 2 Background characteristics of respondent PTs in public and private sectors

Characteristics	Total (N=553)	Public (N=392)	Private (N=161)	p-value
Median Age (IQR)	29 (25-35)	29 (25-34)	30 (26-35)	0.54
Gender, n (%)				
Female	463 (83.7)	326 (83.2)	137 (85.1)	0.67
Male	90 (16.3)	66 (16.8)	24 (14.9)	
Higher education, n (%)				
Bachelor's degree	484 (87.5)	342 (87.2)	142 (88.2)	0.25
Other master's	50 (9.0)	39 (10.0)	11 (6.8)	
Diploma and Master in PT	19 (3.4)	11 (2.8)	8 (5.0)	
Religions, n (%)				
Buddhist	530 (95.9)	375 (95.7)	155 (96.3)	0.32
Muslim	14 (2.5)	12 (3.1)	2 (1.2)	
Christian	9 (1.6)	5 (1.2)	4 (2.5)	
Marital status, n (%)				
Single	392 (70.9)	272 (69.4)	120 (74.5)	0.48
Married	152 (27.5)	113 (28.8)	39 (24.3)	
Widow or divorce	9 (1.6)	7 (1.8)	2 (1.2)	
Birthplace, n (%)				
Bangkok and vicinity	119 (21.5)	54 (13.8)	65 (40.4)	<0.001
Central	103 (18.6)	69 (17.6)	34 (21.1)	
North-east	59 (10.7)	39 (9.9)	20 (12.4)	
North	167 (30.2)	136 (34.7)	31 (19.3)	
South	105 (19.0)	94 (24.0)	11 (6.8)	
Current workplace, n (%)				
Bangkok and vicinity	172 (31.1)	59 (15.1)	113 (70.2)	<0.001
Central	123 (22.2)	103 (26.3)	20 (12.4)	
North-east	13 (2.4)	13 (3.3)	0 (0.0)	
North	146 (26.4)	126 (32.1)	20 (12.4)	
South	99 (17.9)	91 (23.2)	8 (5.0)	

education. However, PTs in the private sector were more likely to be born and work in Bangkok and vicinity than those working in the public sector.

Table 3 shows work experience, income and benefits, work patterns and workload aggregated by public and private sectors. Most of the respondents have held their professional jobs since bachelor graduation. Over a half of the public PTs were classified as temporary employees (56.4%) as the government has not sanctioned their permanent positions. On the other hand, 86.3% of private PTs were employed as permanent staff

Table 3 Working experience, income and benefit and work pattern of PTs by sector

	Total (N=553)	Public (N=392)	Private (N=161)	p-value
Working experience (years)				
mean (SD)	8.7 (7.1)	8.5 (7.1)	9.0 (7.0)	0.42
Work status, n (%)				
Permanent staff	310 (56.1)	171 (43.6)	139 (86.3)	<0.001
Temporary employee	243 (43.9)	221 (56.4)	22 (13.7)	
Income (baht)	15,600	15,000	20,000	<0.001
median (IQR)	(13,000-20,000)	(12,712-18,000)	(15,000-25,000)	
Work benefit (Yes, n %)				
Paid vacation	486 (87.9)	360 (91.8)	126 (78.3)	<0.001
Health insurance	454 (82.1)	332 (84.7)	122 (75.8)	0.02
Professional allowance	452 (81.7)	344 (87.8)	108 (67.1)	<0.001
Training	321 (58.0)	238 (60.7)	83 (51.6)	0.06
Housing/Dormitory	128 (23.1)	124 (31.6)	4 (2.5)	<0.001
Transportation allowance	114 (20.6)	102 (26.0)	12 (7.5)	<0.001
Rural allowance	87 (15.7)	85 (21.7)	2 (1.2)	<0.001
Food allowance	79 (14.3)	63 (16.1)	16 (10.0)	0.09
Home rental	8 (1.4)	8 (2.0)	0 (0.0)	0.11
Work mix percentage, mean (SD)				
Curative care	46.6 (20.9)	44.7 (20.8)	51.5 (20.7)	<0.001
Rehabilitation	26.2 (17.8)	27.0 (18.6)	24.5 (15.8)	0.11
Prevention	12.6 (10.9)	13.8 (11.8)	9.7 (7.6)	<0.001
Research	8.4 (13.1)	10.0 (14.9)	4.6 (5.4)	<0.001
Administration	8.7 (14.2)	8.5 (13.7)	9.3 (15.3)	0.60
Workload, mean (SD)				
Work hour per day	7.6 (0.9)	7.4 (0.7)	8.3 (1.0)	<0.001
Case per day	13.7 (9.4)	14.7 (9.9)	11.3 (7.3)	<0.001
Overtime hour per day	0.8 (0.7)	0.9 (0.7)	0.5 (0.5)	<0.001

and earned higher income (20,000 versus 15,000 baht). Conversely, PTs in the public sector had significantly higher work benefits. PTs in the private sector were more likely to work in curative care (51.5%), whereas those in the public sector had a significantly higher work proportion for prevention (13.8%) and research (10%).

Table 4 presents the short-term and long-term personal plans for job mobility. Within 5 years, the majority of PTs (83.5%) would change their workplace, especially those working in the public sector. The most commonly stated reason for changing jobs in both the public and private sectors was to quit the profession. On the other hand, half of the public sector PTs (50.8%) had plans to work until retirement. The corresponding percentage among PTs in the private sector was 37.3%.

Job satisfaction for PTs was probed with 10 questions. The overall reliability coefficient (Cronbach's alpha) for the whole study sample was 0.64 indicating a need to examine sub-domains. The Scree plot (Figure 1) suggested that there are three factors. Their loading values are illustrated in Table 5. The first factor contributed five items, namely challenging work, fulfilling, sufficient independence in decision making, interesting job, and learning and improving on work. We named this factor "professional fulfillment". The second factor contributed three items including too much paperwork, not given enough autonomy, and mental stress. We named this factor "job stress".

Table 4 Short-term and long-term personal plans on job mobility

	Total (N=553)	Public (N=392)	Private (N=161)	p-value
Desire to change workplace within 5 years, n (%)				
Yes	462 (83.5)	340 (86.7)	122 (75.8)	<0.001
No	79 (14.3)	44 (11.2)	35 (21.7)	
Maybe	12 (12.2)	8 (2.1)	4 (2.5)	
Reasons for change of workplace, n (%)				
Quit out the profession	124 (27.0)	80 (23.5)	44 (36.1)	<0.001
Family reason	74 (16.0)	49 (14.4)	25 (20.5)	
Post-grad study	50 (10.8)	36 (10.6)	14 (11.5)	
Migration	48 (10.4)	34 (10.0)	14 (11.5)	
Health problem and others	44 (9.5)	33 (9.7)	11 (9.0)	
No answer	122 (26.4)	108 (31.8)	14 (11.5)	
Desire to continue PT work until retirement, n (%)				
Yes	259 (46.8)	199 (50.8)	60 (37.3)	0.006
No	285 (51.5)	187 (47.7)	98 (60.9)	
Maybe	9 (1.7)	6 (1.5)	3 (1.8)	

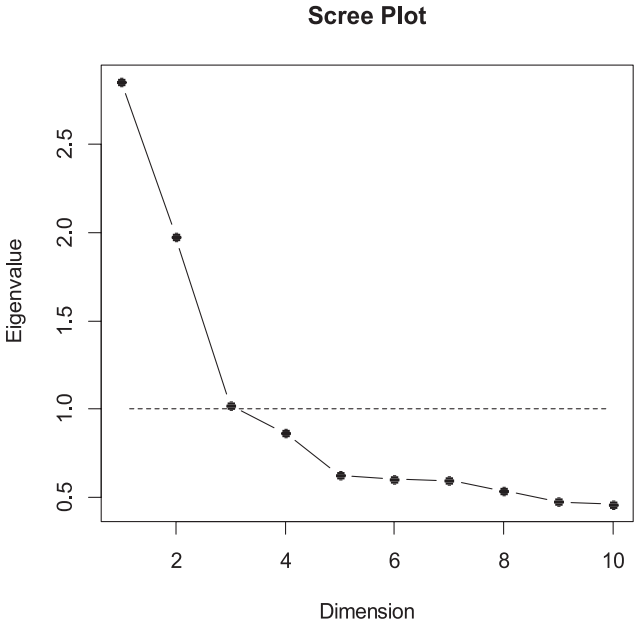

Figure 1 Scree plot of job satisfaction on profession PTs

The last factor was "physical exhaustion" which contributed 2 items: overwork and too physically demanding.

Table 6 presents the predictors of planning to leave the profession. An odds ratio of below 1 indicates a protective effect for quitting the profession. Significant predictors for planning of professional attrition include low professional fulfillment and physical exhaustion. After adjustment for these factors and other potential confounders including permanency of position, age and income (all of which showed no significant effect), it was found that private PTs were 2.4 times more likely to plan for professional attrition than their public sector counterparts.

Table 5 Rotated factor analysis for three factors of job satisfaction among Thai PTs

Items	Factor		
	Professional fulfillment	Job stress	Physical exhaustion
1. There is too much paperwork.		0.40	
2. My job is challenging in a positive sense.	0.72		
3. I am not given enough autonomy (freedom to do my work the way I want to).		0.55	
4. My job is fulfilling (i.e., enables me to use my ability).	0.64		
5. My job is mentally stressful.		0.57	
6. I have sufficient independence in decision making.	0.51		
7. My job is too physically demanding.			0.47
8. My work is interesting.	0.67		
9. I am overworked.			0.78
10. I am learning and improving on my work.	0.64		
Eigenvalue	2.14	1.04	0.96
Proportion variance	0.21	0.10	0.10
Cumulative variance	0.21	0.32	0.41

Table 6 Factors associated with planning to quit the profession based on logistic regression (n=547)

Factor	Crude OR[a] (95%CI)	Adjusted OR[a] (95%CI)	p-value[b]
Job satisfaction:			
Professional fulfillment	0.58 (0.43, 0.77)	0.58 (0.42, 0.79)	< 0.001
Job stress	1.27 (0.93, 1.74)	1.23 (0.87, 1.74)	0.234
Physical exhaustion	1.49 (1.12, 1.99)	1.55 (1.13, 2.12)	0.006
Sector: private vs public	1.67 (0.96, 2.89)	2.37 (1.2, 4.68)	0.014
Work position: temporary vs permanent	0.76 (0.47, 1.22)	1.02 (0.56, 1.84)	0.957
Income (reference=15,000 baht)			0.187
15,001 – 20,000 baht	1.4 (0.82, 2.4)	1.35 (0.71, 2.54)	0.356
20,001 baht+	0.89 (0.47, 1.68)	0.68 (0.3, 1.54)	0.358
Age: 30 years and above vs below	0.97 (0.6, 1.57)	1.15 (0.41,3.25)	0.789

[a] OR: Odds ratio; CI: confidence interval
[b] Likelihood ratio test

Discussion

The private sector PTs in this study were born and continued working in Bangkok and vicinity higher than the public sector PTs. People born in urban settings had greater opportunities for university education and employment, especially with a strong private health care market. The problem of mal-distribution of doctors in Thailand has been partially solved by an improved distribution of medical schools in rural areas and the recruitment of medical students from rural communities.[21] However, physical therapy schools have only recently begun to be established outside the capital city.[22] The impact on the distribution of PTs is still relatively small.

The public sector PTs had significantly more working experience in health prevention and research, than the private sector PTs due to the fact that the national health reform has shifted from curative care to health prevention and promotion. Currently, the major role of the public sector PTs is not only for hospital-based treatment, but also home-based rehabilitation and prevention or minimization of disabilities for older people including stroke and patient injuries.[23-26] As a result, there has been an increasing demand for PTs in community hospitals since 2001.[13] Presently, more than 80% of community hospitals in Thailand had PT services. However, the number of permanent jobs sanctioned by the government is still very limited.

Mobility and professional attrition found in this study are of the greatest concern. This is complicated by the fact that PT education in Thailand has limited capacity, a high student drop-out rate and poor geographical distribution of graduates.[22] In addition, background characteristics including being single and young makes PT staff more likely to find a new job or seek career advancement. A study on Nigerian PTs reported

that the perception of well-being was related to emigrant PTs moving to developed countries.[27] Lessons learned from other health workforces indicate that perceptions of job insecurity, burn-out, lack of professional commitment, the work-place environment, and job satisfaction were probable factors.[28-33]

The numerical domination of female PTs in our study is a part of global medical feminization.[34] This may be explained by women having a better sense of care than men.[35] Many countries have increasing concerns on the impact of gender imbalance on the healthcare system in addition to shortages and mal-distribution of the health workforce.[36,37] So far, there have not been any good examples of success in addressing the gender balance.

Conclusion and recommendations

To conclude, professional fulfillment was a preventing factor. However, physical exhaustion was influencing PT workforce to quit profession. There is a need to improve working conditions of PTs in Thailand to solve the problem of poor job satisfaction and a significant proportion of PTs planning to leave the profession. Strategy planning and implemented policy such as attrition and retention should be encouraged. In addition, systemic management for human resource should be increasing concern.[38] Moreover, PT council and PT associations of Thailand should improve the competency and performance of young staffs and assist the profession in resolving the issue.

What is already known on this topic?

There have been studies on job satisfaction among PTs in the USA, Japan and Nigeria. All the studies show that professional PTs were concerned with intrinsic factors such as fulfillment, perception of autonomy, and skill challenges rather than external factors such as income and remuneration.[18,27,39] Our study demonstrated that the sub-domains had independent effects on predicting professional attrition whereas the effects of other putative professional factors such as income and job security did not. Thus, these psychological aspects need to be taken into consideration in solving the problem of PT shortage.

What this study adds?

This study confirmed that job stress and physical exhaustion were factors influencing leaving the PT profession. In contrast, professional fulfillment was a protective factor. However, PTs in the private sector were more likely to quit the profession even after adjustment for these factors. It is possible that there are other unknown explanatory factors that were different for these two sectors and were not included in this study.

Acknowledgements

We would like to express our deepest appreciation to the PTs who participated in the survey, the head of physical therapy department at each healthcare facility for coordinating and returning the questionnaires, and the PTs who worked in Satun, for pre-testing of the questionnaire. We also would like to thank Assistant Professor Mantana

Vongsirinavarat, the then president of the Physical Therapy Council of Thailand (2010-2013), for her guidance. Funding support for this study came from the Graduate School, Prince of Songkla University, Thailand.

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