

Comparison of Physical Therapy Field Preferences of Students and Physical Therapists

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Received: October 19 2023 / Revised: October 20 2023 / Accepted: November 6 2023

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| Abstract |

PURPOSE: This study compared the preferences of students majoring in physical therapy (PT) and those of physical therapists regarding various PT fields.

METHODS: Two hundred and sixty-two participants (students: 161, physical therapists: 101) were recruited, and their preferences for seven fields of the PT (musculoskeletal system, nervous system, children and adolescents, cardiopulmonary system, sports, and pelvic and women's health) were surveyed using a Likert five-point scale. An independent t-test was conducted to compare the preference scores of each field between the PT student and physical therapist groups.

RESULTS: PT for the musculoskeletal system was the most preferred by PT students and physical therapists. In contrast, PT for children and adolescents had the lowest preference. A comparison of the preferences of various PT fields in the two groups revealed PT students to have a significantly higher preference for PT on the musculoskeletal

system, children and adolescents, and the nervous system compared with the physical therapists.

CONCLUSION: These results could provide the basic information for various PT fields.

Key Words: Field of physical therapy, Physical therapists, Physical therapy students, Physical therapy, Preference

I. Introduction

Physical therapy (PT) is used to prevent and treat diseases, providing patients with a means to return to a healthy life. PT delivers health care through various means, such as electricity, water, and massage. According to the Korean Physical Therapy Association, PT may be categorized into various specialized fields. These include PT for the musculoskeletal system, nervous system, children and adolescents, cardiopulmonary system, pelvic and women's health, and sports. PT for the musculoskeletal system aims to treat soft tissue and muscle injuries and conditions, such as fractures, bone deformities, arthritis, and sprains [1]. PT for the nervous system focuses on functional recovery from disorders caused by injuries to the central and peripheral nerves. PT for children and adolescents provides care for conditions, such as cerebral palsy, polio, or congenital malformations, and PT for the

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cardiopulmonary system includes breathing exercises for heart and lung diseases. PT for pelvic and women's health involves prenatal and postpartum exercise treatment, especially for the pelvic region. PT for sports aims to maintain athletic performance by preventing injuries and treating athletes according to the specific characteristics of their sport and the type of injuries. In addition, there are various other fields of PT, such as those for the elderly, robot rehabilitation, and the integumentary system.

Obtaining a license to practice PT requires passing the National Physical Therapist Examination conducted by the Korea Health Personnel Licensing Examination Institute. The criteria for passing this national exam comprise scores of 40% or more in each subject, 60% or more in total for the written test, and 60% or more in the practical test [2]. A successful candidate obtains a physical therapist's license from the Ministry of Health and Welfare. A candidate must complete a certain level of education and graduate with a major in PT to qualify for the examination. Students undergo a stipulated curriculum to gain the required expertise and qualifications. PT courses can be divided into basic and major courses, and the major courses include basic PT, diagnosis and evaluation, and intervention for PT [3]. The curriculum enables PT students to improve their skills, gain a basic grounding in PT, and develop practical expertise, skills in thinking, clinical evaluation and diagnosis, and interventions for personalized PT. This curriculum allows PT students to gain experience in various PT fields indirectly. On the other hand, the availability of accurate information for clinical practice in each field is inadequate, and PT students resort to other channels to obtain more information on the characteristics of each field. The students face difficulties making career choices for a specific field without sufficient information or due to the availability of only inaccurate information. In addition, physical therapists find it difficult to obtain accurate information on fields of PT other than their career field.

In a study on the fields of PT, Park surveyed the career

preferences of PT students [4]. Lee and Yoon (2018) surveyed the PT subject preferences of seniors [5]. Park et al. evaluated PT students to determine their employment and career path preferences for orthopedic PT [6]. On the other hand, there has been no survey to date on the preferences of PT students and physical therapists for each of the various PT fields. Therefore, this study surveyed the preferences of PT students and physical therapists for various PT fields.

II. Methods

1. Subjects and Methods

This study is based on a survey. Two hundred and sixty-two participants (161 PT students and 101 physical therapists) were recruited, and the survey on them was conducted from August 18 to September 15, 2022. Before the survey, adequate explanations were provided, and the subjects signed an informed consent form to participate. The survey was conducted using a Google online questionnaire (Google Forms, Google Inc., CA, USA). The questionnaire was based on the Korea Physical Therapy Association categorization and was divided into seven fields, i.e., PT for the musculoskeletal system, nervous system, children and adolescents, cardiopulmonary system, sports, pelvic and women's health, and others [fitness centers, Pilates, and daycare centers]). The questionnaire had four (PT student) and six (physical therapist) general questions and 14 questions about the PT fields and occupation preferences. The questionnaire adopted a self-report Likert five-point scale. Table 1 lists the general characteristics of the PT students and physical therapists.

2. Questionnaire

The measurement tools in this study included information on the subject, four questions for PT students, and six for physical therapists. Integrated questions

Table 1. General characteristics of the physical therapy students and physical therapists

		Students	Physical therapists
Gender (n, %)	Male	52 (32.3)	44 (43.6)
	Female	109 (67.7)	57 (56.4)
Age (n, %)	20s	156 (96.9)	72 (71.3)
	30s	5 (3.1)	20 (19.8)
	40s	-	8 (7.9)
	50s	-	1 (1)
Grade (n, %)	1	53 (32.9)	
	2	34 (21.1)	
	3	48 (29.8)	-
	4	26 (16.1)	
Work experience (n, %)	Less than 1 year		28 (27.7)
	1–5 years		36 (40.6)
	6–10 years	-	19 (18.8)
	Over 10 years		13 (12.9)
Current field of Practice (n, %)	Musculoskeletal system		53 (52.5)
	Nervous system		27 (26.7)
	Children and adolescents		3 (3)
	Cardiopulmonary system	-	3 (3)
	Pelvic and Women's health		0
	Sport		5 (5)
	Others		10 (9.9)

included 14 questions regarding the PT field and occupation preferences to enable the researchers to compare the preferences of the PT students and physical therapists. A question regarding the reasons for their choices was also included. The questionnaire was made and reviewed by five PT experts (one professor and four physical therapists with at least five years of experience).

3. Statistical Analysis

The SPSS software (SPSS for Windows, Version 25.0; SPSS Inc., Chicago, IL, USA) was used for statistical analysis. An independent t-test was conducted to compare the preference scores of each field between the PT student and physical therapist groups. The statistical significance level was set to .05.

III. Results

1. Preferences for Various PT Fields and Reasons for the Same

1) PT for the Musculoskeletal System

The results of the analysis of the preference of PT students and physical therapists for the field of PT for the musculoskeletal system and the reasons for their choice were as follows (Table 2): The average preference scores of the PT students and the physical therapists for PT for the musculoskeletal system were 4.32 and 4.07 points, respectively. There was a significant difference between the preferences of the two groups ($p < .05$). The reasons given by PT students for this choice were as follows. Annual salary was the foremost

reason given by 57.1% (92/161) of the students, followed by aptitude 36% (58/161), employment 29.8% (48/161), potential for development 19.9% (32/161), social awareness 11.8% (19/161), service environment 10.6% (17/161), job stability 10.6% (17/161), work difficulty 6.2% (10/161), academic difficulty 2.5% (4/161), and others 1.2% (2/161).

The reasons given by physical therapists for their choice of PT for the musculoskeletal system were as follows. Annual salary was the top reason given by 58.4% (59/101) of the therapists, followed by aptitude 45.5% (46/101), potential for development 22.8% (23/101), service environment 15.8% (16/101), employment 13.9% (14/101), social awareness 11.9% (12/101), work difficulty 8.9% (9/101), job stability 7.9% (8/101), academic difficulty 2% (2/101), and others 1% (1/101).

2) PT for the Nervous System

The results of the analysis of the preference of PT students and physical therapists for PT for the nervous system and the reasons for this choice were as follows

Table 2. Physical therapy for the musculoskeletal system

Preference	Students	Physical therapists
	4.32 (.77)*	4.07 (.89)
Reasons for selection (n, %)		
Annual salary	92 (57.14)	59 (58.42)
Aptitude	58 (36.02)	46 (45.54)
Employment	48 (29.81)	14 (13.86)
Development potential	32 (19.88)	23 (22.77)
Social awareness	19 (11.80)	12 (11.88)
Service environment	17 (10.56)	16 (15.84)
Job stability	17 (10.56)	8 (7.92)
Work difficulty	10 (6.21)	9 (8.91)
Academic difficulty	4 (2.48)	2 (1.98)
Others	2 (1.24)	1 (.99)

Values represent the mean (\pm standard deviation)

*: $p < .05$

(Table 3). The average preference scores of PT students and the physical therapists for PT for the nervous system were 3.53 and 2.95 points, respectively. A significant difference was noted in the preferences of the two groups ($p < .05$). The reasons for this choice by the PT students were as follows. Service environment was the reason given by the highest number of students at 33.5% (54/161), followed by aptitude 24.8% (40/161), work difficulty 23.6% (38/161), potential for development 23% (37/161), employment 19.9% (32/161), annual salary 18% (29/161), job stability 17.4% (28/161), social awareness 12.4% (20/161), academic difficulty 6.8% (11/161), and others 0.6% (1/161). The highest number of physical therapists (42.6% (43/101)) reported the service environment as the foremost reason for their choice, followed by annual salary 34.7% (35/101), potential for development 20.8% (21/101), job stability 20.8% (21/101), work difficulty 19.8% (20/101), employment 16.8% (17/101), aptitude 15.8% (16/101), social awareness 5% (5/101), and academic difficulty 2% (2/101).

Table 3. Physical therapy for the nervous system

Preference	Students	Physical therapists
	3.53 (1.10)*	2.95 (1.11)
Reasons for selection (n, %)		
Annual salary	54 (33.54)	43 (42.57)
Aptitude	40 (24.84)	16 (15.84)
Work difficulty	38 (23.60)	20 (19.80)
Potential for development	37 (22.98)	21 (20.79)
Employment	32 (19.88)	17 (16.83)
Annual salary	29 (18.01)	35 (34.65)
Job stability	28 (17.39)	21 (20.79)
Social awareness	20 (12.42)	5 (4.95)
Academic difficulty	11 (6.83)	2 (1.98)
Others	1 (.62)	-

Values represent the mean (\pm standard deviation)

*: $p < .05$

3) PT for Children and Adolescents

An analysis of the preference of PT students and physical therapists for PT for children and adolescents revealed the following (Table 4). The average preference score of the students and the physical therapists for PT for children and adolescents was 3.27 and 2.73 points, respectively. There was a significant difference in the preferences between the two groups ($p < .05$). The uppermost reason for this choice among the PT students was aptitude (55.9% (90/161)), followed by the service environment 31.1% (50/161), working difficulty 24.2% (39/161), potential for development 17.4% (28/161), job stability 9.9% (16/161), employment 9.9% (16/161), social awareness 9.3% (15/161), annual salary 8.7% (14/161), others 3.6% (6/161), and academic difficulty 3.1% (5/161). The physical therapists reported work difficulty as the top reason, selected by 36.6% (37/101) of therapists, followed by the potential for development 31.7% (32/101), aptitude 28.7% (29/101), service environment 22.8%. (23/101), annual salary 18.8% (19/101), social awareness 12.9% (13/101),

job stability 12.9% (13/101), employment 8.9% (9/101), and academic difficulty 5% (5/101).

4) PT for the Cardiopulmonary System

An analysis of the preference of PT students and physical therapists for PT for the cardiopulmonary system revealed the following (Table 5). The average score of the preference of the PT students and the physical therapists for PT for the cardiopulmonary system was 3.49 and 3.54 points, respectively. The two groups had similar preferences ($p > .05$). The foremost reason for choosing PT for the cardiopulmonary system among the PT students was the potential for development (42.2% (68/161)), followed by aptitude 24.8% (40/161), service environment 19.9% (32/161), work difficulty 19.9% (32/161), social awareness 16.8% (27/161), employment 11.2% (18/161), academic difficulty 11.2% (18/161), job stability 10.6% (17/161), annual salary 9.9% (16/161), and others 3.6% (6/161). The leading reason for choosing PT for the cardiopulmonary system among physical therapists was the potential for

Table 4. Physical therapy for children and adolescents

Preference	Students	Physical therapists
	3.27 (1.17)*	2.73 (1.17)
Reasons for selection (n, %)		
Aptitude	90 (55.90)	29 (28.71)
Service environment	50 (31.06)	23 (22.77)
Work difficulty	39 (24.22)	37 (36.63)
Potential for development	28 (17.39)	32 (31.68)
Job stability	16 (9.94)	13 (12.87)
Employment	16 (9.94)	9 (8.91)
Social awareness	15 (9.32)	13 (12.87)
Annual salary	14 (8.70)	19 (18.81)
Others	6 (3.73)	-
Academic difficulty	5 (3.11)	5 (4.95)

Values represent the mean (\pm standard deviation)

*: $p < .05$

Table 5. Physical therapy for the cardiopulmonary system

Preference	Students	Physical therapists
	3.49 (1.04)	3.54 (1.05)
Reasons for selection (n, %)		
Potential for development	68 (42.24)	66 (65.35)
Aptitude	40 (24.84)	13 (12.87)
Service environment	32 (19.88)	25 (24.75)
Work difficulty	32 (19.88)	15 (14.85)
Social awareness	27 (16.77)	12 (11.88)
Employment	18 (11.18)	14 (13.86)
Academic difficulty	18 (11.18)	11 (10.89)
Job stability	17 (10.56)	8 (7.92)
Annual salary	16 (9.94)	9 (8.91)
Others	6 (3.73)	-

Values represent the mean (\pm standard deviation)

development (65.3% (66/101)), followed by the service environment 24.8% (25/101), work difficulty 14.9% (15/101), employment 13.9% (14/101), aptitude 12.9% (13/101), social awareness 11.9% (12/101), academic difficulty 10.9% (11/101), annual salary 8.9% (9/101), and job stability 7.9% (8/101).

5) PT for Sports

An analysis of the preference of PT students and physical therapists for sports PT showed the following (Table 6). The average score for the preference of the PT students and the physical therapists for PT for sports was 4.05 and 3.81 points, respectively. The two groups had a similar preference for sports ($p > .05$). The main reason for choosing PT for sports among the PT students was aptitude (47.2% (76/161)), followed by the service environment 36% (58/161), annual salary 28.6% (46/161), potential for development 26.1% (42/161), social awareness 16.8% (27/161), work difficulty 9.9% (16/161), job stability 9.9% (16/161), employment 6.8% (11/161), and academic difficulty 1.9% (3/161). The principal reason for choosing sports PT among physical therapists was the potential for

Table 6. Physical therapy for sports

Preference	Students	Physical therapists
	4.05 (1.08)	3.81 (.99)
Reasons for selection (n, %)		
Aptitude	76 (47.20)	34 (33.66)
Service environment	58 (36.02)	30 (29.70)
Annual salary	46 (28.57)	29 (28.71)
Potential for development	42 (26.09)	44 (43.56)
Social awareness	27 (16.77)	28 (27.72)
Work difficulty	16 (9.94)	8 (7.92)
Job stability	16 (9.94)	6 (5.94)
Employment	11 (6.83)	7 (6.93)
Academic difficulty	3 (1.86)	1 (.99)
Others	-	-

Values represent the mean (\pm standard deviation)

development (43.6% (44/101)), followed by aptitude 33.7% (34/101), service environment 29.7% (30/101), annual salary 28.7% (29/101), social awareness 27.7% (28/101), work difficulty 7.9% (8/101), employment 6.9% (7/101), job stability 5.9% (6/101), and academic difficulty 1% (1/101).

6) PT for Pelvic and Women's Health

An analysis of the preference of PT students and physical therapists for PT for pelvic and women's health revealed the following (Table 7). The average score of the preference of PT students and the physical therapists for PT for pelvic and women's health was 3.57 and 3.50 points, respectively. The preferences were similar in the two groups ($p > .05$). The main reason for the preference of PT for pelvic and women's health among PT students was the potential for development chosen by 38.5% (40/161) of students, followed by service environment 36.6% (59/161), aptitude 30.4% (49/161), social awareness 24.8% (40/161), employment 11.2% (18/161), work difficulty 9.3% (15/161), job stability 9.3% (15/161), annual salary 6.8% (11/161), others 3% (5/161), and academic difficulty 1.2% (2/161). The primary

Table 7. Physical therapy for pelvic and women's health

Preference	Students	Physical therapists
	3.57 (1.16)	3.50 (1.22)
Reasons for selection (n, %)		
Developmental potential	62 (38.51)	55 (54.46)
Work environment	59 (36.65)	25 (24.75)
Aptitude	49 (30.43)	25 (24.75)
Social perception	40 (24.84)	27 (26.73)
Employment	18 (11.18)	10 (9.90)
Work difficulty	15 (9.32)	10 (9.90)
Job stability	15 (9.32)	11 (10.89)
Annual salary	11 (6.83)	5 (4.95)
Others	5 (3.11)	-
Academic difficulty	2 (1.24)	4 (3.96)

Values represent the mean (\pm standard deviation)

reason for choosing PT for pelvic and women’s health among physical therapists was the potential for development (54.5% (55/101)), followed by social awareness 26.7% (27/101), aptitude 24.8% (25/101), service environment 24.8% (25/101), job stability 10.9% (11/101), employment 9.9% (10/101), work difficulty 9.9% (10/101), annual salary 5% (5/101), and academic difficulty 4% (4/101).

7) Others (Fitness Centers, Pilates, and Daycare Centers)

An analysis of the preference of PT students and physical therapists for other fields of PT, not included above, revealed the following (Table 8). The average score of the preference of PT students and the physical therapists for the others category was 3.91 and 4.03 points, respectively. The two groups showed a similar preference for other fields ($p > .05$). The foremost reason for choosing others among PT students was the service environment (38.5% (62/161)), followed by aptitude 35.4% (57/161), potential for development 28% (45/161), annual salary 20.5% (33/161), social awareness 20.5% (33/161), employment 13% (21/161), work difficulty 12.4% (20/161),

job stability 6.8% (11/161), academic difficulty 1.9% (3/161), and others 1.2% (2/161). The leading reason for choosing other fields of PT among physical therapists was the service environment (41.6% (42/101)), followed by the potential for development 31.7% (32/101), annual salary 26.7% (27/101), aptitude 21.8% (22/101), social awareness 16.8% (17/101), employment 13.9% (14/101), work difficulty 13.9% (14/101), job stability 9.9% (10/101), and academic difficulty 2% (2/101).

IV. Discussion

This study examined the preferences of PT students and physical therapists for the various fields of PT. The results are summarized as follows. (1) both groups most preferred PT for the musculoskeletal system. In contrast, PT for children and adolescents was the least preferred. (2) A comparison of the two groups revealed PT students to have a significantly higher preference for PT for the musculoskeletal system, PT for children and adolescents, and PT for the nervous system than physical therapists. (3) Work environment and developmental potential greatly influenced the preferences of PT students, while developmental potential had the greatest influence on the physical therapists.

Previous studies reported the preferences for the various fields of PT among physical therapists and students. In 2013, Park examined the job satisfaction of 197 physical therapists concerning manual orthopedic therapy and reported high satisfaction rates (men’s score, 4.03 points; women’s score, 3.66 points) [7]. Jeong et al. reported a high awareness among 267 PT students regarding manual orthopedic PT [8]. These results were consistent with the present study. In the same year, Moon et al. reported that PT for the musculoskeletal system showed increased demand [9]. The increased awareness and demand for PT for the musculoskeletal system resulted in it being preferred

Table 8. Physical therapy for others (fitness centers, Pilates, and Daycare centers)

Preference	Students	Physical therapists
	3.91 (1.10)	4.03 (1.01)
Reasons for selection (n, %)		
Service environment	62 (38.51)	42 (41.58)
Aptitude	57 (35.40)	22 (21.78)
Potential for development	45 (27.95)	32 (31.68)
Annual salary	33 (20.50)	27 (26.73)
Social awareness	33 (20.50)	17 (16.83)
Employment	21 (13.04)	14 (13.86)
Work difficulty	20 (12.42)	14 (13.86)
Job stability	11 (6.83)	10 (9.90)
Academic difficulty	3 (1.86)	2 (1.98)
Others	2 (1.24)	-

Values represent mean (± standard deviation)

over the other fields. Park reported that in a group of 738 PT students, PT for the musculoskeletal system attracted the highest preference (45.4%), followed by PT for the nervous system at 21.0% and sports at 7.2% [4]. In 2015, Kang et al. found that PT for the musculoskeletal system had the highest preference (36.3%), followed by PT for sports (23.4%), PT for children and adolescents (11.9%), PT for the nervous system (11.7%), PT for pelvic and women's health (3.6%), and cardiopulmonary PT (2.5%) among a group of 394 PT students [10]. Lee (2018) studied the awareness of various PT fields in a group of 270 PT students and found that 33.0%, 31.1%, and 23.0% of the students had an awareness of PT for the nervous system, orthopedic PT, and PT for sports, respectively [11]. In contrast, Park et al. reported that in a group of 267 PT students, PT for the musculoskeletal system showed the highest preference (43.3%), followed by PT for sports (24.7%) and PT for the nervous system (23.6%) [6]. The study indicated that PT for the musculoskeletal system had a higher preference than the other PT fields because of the better annual salary, work environment, and job satisfaction [12].

Regarding PT for children and adolescents, Lee et al. reported that subjects related to PT for children and adolescents opened only one class, so it was difficult to learn basic knowledge and career certainty for PT for children and adolescents [13]. On the other hand, in the present study, the preference of physical therapists for PT for children and adolescents was lower than that of the PT students. According to Seo and Rhie, PT for children and adolescents is difficult as it causes the physical therapists excessive physical exhaustion because they have to directly control and move the limbs of pediatric patients, who may not follow instructions properly [14]. On the other hand, the PT students believed that treating pediatric patients would be easy because they were small and light. This difference in views between the PT students and physical therapists was attributed to the lack of information

on PT for children and adolescents.

Regarding PT for the cardiopulmonary system, Bang and Kim reported that most physical therapists were interested and active in the fields of PT for the musculoskeletal system or nervous system. Nevertheless, PT for the cardiopulmonary system was unpopular [15]. Both groups indicated that PT for the cardiopulmonary system had a high developmental potential. Both groups showed a low preference for PT for pelvic and women's health. This may be because, in the Republic of Korea, no professional intervention is available for preventing or managing women's diseases [16]. On the other hand, improved awareness and education regarding this field could help enhance their preference levels because both groups in the present study indicated that high developmental potential was the reason for their preference for the field of PT for pelvic and women's health.

This study had several limitations. First, a comparative analysis covering gender, grade, and career was not conducted. Second, a generalized survey was conducted for this study without distinguishing between the positive and negative reasons for preference selection. Third, the results of this study were limited to the Republic of Korea. Therefore, future research that addresses these limitations could provide more information on each PT field. The resulting data could then be provided to PT students to assist them with their career choices.

V. Conclusion

This study compared the preferences of PT students and physical therapists for various fields of PT. The PT students and physical therapists showed the highest preference for PT for the musculoskeletal system, while PT for children and adolescents was the least preferred. Furthermore, PT students showed a higher preference for PT for the musculoskeletal system, nervous system, and children and

adolescents than physical therapists. These results could provide the basic information for various PT fields.

Acknowledgments

This research was supported by a 2023 Eulji University Innovation Support Project grant.

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