

Survey study on the Physical Therapy Experience of North Korea Defectors

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Abstract

Background/Objectives: The purpose of this study is to help North Korean defectors residing in South Korea improve their physical therapy experience and improve their health.

Methods/Statistical analysis: The district's target was 100 Korean defectors living in South Korea. The data of this study were statistically analyzed by the following procedure using the SPSS 22.0 program. Pearson's correlation analysis was conducted to determine the correlation between the experience of physical therapy, the prospect of experience it and satisfaction. The statistical significance level was set to 0.05.

Findings: As a result of this study, there was a correlation between physical therapy experience, satisfaction, and outlook. The middle school or lower and high school satisfaction rate was higher than that of above university, and this difference was also found to be statistically significant ($\chi^2=9.548$, $p<.05$). The moderately healthy and healthy satisfaction rate was higher than that of unhealthy, and this difference was also found to be statistically significant ($\chi^2=10.024$, $p<.05$).

As a result of this study, satisfaction with physical therapy showed a statistically significant positive (+) correlation with intention to recommend physical therapy ($r=.423$ $p<.01$) and intention to experience in the future ($r=.429$, $p<.01$). Intention to recommend physical therapy and intention to experience in the future also showed a significant positive (+) correlation ($r=.766$, $p<.001$).

This study is of great significance in that it investigated the actual state of physical therapy experience targeting North Korean defectors who had not previously been.

Improvements/ Applications: There was no detailed investigation on the physical therapy. In future studies, there is a need to understand this through various measurement tools and subdivided questions based on this study.

Keywords: North Korean defectors, Physical therapy, Survey study, satisfaction, Physical therapy plan for experience

1. Introduction

According to an integrated social survey conducted on 3,000 North Korean defectors aged 15 and over, among North Korean defectors who needed treatment for the past year, 18.5% of North Korean defectors who needed physical therapy but did not receive treatment were relatively high. Therefore, it is considered necessary to improve the experience of physical therapy for North Korean defectors[1].

Research to increase the health level of North Korean defectors can be said to be an issue that requires continuous attention in that they guarantee their right to achieve freely in Korean society and alleviate health in equality[2].

Health is itself a key component of life and is associated with the freedom to achieve. Research to increase the health level of North Korean defectors can be said to be an issue that requires continuous

attention in that they guarantee their right to achieve freely in Korean society and alleviate health inequality[3].

In order to improve the vulnerability of North Korean defectors to their health conditions, efforts to identify and provide health care services necessary for improving the health of North Korean defectors are necessary. Considering that health problems have a great influence on their adaptation, a detailed and comprehensive survey is needed on the health status and medical use of North Korean defectors[4,5]. Therefore, this study investigates the factors that influence the experience of physical therapy by North Korean defectors, and intends to use them as basic data for improving the experience of physical therapy by North Korean defectors in Korea. In addition, it intends to prepare basic analysis frameworks and supporting data that can be used in various health care policies targeting North Korean refugees in the future.

2. Materials and Methods

This study recruited 100 North Korean defectors currently residing in the Republic of Korea by snowball sampling. Data collection was surveyed through a self-written questionnaire and collected by mail and internet. For the protection of subjects in vulnerable environments, the purpose of the study was fully explained to the subject before the survey, and those who understood the purpose of the study and voluntarily agreed to participate in the study were targeted. Also, those who were unable to voluntarily consent to participate in the study were excluded.

The model of this study is based on Andersen's Behavioral Model of Health Services, which has been used most in medical service analysis. Through prior research, variables that are expected to affect the physical therapy experience of North Korean defectors, the subject of the study, were constructed[6-8].

The questionnaire questions used in this study are largely divided into three parts. It consists of 10 items of characteristics, 10 items of experience of physical therapy by the subjects, 3 items of prospects of experience physical therapy by the subjects, and a total of 23 items(Fig. 1).

The data of this study were statistically analyzed by the following procedure using the SPSS 22.0 program. Pearson's correlation analysis was conducted to determine the correlation between the experience of physical therapy and the prospect of experience it. The statistical significance level was set to 0.05.

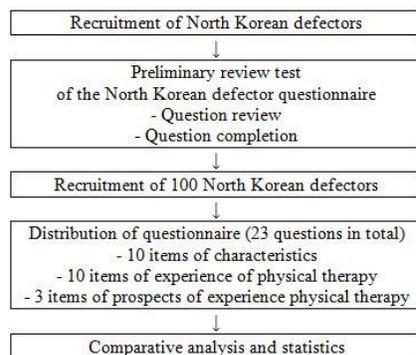


Figure 1. Study design

3. Results and Discussion

A chi-squared test was conducted to determine whether there was a difference in satisfaction with physical therapy according to the characteristics of the study subjects (Table 1). Looking at the satisfaction level of physical therapy according to the regular education in North Korea that was completed, middle school or lower were unsatisfied with 0 (0.0%), average 4 (30.8%), satisfied 9 (69.2%), high school unsatisfied 4 (13.3%) average 7 (23.3%), satisfied 19 (63.3%) and above university were unsatisfied 1 (10.0%), average 7 (70.0%), satisfied 2 (20.0%). The middle school or lower and high school satisfaction rate was higher than that of above university, and this difference was also found to be statistically significant ($\chi^2=9.548$, $p<.05$).

When looking at the degree of satisfaction with physical therapy according to the subjective health level, unhealthy is 2 unsatisfied (9.5%), average 10 (47.6%), satisfied 9 (42.9%), moderately healthy is unsatisfied 0 (0.0%), average 7 (33.3%), satisfied 14 (66.7%), healthy is 3 unsatisfied (27.3%), average 1 (9.1%), satisfied 7 (63.6%). The moderately healthy and healthy satisfaction rate was higher than that of unhealthy, and this difference was also found to be statistically significant ($\chi^2=10.024$, $p<.05$) (Table 1).

Table 1. Satisfaction with physical therapy according to the characteristics of the study subject
Unit: persons (%)

Items	Division	Unsatisfied (n=5)	Average (n=18)	Satisfied (n=30)	$\chi^2(p)$
Gender	Male	0(0.0)	8(36.4)	14(63.6)	3.941
	Female	5(16.1)	10(32.3)	16(51.6)	(.139)
Age group	20's	0(0.0)	1(16.7)	5(83.3)	11.183
	30's	1(7.7)	3(23.1)	9(69.2)	(.083)
	40's	4(23.5)	8(47.1)	5(29.4)	
	Over 50	0(0.0)	6(35.3)	11(64.7)	
Length of residence in South Korea	less than 5 yrs	1(9.1)	2(18.2)	8(72.7)	1.657
	more than 5yrs	4(9.5)	16(38.1)	22(52.4)	(.437)
Marital status	married	4(12.1)	11(33.3)	18(54.5)	0.745
	not married	1(5.0)	7(35.0)	12(60.0)	(.689)
regular education in North Korea	middle school or lower	0(0.0)	4(30.8)	9(69.2)	9.548*
	high school	4(13.3)	7(23.3)	19(63.3)	(.049)
	above university	1(10.0)	7(70.0)	2(20.0)	
	high school or lower	0(0.0)	1(12.5)	7(87.5)	5.458
regular education in south Korea	above university	2(9.5)	10(47.6)	9(42.9)	(.243)

	not educated	3(12.5)	7(29.2)	14(58.3)		
Occupational status	permanent	3(18.8)	5(31.3)	8(50.0)	4.300	
	temporary	2(10.0)	8(40.0)	10(50.0)	(.367)	
	inoccupation	0(0.0)	5(29.4)	12(70.6)		
Annual average income level	Less than 10million won	1(6.3)	6(37.5)	9(56.3)	2.296	
	Less than 20million won	1(12.5)	4(50.0)	3(37.5)	(.891)	
	Less than 30million won	1(8.3)	4(33.3)	7(58.3)		
	30million won or more	2(11.8)	4(23.5)	11(64.7)		
	Subjective social status	under	1(7.7)	5(38.5)	7(53.8)	0.455
		middle	2(11.8)	6(35.3)	9(52.9)	(.978)
above the middle		2(8.7)	7(30.4)	14(60.9)		
subjective health level	unhealthy	2(9.5)	10(47.6)	9(42.9)	10.024*	
	average	0(0.0)	7(33.3)	14(66.7)	(.040)	
	healthy	3(27.3)	1(9.1)	7(63.6)		

* $p < .05$

As a result of this study, satisfaction with physical therapy showed a statistically significant positive (+) correlation with intention to recommend physical therapy ($r = .423$, $p < .01$) and intention to experience in the future ($r = .429$, $p < .01$). Intention to recommend physical therapy and intention to experience in the future also showed a significant positive (+) correlation ($r = .766$, $p < .001$). In contrast, the number of experience of physical therapy did not show a statistically significant correlation with satisfaction, intention to recommend physical therapy and intention to experience in the future ($p > .05$) (Table 2).

Table 2. Correlation between experience, satisfaction and prospect of physical therapy

	Number of experiences	Satisfaction	Intention to recommendation	Intention to experience in the future
Number of experiences	1			

	-.216	1		
Satisfaction				
Intention to Recommendation	-.172	.423*	1	
Intention to experience in the future	-.182	.429*	.766*	1

* $p < .05$

This study aims to grasp the actual state of physical therapy experience of North Korean defectors currently residing in South Korea as basic data for improving the physical therapy experience of North Korean defectors. This study is of great significance in that it investigated the actual state of physical therapy experience targeting North Korean defectors who had not previously been.

Research on the actual state of health care targeting North Korean defectors is currently very poor, and there is a difficulty in contacting North Korean defectors due to high alertness both internally and externally. Therefore, it is believed that measures to increase accessibility to North Korean defectors along with the interest of health care workers for North Korean defectors should be prepared.

As a result of this study, it was confirmed that the current North Korean defectors have economic difficulties, lack of information on physical therapy, and difficulties that cannot be experienced at convenient times and places. In order to improve the health of North Korean defectors, it is important to increase the proportion of physical therapy in public medical institutions along with strengthening public medical care, and education and publicity on physical therapy to North Korean defectors should be carried out from the beginning of entry through Hanawon or Hana Center.

In addition, in light of the cases of system-integrated countries such as Germany and Vietnam, it is estimated that the task of unification and preparation for the health care sector, among others, are likely to face various difficulties [9]. As in the case of Germany before unification, humanitarian support between the two Koreas should continue to be developed for health and medical exchange and cooperation, and it is necessary not only to think about the strategy before unification, but to look forward to a considerable period of time after unification and make concrete designs.

In the case of Germany, the total investment for health care integration and maintenance during the three years after reunification is 50 billion DM (Deutsche Mark) per year, which is 30,00 DM (18 million won) per local resident in East Germany [9]. In the case of South and North Korea, there is no specific mention of the cost of unification yet, but public medical expenditures for the North Korean region are expected to bear a total cost of 134.2 trillion won over 20 years [5]. As described above, in order to reduce the enormous expenditures for bridging the gap in the health care sector after unification, even in the situation of division, a support system and related education must be provided to close the gap [10].

The establishment of a social safety net during unification is very important to minimize social confusion, and among them, the establishment of a medical safety net is a key factor. Moreover, the medical sector has a non-political and humanitarian character and can be used as an important means of

initiating peaceful exchanges. Therefore, it is necessary to continuously research and monitor North Korean defectors and to expand the support system nationally.

In particular, it is necessary to spare no interest in physical therapy fields such as musculoskeletal physical therapy and neurological physical therapy, which North Korean defectors will experience.

As a limitation of the study, there was no more detailed investigation on the experience of physical therapy, so it is difficult to represent all satisfaction levels according to the size of physical therapy rooms, facilities, and contents of medical expenses depending on the medical institution. Because it occupies, there is a limit that it is focused on the satisfaction of musculoskeletal physical therapy. In future studies, there is a need to understand this through various measurement tools and subdivided questions based on this study.

4. Conclusion

This study was conducted to compare and investigate the factors and preferences that influence the experience of physical therapy by North Korean defectors, and for this purpose, a survey on the actual experience of physical therapy was conducted for North Korean defectors living in South Korea. The higher the satisfaction level of physical therapy among North Korean defectors, the higher their intention to experience in the future and intention to recommend physical therapy. Since the greatest factor influencing the satisfaction of physical therapy was the result of treatment, it is important to improve the therapeutic capacity of physical therapists to improve the experience of physical therapy for North Korean defectors.

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