

# A Survey of the Subjective Quality of Life of Clinical Physical Therapists and Factors Affecting Their Work Satisfaction Factors

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**Abstract.** [Purpose] This study examined the relationship between the subjective quality of life of clinical physical therapists and the factors affecting their work satisfaction. [Subjects and Methods] A questionnaire was given to 101 clinical physical therapists who worked in medical institutions in A region from October to November 2009. [Results] Personal environment factors, such as marital status, education, work experience, etc, were found to affect the subjective quality of life. Hierarchical regression revealed job stress, self-esteem, job satisfaction and support of superiors or co-workers to be associated with the subjective quality of life of clinical physical therapists. [Conclusion] Several factors were found to affect the level of work satisfaction, which affected the subjective quality of life. These results can be used as base data for the development of programs for improving the subjective quality of life of clinical physical therapists.

**Key words:** Clinical physical therapists, Subjective quality of life, Work satisfaction factor

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## INTRODUCTION

Interest in health and quality of life has increased due to economic development and the improvement of educational standards. Various terms have been used to define the quality of life. WHO (1998)<sup>1</sup>) defines the quality of life as personal awareness of one's position, which is embedded in a cultural, social and environmental context, such as health status, lifestyle, mental state, etc.

The quality of life can be classified into objective and subjective quality of life. Although the quality is proportional to the degree of wealth and living standards, which are classified to some degree into objective evaluation parameters, quality of life is dependent on subjective evaluation parameters. Specifically, the quality of life is more dependent on the subjective quality of life, which is defined as the degree of personal satisfaction, well-being, happiness, etc<sup>2,3</sup>). According to Locke's research<sup>4</sup>) into the subjective quality of life, job satisfaction, and job stresses are the main factors affecting mental state, work efficiency, etc. Moreover, the subjective quality of life is lower if elements, such as wage increases, promotion, job satisfaction, etc., are not acceptable<sup>5</sup>).

The quality of life is affected by various parameters, such as age, gender, health, property, cultural and social

environment, one's mental state, etc. Work satisfaction factors, such as self-esteem, position, support of superiors and co-workers, etc., influence the subjective quality of life. Based on these parameters, many studies have examined the subjective quality of life according to job, position. Knoop (1994), Lee (1998) and Goldman et al. (2005) proposed several work satisfaction factors<sup>6-8</sup>).

However, domestic studies of job satisfaction or the subjective quality of life are limited to nurses, congenital heart patients or diabetic inpatients<sup>9-11</sup>). There are few reports on the quality of life of Korean physical therapists<sup>12</sup>). Conventional studies have evaluated the subjective quality of life of domestic physical therapists based on job stress. These studies have limitations since they evaluated the quality of life of physical therapists using just job stress, because physical therapists need to work with various people, such as patients, caregivers, nurses, doctors, etc, in complex environments.

This study examined the subjective quality of life of physical therapists based on a range of work satisfaction parameters, such as age, job stress, job satisfaction, and self-esteem, which have been confirmed to be major variables affecting the subjective quality of life of physical therapists.

## SUBJECTS AND METHODS

This study targeted 203 out of 1,715 physical therapists, who were working in 8 hospitals and were registered in A region from September to October 2009. One hundred and thirty self-report questionnaires were given to the physical therapists. Of these, 110 questionnaires were returned. Of the 110 questionnaires, 101(84.6%) questionnaires were used in this study after excluding 9 questionnaires that were not fully completed.

To analyze the general characteristics of physical therapists who participated in this study, the questionnaire included questions about age, gender, marital status, religion, position, education level, career, income, health state, etc.

To analyze the subjective quality of life, the Kv-SmithKline Beecham quality of life scale (SBQOL) was used. The Kv-SBQOL was adapted from the SBQOL with 28 questions developed by Dunbar et al.<sup>13)</sup> to the Korean version with 23 questions by Yoon et al.<sup>14)</sup>. This measurement system uses a Likert scale with a maximum of 5 points. Cronbach's Alpha was used to evaluate the confidence of the tool, which was 0.84.

To evaluate the level of job stress of physical therapists, a modified measurement tool was used, which was developed by Kim to evaluate the job stress of nurses working in a general hospital<sup>15)</sup>. The modified measurement is composed of 44 questions, such as self-realization, psychological burden of the job, workload, problems of relation with co-workers, etc. This measurement system also uses a Likert scale with a maximum of 5 points. The confidence of this tool was measured by Cronbach's Alpha is 0.92.

The Korean version of the Self-Esteem Inventory<sup>16)</sup>, which is based on the tool developed by Coopersmiths, was used to evaluate the level of self-esteem<sup>17)</sup>. A Likert scale with a maximum of 5 points is used and Cronbach's Alpha is 0.86.

A tool developed by Slavitt et al.<sup>18)</sup> has adapted into Korean by Park<sup>19)</sup> was used to evaluate job satisfaction. This tool has 18 questions, such as payment, relationship between physical therapists and doctors, professionalism, etc. A Likert scale with a maximum of 5 points is used and Cronbach's Alpha is 0.86.

A tool developed by Karasek et al.<sup>20)</sup> and adapted by Yoon was used to evaluate the support of superiors and co-workers<sup>21)</sup>. This tool contains 4 questions to measure the support of superiors, and 4 questions to measure the support of co-workers. A Likert scale with a maximum of 5 points is used and Cronbach's Alpha is 0.89.

SPSS Statistics ver. 17.0 was used to analyze the data. The general characteristics are presented as the frequency and percentage, and the average and standard deviation are also provided. The t-test and one-way ANOVA were used to analyze the differences in the subjective quality of life according to the general characteristics. The Scheffe or Dunnett test was used for post hoc analysis, and Pearson's correlation coefficient was used to examine the correlation between the subjective quality of life and the work

satisfaction factors considered in this study. Hierarchical regression analysis was used to examine the relative effect of these factors.

## RESULTS

Table 1 lists the general characteristics of the subjects. Fortytwo (41.6%) therapists were aged between 20~25 years, and the mean ( $\pm$  standard deviation (SD)) age was 27.74 $\pm$ 5.72 years. There were 47 (46.5%) males and 54 (53.5%) females. Seventyeight therapists (77.2%) were married, and 55 (46.5%) reported no religion. Ninetytwo (91.1%) therapists were ordinary therapists.

Regarding the characteristics of education and career, 56.4% had an associate degree, and 56.4% had worked in their career for 3 years or less. In the case of income, 77.2% earned less than ₩2,000,000 per a month; 82% of subjects reported normal or good health status.

Table 2 lists the work satisfaction factors that affect the subjective quality of life. The mean subjective quality of life was 76.50. The averages for job stress, self-esteem, job satisfaction, and support of superior or co-workers were 150.66, 85.07, 55.99, and 28.71, respectively.

Table 3 shows the differences in the subjective quality of life according to the subjects' characteristics. Marital status and education level affected the subjective quality of life (marriage:  $t=-2.17$ ,  $p=0.03$ , education:  $F=3.66$ ,  $p=0.03$ ). Married people with a high education level reported a higher subjective quality of life. In particular, people with a degree higher than graduate school reported a higher subjective quality of life than people with an associate degree. Moreover, the clinical career ( $F=3.23$ ,  $p=0.04$ ), payment ( $F=4.51$ ,  $p=0.00$ ), and health ( $F=14.21$ ,  $p=0.00$ ) showed statistically significant associations with the subjective quality of life. However, age ( $F=3.03$ ,  $p=0.05$ ), gender ( $t=0.61$ ,  $p=0.54$ ), religion ( $F=0.51$ ,  $p=0.67$ ), position ( $t=-1.51$ ,  $p=0.14$ ) and sleeping duration ( $F=-1.73$ ,  $p=0.09$ ) did not show statistically significant associations with the subjective quality of life, despite the subjective quality of life showing differences according to these variables.

Table 4 presents the correlation between the subjective quality of life and work satisfaction factors. Job stress ( $r=-0.32$ ,  $p=0.00$ ), self-esteem ( $r=0.61$ ,  $p=0.00$ ) and job satisfaction ( $r=0.55$ ,  $p=0.00$ ) had a proportional relationship with the subjective quality of life. In particular, the support of their superior or co-workers ( $r=0.47$ ,  $p=0.00$ ) had a significant effect on the subjective quality of life.

Hierarchical regression analysis was performed to evaluate the relationship between the subjective quality of life and each work satisfaction factor. The results of hierarchical regression are summarized in Table 5. The tolerances were  $> 0.1$  and the Durbin-Watson value was 2.12, which is very close to the standard value 2. Therefore, there were no correlations between the residuals.

Model 1 showed that the support of superiors or co-workers reflects 5.6% of the subjective quality of life. Moreover, the subjective quality of life increased with increasing support of superiors or co-workers ( $t=2.43$ ,  $p=0.02$ ). From Model 2, job stress had an adverse effect on

**Table 1.** General characteristics of the subjects

Categories	Type	Frequency	Percentile (%)	M±SD
Age	20–25years	42	41.6	27.74±5.72 (years)
	26–30years	36	35.6	
	31years over	23	22.8	
Gender	Male	47	46.5	
	Female	54	53.5	
Marriage	Married	78	77.2	
	Single	23	22.8	
Religion	Buddhism	18	17.8	
	Christian	20	19.8	
	Catholicism	8	7.9	
	None	55	54.5	
Education degree	Associated degree	57	56.4	
	Bachelor's degree	23	22.8	
	MSc. or Ph.D	21	20.8	
Career	3 years or less	63	62.4	4.17±4.91 (years)
	3-6 years	16	15.8	
	6 years over	22	21.8	
Payment	Below ₩2,000,000	78	77.2	
	₩2,010,000-₩3,000,000	16	15.8	
	Above ₩3,000,000	7	7.0	
Position	Ordinary therapist	92	91.1	
	Superintendent therapist	9	8.9	
Sleeping duration	Under 7 hours	50	49.5	
	Over 7 hours	51	50.5	
Health	Bad	19	18.8	
	Normal	54	53.5	
	Good	28	27.7	

**Table 2.** Factors affecting the subjective quality of life (N=101)

Variables	Minimum Value	Maximum	Average	Standard Deviation
Job stress	100	186	150.66	19.18
Self-esteem	56	113	85.07	10.05
Job satisfaction	43	74	55.99	5.27
Support of superior or co-workers	19	40	28.71	3.76
Subjective quality of life	57	105	76.50	8.49

the subjective quality of life ( $t=-2.34$ ,  $p=0.02$ ), and job satisfaction had a positive effect on the subjective quality ( $t=5.68$ ,  $p=0.00$ ). However, the support of superiors or co-workers did not significantly affect the subjective quality. Model 3 showed a subjective quality of life of 52%, which was 17.5% higher than Model 2. Overall, job stress ( $t=4.27$ ,

$p=0.00$ ), job satisfaction ( $t=4.27$ ,  $p=0.00$ ), and self-esteem ( $t=5.92$ ,  $p=0.00$ ) affected the subjective quality of life. The effects of the affecting factors are arranged in the following order: self-esteem ( $\beta=0.45$ ), job satisfaction ( $\beta=0.36$ ), job stress ( $\beta=-0.17$ ), and the support of superiors or co-workers ( $\beta=-0.08$ ).

**Table 3.** Differences in the subjective quality of life according to the subjects' characteristics

Categories	Type	M±SD
Age	20–25years	74.74±8.26
	26–30years	76.31±8.37
	31years over	80.04±8.37
Gender	Male	77.09±10.55
	Female	76.00±6.25
Marriage	Married	79.83±8.25
	Not married	75.53±8.37
Religion	Buddhism	74.89±7.34
	Christian	76.60±8.40
	Catholicism	79.38±13.20
	No religion	76.58±8.19
Position	Ordinary therapist	76.11±8.62
	Superintendent therapist	80.56±6.11
Education degree	Associated degree <sup>a</sup>	74.56±7.69
	Bachelor's degree	78.61±10.82
	MSc. Or Ph.D <sup>b</sup>	79.48±6.45
Clinical career	3 years or less <sup>a</sup>	75.17±8.60
	3-6 years	76.38±7.05
	6 years over <sup>b</sup>	80.41±8.28
Payment	Below ₩2,000,000 <sup>a</sup>	75.24±8.13
	₩2,010,000-₩3,000,000	79.69±7.00
	Above ₩3,000,000 <sup>b</sup>	83.29±11.43
Sleeping duration	Below 7	75.04±8.78
	Above 7	77.94±8.03
Health	Poor <sup>a</sup>	70.32±7.01
	Moderate <sup>b</sup>	75.80±7.34
	Good <sup>c</sup>	82.07±8.28

a&lt;b, a&lt;b&lt;c

**Table 4.** Correlation between the subjective quality of life and factors affecting work satisfaction

	Subjective quality of life	Job stress	Self esteem	Job satisfaction	Support of superior or co-workers
Subjective quality of life	1				
Job stress	-0.32 (0.00)	1			
Self-esteem	0.61 (0.00)	-0.15 (0.12)	1		
Job satisfaction	0.55 (0.00)	-0.25 (0.01)	0.40 (0.00)	1	
Support of superior or co-workers	0.24 (0.02)	-0.26 (0.01)	0.22 (0.03)	0.47 (0.00)	1

**Table 5.** Hierarchical regression results

Variables	Model 1		Model 2		Model 3		Tolerance
	SE	$\beta$	SE	$\beta$	SE	$\beta$	
Constant	6.37	-	11.13	-	10.06	-	
Support of superior or co-workers	0.22	0.23	0.21	-0.06	0.18	-0.08	0.75
Job stress			0.03	-0.20	0.03	-0.17	0.91
Job satisfaction			0.15	0.53	0.13	0.36	0.67
Self-esteem					0.06	0.45	0.83
	R <sup>2</sup> =0.06, revised R <sup>2</sup> =0.05 F=5.91		R <sup>2</sup> =0.35, revised R <sup>2</sup> =0.33 F=17.04		R <sup>2</sup> =0.52, revised R <sup>2</sup> =0.50 F=26.04		

## DISCUSSION

Marriage and education level are factors that affect the subjective quality of life. Married people show a higher subjective quality than single people, and people with a higher education degree show a higher subjective quality. In particular, physical therapists with more than a graduate degree, showed a higher subjective quality than those with an associate degree. These results are similar to those reported by Moon et al., who examined the job satisfaction of physical therapists working in public institutions in Seoul<sup>22</sup>. Career and payment are closely related to the subjective quality of life. In particular, those with a long term career had a higher subjective quality of life than the others, which is similar to Ahn et al. (2002), who showed that therapists with fifteen or more years experience were satisfied with the present job because they had difficulty to change their occupation<sup>23</sup>. In the present study, payment was related to the subjective quality of life, which is similar to a report by the Korea Labor Institute (KLI) which found that income is particularly important, explaining as much as 40% of the whole life satisfaction<sup>24</sup>. Kim et al. similarly reported that good payment, education background, position, career and job satisfaction have a positive affect on the quality of life of nurses<sup>25</sup>.

In the present study, health status also had an effect on subjective quality of life, which is in contrast to a study by Koo and Lee of physical and occupational therapists<sup>12</sup>. The positive effect of health status was attributed to the present study investigating only physical therapists who have a lot of motion activities.

Job stress, self-esteem, job satisfaction, and the support of superiors or co-workers were found to be the major work satisfaction factors affecting the subjective quality of life in the present study. In particular, self-esteem and the support of superiors or co-workers significantly correlated with the subjective of quality of life. This result is in keeping with other studies, such as those by Deckard et al, Yoon and Cho, and Graen et al<sup>26-28</sup>. Deckard et al. examined the relationship between stress and the physical and emotional well-being of 187 physical therapists in the state of Missouri. They reported that stress could induce emotional

exhaustion and job-tension<sup>26</sup>. In Yun's research, it was reported that higher self-esteem was associated with higher job satisfaction and the quality of life of nurses caring for cancer patients<sup>27</sup>. Moreover, Graen et al., who examined relationships with co-workers and quality of life, reported that a high quality relationship between the leader and followers affects the quality of life, which is similar to the results of the present study in that the support of superiors or co-workers was closely related to the subjective quality of life<sup>28</sup>. Therefore, the active support of superiors or co-workers is needed to improve the subjective of quality of life of physical therapists. Moreover, physical therapists need positive self-esteem to improve their subjective quality of life and decrease the negative aspects of the working environment, such as job stress.

A limitation of this study is that this research does not reflect the subjective quality of all physical therapists because only the data of those working in A region were used. In other words, the relation-oriented culture of hospital organizations, which is a factor affecting the subjective quality of life, according to Han's research, was not considered<sup>29</sup>. To overcome this limitation, more studies with larger samples of physical therapists working in various hospitals will be needed.

This study examined the relationship between the subjective quality of life of physical therapists and factors affecting work satisfaction. The factors affecting the subjective quality of life of physical therapists are as follows: (in descending order) marital status, education level, work experience, income level and health. The work satisfaction factors affecting the subjective quality of life are as follows: (in descending order) self-esteem, job satisfaction, job stress, and the support of superiors or co-workers. Overall, people with an active posture, a positive state of mind and good relationship with their superiors and co-workers showed a high subjective quality of life.

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## REFERENCES

- 1) WHO (1998): Division of mental health and substance abuse. WHOQOL user manual.
- 2) Bergner M: Quality of life, health status, and clinical research. *Med Care*, 1989, 27: S148–S156.
- 3) Hollandsworth JG Jr: Evaluating the impact of medical treatment on the quality of life: A 5 year update. *Soc Sci Med*, 1988, 26: 425–434.
- 4) Locke EA: The nature and cause of job satisfaction. In: *Handbook of industrial and organizational psychology*. Chicago: Rand McNally, 1976.
- 5) Raeside L: Caring for dying babies: perceptions of neonatal nurses. *J Neonatal Nurs*, 2000, 6: 93–99.
- 6) Knoop R: Work values and job satisfaction. *The Journal of Psychology*, 1994, 28: 683–690.
- 7) Lee MS: The subjective quality of life of Korean workers and associated variables. Yonsei University, Dissertation of Doctorate Degree. 1998.
- 8) Goldman RN, Greenberg LS, Pos AE: Depth of emotional experience and outcome. *Psychother Res*, 2005, 15: 238–249.
- 9) Jun JY, Song GS: Burden and quality of life in family caregivers of diabetic inpatients. *Journal of the Korean Data Analysis Society*, 2006, 8: 2205–2219.
- 10) Youn MS, Moon JR, Jun MH, et al.: Perceived health status, sexual satisfaction and quality of life of married adults with congenital heart disease. *Journal of the Korean Data Analysis Society*, 2010, 12: 1401–1414.
- 11) Lee SW, Sakurai R, Yatsushiro R, et al.: Comparison of job satisfaction between Japanese and Korean nurse. *Journal of the Korean Data Analysis Society*, 2009, 11: 2303–2314.
- 12) Koo HM, Lee IH: A study on the relationship between subjective quality of life and job stress among physical and occupational therapists. *J Kor Soc Phys Ther*, 2010, 22: 69–75.
- 13) Dunbar GC, Stoker MJ, Hodges TCP, et al.: The development of SBQOL-A unique scale for measuring quality of life. *Br J Med Econ*, 1992, 2: 65–74.
- 14) Yoon JS, Kook SH, Lee MS: A preliminary study on Korean version of the SmithKline Beecham 'Quality of Life' scale (KvSBQOL). *J Korean Neuropsychiatr Assoc*, 1998, 37: 280–294.
- 15) Kim JH: The study on the job stress and the symptoms of the stress of clinical nurses. Seoul National University, Dissertation of Master Degree. 2001.
- 16) Song BO: The effects of group bibliotherapy program on the self-esteem, quality of life and spiritual self-esteem of adult woman, Kosin University, Dissertation of Master Degree. 2005.
- 17) Coopersmith S: *The antecedents of self-esteem*. New York: W. H. Freeman & Company, 1968.
- 18) Slavitt DB, Stamps PL, Piedmont EB, et al.: Nurses' satisfaction with their work situation. *Nurs Res*, 1978, 27: 114–120.
- 19) Park HT: Transformational and transactional leadership styles of the nurse administrators and job satisfaction, organizational commitment in nursing services. *J Nurs Acad Soc*, 1997, 27: 228–241.
- 20) Karasek R, Gardell B, Lindell J: Work and non-work correlates of illness and behavior in male and female Swedish white-collar workers. *J Occup Behav*, 1987, 8: 187–207.
- 21) Yoon JW: A prospective model of subjective life quality of clinical nurses, Keimyung University, Dissertation of Doctorate Degree. 2009.
- 22) Moon JK, Song BK, Hwang BY: A study on job satisfaction among physical therapists in the public health centers of the Seoul metropolitan area. *J Kor Soc Phys Ther*, 2010, 22: 61–68.
- 23) Ahn SY, Kim WJ, Huh YB: Working conditions, job satisfaction and organizational commitment of physical therapists. *J Kor Soc Phys Ther*, 2002, 14: 308–322.
- 24) Lee HS: Impact of income on subjective quality of life. *Korea journal of population studies*, 2000, 23: 91–117.
- 25) Kim BJ: The study on the job satisfaction of nurses in a 3 shift after the operation of 5 day a week working system. Kyunghee University, Dissertation of Master Degree. 2007.
- 26) Deckard JG, Present RM: Impact of role stress on physical therapists' emotional and physical well-being. *Phys Ther*, 1989, 69: 713–718.
- 27) Yoon HS, Cho YC: Relationship between job stress contents, psychosocial factors and mental health status among university hospital nurses in Korea. *J Prev Med Public Health*, 2007, 40: 351–362.
- 28) Graen GB, Uhl-Bien M: Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly*, 1995, 6: 219–247.
- 29) Han SJ: A study on the relationship between nursing organizational culture and organizational performance. *J Koreans Acad Nurs Admin*, 2002, 8: 441–456.