Study on the Effect of Physical Symptoms, Stress, and Self-Esteem Factors on the User Satisfaction of the Mentally Handicapped

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Abstract

The purpose of this study was to analyze the effect of physical symptoms, stress, and self-esteem factors of the mentally handicapped on user satisfaction. For this study, a questionnaire survey was conducted on the mentally handicapped population at the facilities for the mentally handicapped in Daejeon from March 5, 2014 to September 29, 2014. The SPSS WIN 18.0 and Amos 21.0 programs were used to conduct t-test, one-way variance analysis, confirmatory factor analysis, and structural equation to verify at the significance level of 5%. The results revealed the following. First, stress was found to have a positive effect on user satisfaction. Second, physical symptoms were found to have a significant effect on user satisfaction. Third, self-esteem factors were found to not have a significant effect on the user satisfaction. Fourth, the user satisfaction and self-esteem were found to have a significant effect on life satisfaction. These results are expected to become basic data to develop policies for the improvement of user satisfaction using the physical symptoms, stress, and self-esteem of the mentally handicapped

Key Words: Mentally handicapped, physical symptoms, stress, self-esteem factors, user satisfaction

1. Introduction

1.1 Necessity for Study

According to the data by the National Statistics Office, the number of the mentally handicapped is increasing each year. The ratio has increased from 6.41% in 2010 to 7.15% in 2013 [1]. The increase in the number of social welfare facilities has been primarily on the elderly and handicapped facilities. Such phenomenon is a result of concentrating on providing the basic needs such as food, clothing, and housing for the increased number of elderly population in the aging society and the handicapped population from accidents [2].

The handicapped population in the facilities is faced with many difficulties in daily lives. Especially, the mentally handicapped are experiencing more difficulties due to their mental and physical disabilities. In addition, the mentally handicapped find it almost impossible to conduct economic activities compared to the physically handicapped. Due to such reasons, the handicapped are receiving care from their family members or by entering handicapped facilities [3]. Many have started studies on the regular stress of the workers at such facilities and family members of the handicapped.

It was shown that "job satisfaction of the center workers decrease as job stress increases, causing emotional exhaustion of the workers, and ultimately decreasing the sense of achievement due to the dehumanization individuals feel towards the handicapped [4]."

It was shown that "the stress was higher for the spouses of the mentally handicapped when the number of children increased and the age of the last offspring decreased and the stress of the spouses increased as they felt difficulties in communication [5]." Therefore, there is a need for a wholehearted support by the government for the mentally handicapped families.

Many previous studies have focused on the workers of the handicapped welfare facilities and family members, but not enough on the physical and mental problems of the mentally handicapped. This study seeks to analyze the effect of physical symptoms, stress, and self-esteem factors of the mentally handicapped on user satisfaction.

1.2 Problem Statement

The problems of the study are as follows.

First, what effects do stress and physical symptom factors of the mentally handicapped have on user satisfaction?

Second, what effects do user satisfaction and self-esteems of the mentally handicapped have on life satisfaction?

Third, what effects do self-esteem and stress of the mentally handicapped have on user satisfaction?

1.2 Hypothesis

The hypotheses for the study are as follows.

H1. Stress will have a significant effect on user satisfaction.

H2. Physical symptoms will have a significant effect on user satisfaction.

H3. Self-esteem will have a significant effect on user satisfaction.

H4. User satisfaction will have a significant effect on life satisfaction.
H5. Stress will have a significant effect on user satisfaction.
H6. Self-esteem will have a significant effect on life satisfaction.

2. Methods of Study

2.1 Subjects

For this study, a questionnaire survey was conducted on 200 mentally handicapped people in a mentally handicapped facility in Daejeon. The sample size of the study subjects was calculated by using the test-power analysis program G*Power 3.1, which adheres to Cohen's sample extraction equation and the minimum sample size, was calculated to be 111. Excluding the copies with no response or insincere response, 167 copies were used as analysis data out of 200 copies.

2.2 Study Method

The purpose and the method of filling out the questionnaire survey was explained to subjects before individual survey

2.3 Study Tools

The questionnaires composed of socio-demographic characteristics, daily stress, and living behavior index. The content of each tool is as follows.

2.3.1 Socio-Demographic Characteristics

The questionnaires developed in the Local Community Health Inspection [6] were edited and reinforced for this study. The questionnaires of the socio-demographic characteristics included those for the subjects and for the care- providers.

2.3.2 Daily Stress

The tool developed by Lazarus and Delongis [7] and adapted by Jung-Hee Kim [8] was modified and revised, in which higher average indicated higher daily stress.

2.3.3 Living Behavior Index

The tool of Local Community Health Inspection [6] was modified and revised for this study. The sub-factors composed of 10 questions in areas of 'physical disability symptoms', 'weight control', 'nutrient deficiency symptoms'. Each question was worth 5 points and classified into 5 categories.

2.3.4 Self-Esteem

The self-esteem criterion of the elderly used 10 questions adapted by Rosenberg [9] and Byung-Jae Jeon [10]. Each question was measured by using Likert's 4-point scale.

2.3.5 Data Processing and Analysis Method

The collected data was analyzed by using the SPSS program. First, the socio-demographic characteristics were analyzed by using frequency analysis. Second, the t-

test and one-way variance analysis were conducted by using the SPSS program and verified at the significance level of 5%. Third, confirmatory factor analysis and structural analysis were conducted to understand the factors that affect life satisfaction.

3. Study Results
3.1 Socio-Demographic Characteristics of the Study Subjects
[Table 2] shows the physical symptoms of the subjects, according to the general characteristics. There were more males than females and although physical symptoms showed to be higher if the monthly household income was under 1 million won, there was no significant difference.

[Table 2] Physical Symptoms According to the General Characteristics of the Subjects

		Physical Symptoms		F	p (Scheffe)
		Average	Standard Deviation		
Sex	Male	1.57	.63	1.623	.204
	Female	1.45	.56		
	Total	1.50	.59		
Monthly Household Income	Recipients of Daily Living Support	1.50	.62	.805	.548
	Under 1 million	1.70	.52		
	Under 1-2 million won	1.27	.46		
	Under 2-3 million won	1.26	.53		
	Under 3-4 million won	1.54	.49		
	Under 4 million won	1.15	.07		
	Total	1.50	.59		
Years Spent in the Facility	Under 1	1.97	.71	2.190	.072
	Under 1~5	1.65	.69		
	Under 5~10	1.41	.50		
	Under 10~15	1.49	.59		
	Over 15	1.43	.61		
	Total	1.50	.59		

Frequency of Contact with Family	Weekly	1.41	.54	.891	.470
	Monthly	1.62	.66		
	Semi-monthly	1.30	.49		
	Family Events	1.39	.39		
	No Contact	1.53	.64		
	Total	1.50	.59		

Although physical symptoms were higher for subjects who spent less than 1 year in the facility, there was no significant difference. There was no significant difference in the frequency of contact with family as well. [Table 3] shows the self-esteem according to the general characteristics of the subjects.

[Table 3]Self-Esteem According to the General Characteristics of the Subjects

		Self-Esteem		F	p (Scheffe)
		Average	Standard Deviation		
Sex	Male	2.80	.65	.015	.903
	Female	2.81	.51		
	Total	2.80	.57		
Monthly Household Income	Recipients of Daily Living Support	2.80	.57	2.614*	.027 b,e>a>f>c>d
	Under 1 million	2.94	.31		
	Under 1-2 million won	3.57	.42		
	Under 2-3 million won	2.31	.84		
	Under 3-4 million won	2.90	.26		
	Under 4 million won	2.65	.49		
	Total	2.81	.57		
Years Spent in the Facility	Under 1	2.94	.58	.468	.759
	Under 1~5	2.84	.60		
	Under 5~10	2.85	.58		
	Under 10~15	2.75	.55		

	Over 15	2.72	.57		
	Total	2.80	.57		
Frequency of Contact with Family	Weekly	2.75	.64	.754	.557
	Monthly	2.89	.47		
	Semi-monthly	2.64	.82		
	Family Events	2.92	.49		
	No Contact	2.77	.58		
	Total	2.80	.57		

There were more males than females and the self-esteem showed to be high at above 2.9 points for under 1 million won and under 3-4 million won of monthly household income For under 2-3 million won, it came out relatively low at 2.31, showing significant differences ($p<.05$). Although self-esteem showed to be higher for subjects who spent less than 1 year in the facility, there was no significant difference. There was no significance in the frequency of contact with family.

[Table 4] shows the satisfaction according to the general characteristics of the subjects.

[Table 4] Satisfaction According to the General Characteristics of the Subjects

		User Satisfaction		F	p (Scheffe)
		Average	Standard Deviation		
Sex	Male	3.96	.86	2.865	.092
	Female	4.15	.60		
	Total	4.07	.72		
Monthly Household Income	Recipients of Daily Living Support	4.07	.73	1.590	.166
	Under 1 million	4.02	.26		
	Under 1-2 million won	4.46	.22		
	Under 2-3 million won	3.53	1.11		
	Under 3-4 million won	4.36	.56		
	Under 4 million won	4.63	.30		
	Total	4.07	.72		

Years Spent in the Facility	Under 1	4.11	.43	.519	.722
	Under 1~5	3.93	.90		
	Under 5~10	4.14	.63		
	Under 10~15	4.00	.83		
	Over 15	4.13	.64		
	Total	4.07	.72		
Frequency of Contact with Family	Weekly	4.22	.77	.388	.817
	Monthly	4.16	.57		
	Semi-monthly	3.92	.83		
	Family Events	4.06	.49		
	No Contact	4.04	.80		
	Total	4.07	.72		

There were more males than females and although user satisfaction was high for over 4 million won of monthly household income, there as no significant difference. In addition, although the user satisfaction was high for subjects who spent more than 15 years in the facility, there was no significant difference. There was no significant difference in the frequency of contact with family.

3.2 Verification of Study Model
H1. Stress will have a significant effect on user satisfaction.

Path			Standardized Path Coefficient	Non-standardized Path Coefficient	S.E.	C.R.	P
User Satisfaction _ Factor	<-	Stress _ Factor	.150	.143	.061	2.712*	.047

*p<.05

The above table shows that the stress has a significant effect on user satisfaction at the significance level of p<.05 (β =.150, p=.150). Accordingly, it shows that the stress has a positive effect on user satisfaction. This result indicates that the H1, which states 'stress will have a significant effect on user satisfaction,' was accepted.

H3. Physical symptoms will have a significant effect on user satisfaction.

Path			Standardized Path Coefficient	Non-standardized Path Coefficient	S.E.	C.R.	P
User Satisfaction _ Factor	<-	Physical Symptoms _ Factor	-.275	-.362	.109	-3.306***	.000

***p<.001

The above table shows that the physical symptoms have a significant effect on user satisfaction at the significance level of p<.001. (β =-.275, p=.000). Accordingly, it was shown that physical symptoms affect user satisfaction. This result indicates that the H3, which states that 'the physical symptoms will have a significant effect on user satisfaction,' was accepted.

H4. Self-esteem will have a significant effect on user satisfaction.

Path			Standardized Path Coefficient	Non-standardized Path Coefficient	S.E.	C.R.	P
User Satisfaction _ Factor	<-	Self-Esteem _ Factors	.042	.039	.074	.526	.599

The above table shows that the self-esteem has a significant effect on user satisfaction at the significance level of p<.05 (β =.042, p>.05). Accordingly, it was shown that self-esteem does not affect user satisfaction. This result indicates that H4, which states that 'self-esteem will have a significant effect on user satisfaction,' was accepted.

H6. User satisfaction will have a significant effect on life satisfaction.

Path			Standardized Path Coefficient	Non-standardized Path Coefficient	S.E.	C.R.	P
Life Satisfaction _ Factor	<-	User Satisfaction _ Factor	.529	.496	.073	6.814***	.000

***p<.001

       The above table shows that the user satisfaction has a significant effect on life satisfaction at the significance level of p<.001 (β =.529, p=.000). Accordingly, it was shown that use satisfaction affects life satisfaction. This result indicates that H6, which states that 'user satisfaction will have a significant effect on life satisfaction,' was accepted.

H8. Stress will have a significant effect on user satisfaction.

Path			Standardized Path Coefficient	Non-standardized Path Coefficient	S.E.	C.R.	P
Life Satisfaction _ Factor	<-	Physical Symptoms _ Factor	.123	.152	.089	1.705	.088

       The above table shows that physical symptoms have a significant effect on life satisfaction at the significance level of p<.05 (β =.123, p>.05). Accordingly, it was shown that physical symptoms do not affect life satisfaction. This result indicates that H8, which states that 'the stress will have a significant effect on user satisfaction,' was accepted.

H9. Self-esteem will have a significant effect on life satisfaction.

Path			Standardized Path Coefficient	Non-standardized Path Coefficient	S.E.	C.R.	P
Life Satisfaction _ Factor	<-	Self-Esteem _ Factor	-.324	-.280	.078	-3.565***	.000

***p<.001

The above table shows that self-esteem has a significant effect on life satisfaction at the significance level of p<.001 (β =-.324, p=.000). Accordingly, it was shown that self-esteem factors affect life satisfaction. This result indicates that H9, which states that 'self-esteem will have a significant effect on life satisfaction,' was accepted.

4. Discussion and Conclusion
The present study examined the effects of physical symptoms, stress, and self-esteem factors on user satisfaction. The following are the discussion points based on the results.
First, it was shown that stress has a significant effect on user satisfaction and has a positive effect on user satisfaction. This result indicates that the physical characteristics affect life satisfaction, corresponding to the result that physical and psychological stresses affect life satisfaction [11].
Second, it was shown that physical symptoms affect user satisfaction at the significance level of p<.001 and the physical symptoms affect user satisfaction. This result corresponds to the result that the user satisfaction of the elderly care facilities lowers depression.
Third, it was shown that self-esteem has a significant effect on life satisfaction and affects life satisfaction. The result corresponds to the result that ' higher satisfaction of the facility led to higher self-esteem; the stress of family of the handicapped people in the facility affect depression; and the stress of entering a handicapped facility decreases self-esteem' [12.13.14].
In conclusion, the analysis result of the effects of physical symptoms, stress, and self-esteem factors on user satisfaction revealed that life satisfaction is affected by user satisfaction in the area of physical symptoms.
The following are proposed based on the study results.
First, it was shown that stress of the mentally handicapped has a significant effect on user satisfaction. This result is expected to become basic data to improve the stress levels of the mentally handicapped.

Second, it was shown that the physical symptoms of the mentally handicapped have a significant effect on user satisfaction. This result is expected to become basic data to improve living facilities according to the physical symptoms of the mentally handicapped.

Third, it was shown that the self-esteem has a significant effect on life satisfaction. This result is expected to become basic data to improve life satisfaction of the mentally handicapped.

There is a need for future studies on the improvement of living facilities according to the physical symptoms of the mentally handicapped.

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