

# Effects of Engagements of Parents of Disabled Children in Leisure Activities on their Sense of Depression

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## Abstract

The purpose of this study is to analyze the influences of engagement of parents of disabled children in leisure activities on their sense of depression. For the study, 178 parents of disabled children in 00-si, Chungcheongbuk-do, were surveyed. For data analysis, frequency analysis, correlation analysis and multiple regression analysis were conducted using SPSS program. The results were as follows. Firstly, it was found that if a parent of disabled children has high degree of engagement in leisure activity, the parent's degree of positive emotion in the sense of depression is likely to be high as well. Secondly, the study showed that if a parent of disabled children has a high degree of engagement in leisure activities, the parent's depressive emotions, physical and action slowdowns and sense of depression in social relationships are likely to be low. As an implication, this study is considered to serve as the fundamental data for leisure programs for parents of disabled children.

**Keywords:** Parents of disabled children, leisure, degree of engagement in leisure activities, sense of depression

## 1. Introduction

### 1.1 Issues Raised

According to a report from National Health Statistics in 2013, 10.7% of the whole adult population (aged 19 or more) have experienced depression, with females (14.4%) having more than twice as higher experience rate than males (6.8%) [1]. Such experiences of depression may influence parents' maintaining their daily life and ultimately deteriorate their life quality. Especially, parents who raise disabled children require means of relieving or dealing with sense of depression and stress in daily life. Accordingly, there are rising interests in various supportive policies for leisure activities, which have positive influences on the society [2, 3].

A study on the relationship between leisure activities and depression revealed that the elderly's engagement in sports activities in leisure times has positive influence on their sense of depression [4]. Also, a study on the effects of university students' engagement in leisure activities on their depression and social relationships showed that students who are engaged in leisure activities tend to experience lower degree of depression [5]. In case of housewives, a study on effects of participation in exercises and leisure activities on reduction of depression revealed that participation in leisure activities is effective in reducing the sense of depression [6]. Like so,

many existing researches infer that leisure activity is has positive influences on reducing sense of depression.

The literature survey on existing studies shows that most of studies on the effects of leisure activities on sense of depression were conducted by targeting on adolescents, university students, females at work and the elderly, yet there is a lack of relevant studies targeted on the parents of disabled children [4, 5, 6]. Thus, this study aims to provide the fundamental data for leisure programs, which can reduce the depression of parents of disabled children and ultimately enhance their quality of life.

### 1.2 Research Questions

The purpose of this study is to reveal the effects of degree of engagement in leisure activities of parents of disabled children on their sense of depression. The detailed research questions for this study are as follows.

First, how does the engagement in leisure activities of parents of disabled children influence their positive emotions of depression?

Second, how does the engagement in leisure activities of parents of disabled children influence their depressive emotions, physical and action slowdowns and sense of depression in social relationships?

## 2. Research Methods

### 2.1 Research Targets and Data Collection Method

In this study, 178 parents of disabled children in 00-si, Chungcheongbuk-do, were surveyed from February 10 to April 10 2015. The survey was conducted by sufficiently explaining the purposes and methods thereof to the respondents before asking them to directly fill out the survey sheets. G\*Power 3.1, the test power analysis program of Cohen, was used to calculate the sample size, according to the sampling equation. The factorial analysis was conducted at a significance level of 5%, test power of 95% and effective size with mid-exponential of 0.15. The minimum sample size was calculated to be 135. Out of 178 sets of survey results, 157, excluding the 21 sets that are inappropriate for analysis, were used for the data analysis.

### 2.2 Research Tools

The questions from local health investigation [7] were used as the research tools for general characteristics, including gender, age, final educational level, religion and health conditions. Also, to measure the degree of engagement in leisure

activities, the questions on leisure activities, used by SimNamSoo [8], were used. The sense of depression was measured by using the scale of JeongEunSeon [9] for 20 questions. Moreover, the reliability of the measuring tools were found to be 0.932, of which the Cronbach's  $\alpha$  value is higher than 0.60, the lower bound, indicating that the reliability of the research tools is secured. The result of reliability test on the sense of depression was high with value of 0.932 and the detailed result of analysis on the reliability is presented on <Table 1>.

<Table 1> Test on the reliability of sense of depression

Division		Number of questions	Cronbach's $\alpha$
Sense of depression	Positive emotion	4	.832
	Depressive emotion	7	.891
	Physical and action slowdown	7	.801
	Social relationship	2	.767
Sense of depression		20	.932

### 2.3 Methods of Data Processing and Analysis

The collected data were analyzed using SPSS 18.0 program at a significance level of 5%. The degree of reliability of each research tool was estimated using Cronbach's  $\alpha$  coefficient. The frequency analysis was conducted to investigate the general characteristics, and correlation analysis and multiple regression analysis were conducted to investigate the effects of degree of engagement in leisure activities on the sense of depression.

## 3. Research Results

### 3.1 General Characteristics

The sample of parents of disabled children in this research consists of more females, with 28 males (17.8%) and 129 females (82.2%), and the proportions of each age group were: 87 in 40s (55.4%), 48 in 30s (30.6%) and 22 in 50s or higher (14.0%). Regarding the final educational level, 118, the majority, graduated from university or higher institute (75.2%) and 39 graduated from high school (24.8%). Also, 92 of the parents have religions (58.6%) and 65 (41.4%) do not. Lastly, for the health conditions, 70 has answered to be fine (43.3%), and 81 were found to be comparatively healthy (52.8%).

### 3.2 Correlation between degree of engagement in leisure activities and the sense of depression

The result of analysis on the correlation between engagement in leisure activities of parents of disabled children and their sense of depression is as presented on <Table 2>. The correlation between degree of engagement in leisure activities of parents of disabled children and their sense of depression was investigated and the result was as follows. The sense of

depression was found to be having negative correlation with the types of leisure activities in the following order: static leisure activities ( $r = -.437$ ,  $p < .001$ ) and active leisure activities ( $r = -.418$ ,  $p < .001$ ). Specifically, the depressive emotions, physical and action slowdowns and social relationships, the subscales of sense of depression, were found to be having significant negative relationships with the degree of engagement in leisure activities, and the positive emotion is found to be having positively relationship with the degree of engagement in leisure activities.

<Table 2> Correlation between degree of engagement in leisure activities and the sense of depression

Division			Leisure Activities		Sense of depression				
			1	2	3	4	5	6	7
Leisure	Active leisure activities	1	1						
	Static leisure activities	2	.133*	1					
Sense of depression	Positive emotion	3	-.386***	-.370***	1				
	Depressive emotion	4	.332***	.342***	-.602***	1			
	Physical and action slowdown	5	-.352***	-.383***	.871***	-.465***	1		
	Social relationship	6	-.392***	-.491***	.624***	-.559***	.615***	1	
Sense of depression		7	-.418***	-.437***	.954***	-.743***	.909***	.744***	1

\*  $p < .05$ , \*\*\*  $p < .001$

### 3.3 Effects of engagement in leisure activities on the sense of depression

Multiple regression analysis was conducted to investigate the effects of engagement in leisure activities of parents of disabled children on their sense of depression and the result gave  $R^2 = 0.323$ , implying that 32.3% of the global variation explains the regression model. Since the VIF values of all variables were below 10 and the tolerance value was found to be higher than 0.1, no multicollinearity problem is expected. Variance analysis on the model resulted that the estimated

model is valid ( $F=54.741$ ,  $p<.001$ ) and that the static leisure activities ( $\beta=-.389$ ,  $p<.001$ ) have more significant influence on the sense of depression than the active leisure activities ( $\beta=-.367$ ,  $p<.001$ ). Therefore, it was revealed that the more a parent engages in static and active leisure activities, the lower the sense of depression the parent is likely to experience.

### 3.4 Effects of degree of engagement in leisure activities on the subscales of the sense of depression

#### 3.4.1 Effects on the positive emotions

The effects of engagement in leisure activities of parents of disabled children on their positive emotion, a subscale of sense of depression, were investigated and the result was as follows. The influence of satisfaction with leisure activities on the positive emotion has  $R^2=0.200$ , implying that 20.0% of global variation explains the regression model, and the result of variance analysis showed that the estimated model is valid ( $F=28.654$ ,  $p<.001$ ). It was found that the static leisure activities ( $\beta=-.303$ ,  $p<.001$ ) have more significant influence on the positive emotion than the active leisure activities ( $\beta=-.291$ ,  $p<.001$ ). Such result revealed that the more a parent engages in leisure activities, the more positive emotions the parent is likely to experience.

#### 3.4.2 Effects on the depressive emotions, physical and action slowdowns and social relationships

The influence of engagement in leisure activities of parents of disabled children on their depressive emotion has  $R^2=0.252$ , implying that 25.2% of global variation explains the regression model, and the result of variance analysis showed that the estimated model is valid ( $F=38.632$ ,  $p<.001$ ). It was found that the active leisure activities ( $\beta=-.332$ ,  $p<.001$ ) have more significant influence on the depressive emotion than the static leisure activities ( $\beta=-.325$ ,  $p<.001$ ). Such result means that the more a parent engages in leisure activities, the less depressive emotions the parent is likely to experience.

The influence of engagement in leisure activities of parents of disabled children on their physical and action slowdowns has  $R^2=0.239$ , implying that 23.9% of global variation explains the regression model, and the result of variance analysis showed that the estimated model is valid ( $F=35.944$ ,  $p<.001$ ). It was found that the static leisure activities ( $\beta=-.342$ ,  $p<.001$ ) have more significant influence on the physical and action slowdowns than the active leisure activities ( $\beta=-.307$ ,  $p<.001$ ). Such result means that the more a parent engages in leisure activities, the less physical and action slowdown the parent is likely to experience.

The influence of engagement in leisure activities of parents of disabled children on their social relationships has  $R^2=0.350$ , implying that 35.0% of global variation explains the regression model, and the result of variance analysis showed that the estimated model is valid ( $F=61.614$ ,  $p<.001$ ). It was found that the static leisure activities ( $\beta=-.446$ ,  $p<.001$ ) have more significant influence on the social relationships than the active leisure activities ( $\beta=-.333$ ,  $p<.001$ ). Such

result means that the more a parent engages in leisure activities, the lower sense of depression the parent is likely to experience in social relationships.

## 4. Discussions and Conclusion

In this research, the effects of degree of engagement in activities of parents of disabled children on their sense of depression were analyzed. The detailed discussions on the results of the study are as follows.

Firstly, it was revealed that the positive emotion of parents of disabled children has a positive correlation with their degree of engagement in leisure activities. It was found that the more they participate in leisure activities, the more positive emotions they are likely to experience. Such result is similar to a study result [10], which showed that the more the elderly engage in leisure activities, the less depressive emotions and the more positive emotions they experience [11, 12]. This implies that the engagement in leisure activities of parents of disabled children is a critical factor, which effectively increases positive emotions and reduces sense of depression [13].

Secondly, the study showed that the engagement in leisure activities of parent of disabled children has significant negative correlation with their depressive emotions, physical and action slowdowns and social relationships. Specifically, it was revealed that parents engage more in leisure activities experience less depressive emotion, physical and action slowdowns and sense of depression in social relationships. Such result is similar to a study result [14, 15], which showed that the elderly's engagement in sports has negative correlation with the depression. This result implies that the leisure activities not only turn life of parents of disabled children positively, but also have significant influence on reducing the sense of depression [16, 17, 18].

Based on the above results, the following suggestions are made.

The study revealed that the more a parent of disabled children engage in leisure activities, the more positive emotions and the less depressive emotions, physical and action slowdowns and sense of depression in social relationships the parent is likely to experience. Such result implies that the leisure activities are closely related to reducing sense of depression and vitalizing life, so it is considered to serve as the fundamental data for various leisure programs, which can enhance the life quality of parent of disabled children.

In the future, more studies on the effects of satisfaction with leisure activities of parents of disabled children on their satisfaction with life are required.

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