

The Relationships of Serious Leisure, Self-Determination, Social Interaction, and Quality of Life of Young Adults with Intellectual Disabilities in South Korea

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Abstract

Background/Objectives: At this point in time when the self-determination of adults with intellectual disabilities is emphasized as an important factor of the quality of life. Thus, this study aims to analyze the relationships of serious leisure, self-determination, social interaction, and quality of life.

Methods/Statistical analysis: A structured questionnaire was obtained from 77 young adults with intellectual disabilities between 18 and 25 years of age residing in S-city, and 69 of them were analyzed. The measurement tools used were the self-determination, social interaction, and quality of life of young adults with intellectual disabilities. The SPSS WIN VER 23.0 and Amos 22.0 program were used to analyze the data with reliability analysis, correlation analysis, and structural equation model.

Findings: The results of this study are as follows. First, the serious leisure had significant effects on the self-determination. Second, the serious leisure had significant effects on the self-determination. Third, the serious leisure had significant effects on the social interaction. Fourth, the serious leisure had significant effects on the quality of life. Fifth, in causal relationships of serious leisure, self-determination, social interaction, and quality of life, the serious leisure had

direct effects on the self-determination, social interaction, and quality of life, and also had indirect effects on the quality of life through self-determination and social interaction.

Improvements/Applications: the participation in leisure activities of young adults with intellectual disabilities helps them start playing their roles as a member of society by learning about common, but essential values and attitude through interactions with others, and also makes their entry to society easy, which is eventually to practice the welfare for people with disabilities.

Keywords: Young Adult with Intellectual Disabilities, Serious Leisure, Self-Determination, Social Interaction, Quality of Life

1. Introduction

With the enforcement of the Act on Support for People with Developmental Disabilities(Law No. 12618) on May 20th 2014, the interest in self-determination and quality of life of people with intellectual disabilities is socially rising as an important issue. This act is prescribing the respect for opinions of people with intellectual disabilities, and the systematic provision of support and rights applying the characteristics of their lifecycle and needs of welfare. Thus, the perception of the consumerism of people with disabilities is increasing not only in the area of law and institution, but also in the practical area of policy and welfare service for people with disabilities. This perception views people with intellectual disabilities as human beings who exercise their own equal rights, instead of incapable objects of protection, and for the improvement of the quality of their lives, the self-determination is grabbing attention more than ever[1]. Like this, at this point in time when the self-determination of people with intellectual disabilities is socially emphasized as an important factor of the quality of life, it would be very important to support its practical programs, so that they could actually live self-determinant lives.

Especially, in case of young adults with intellectual disabilities who take the first step in society, the improvement of self-determination is more important for their correct adulthood lives in the future. The young adults with intellectual disabilities who had more experiences in self-determination could more independently select and perform many living categories such as interpersonal relationship, financial independence, and leisure activity necessary for community living[2], which would have positive effects on the quality of adulthood life. Thus, the self-determination of young adults with intellectual disabilities would be a very important factor on the quality of life.

Just as shown in the name, the self-determination is based on the concept of ‘self’. As the process of using an individual’s will, it is needed to accept one’s own strengths and limitations, to recognize the external power to exercise influence on oneself, and also to decide the methods to decide a choice and to meet needs[3]. According to a statistical survey on the disabled[4], the

number of young adults with intellectual disabilities in their 18-25 years old is 19.0% of the whole number of people with intellectual disabilities. This high population ratio of young adults with intellectual disabilities means the high percentage of those people living in community, which shows the importance of increasing the quality of their adulthood lives by establishing the competencies and environment necessary for their correct adulthood lives.

Meanwhile, for improving the quality of life through self-determination, it is complexly developed by getting influences from many factors within environment[5]. Freely expressing one's thought and opinions and deciding one's own life are closely related to socially-interactive behavior[6]. Most of the decision-making is carried out not only based on individual's cognitive ability, but also within interpersonal relationships such as socially-interactive situations. And it is more developed when the opportunity to express one's opinions is increasing. Thus, the self-determination of people with disabilities could be a very important precondition to have opportunities of actual contact and positive interaction with other people[7].

Physical activities provide people with developmental disabilities with a place for social interaction and experience in self-development by providing opportunities for good use of leisure and also therapeutic/cultural life, which is greatly contributing to the welfare for people with disabilities[8]. Also, the participation in serious leisure through physical activities is changed to an essential requirement for improving the quality of life by learning about how to live together with people without disabilities, stimulating or strengthening a desire for independent life, and enjoying a smooth social life[9]. Moreover, the participation in leisure activities of young adults with intellectual disabilities helps them start playing their roles as a member of society by learning about common, but essential values and attitude through interactions with others, and also makes their entry to society easy[10]. Also, the participation in physical activities as serious leisure is emphasizing the benefits and importance to people with developmental disabilities. By participating in exercise, the people with disabilities could receive many great effects such as enhancement of social interaction and improvement of communication skills[11], acquisition of academic skills and relevant techniques[12], enhancement of selective/voluntary decision-making ability[13].

However, those preceding researches are just verifying the effects of each variable on the participation in physical activities. Just as mentioned earlier, for improving the quality of life through self-determination, it is complexly developed by getting influences from many factors within environment. It is very rare to find the researches on changes in self-determination according to the participation in serious leisure activity, or variables inherent in the relationship between self-determination and quality of life. Thus, there should be continuous and concrete

field researches on the effects of self-determination on the quality of life according to the participation in sports-for-all programs as leisure activities of people with intellectual disabilities.

Based on such necessities of those researches, the objective of this study is to examine the effects of serious leisure on the quality of life, targeting people with intellectual disabilities of community, participating in sports-for-all programs as serious leisure activities. Moreover, this study aims to analyze the relationships of serious leisure, self-determination, social interaction, and quality of life, based on the variables related to the quality of life such as self-determination and social interaction.

Feature selection is a process to pick a group of features as subset that are identically suitable for investigation and for future predication by removing the unrelated or redundant features. The ultimate objective of feature selection process is to increase the predictive accuracy and reducing complexity of learner results[1,2]. In the universities or in academic institutions, it's very difficult to predict the frailer or dropout students in early stage. Data assimilations is the main process used to reduce student dropout percentage and to increase the student enrolment percentages in the university. Dropout in residential university is caused by academic, family and personal reasons, campus environment and infrastructure of university and varies depending on the educational structure agreed by the university. Thus, this work aims to effectively formulate education program and institutional infrastructure through which the student's enrollment rate at the university will get increased significantly. The main aim of this paper is to develop a improved decision tree model and to derive a classification rules to predict whether student will graduate or not using the historic dataset. In this paper, improved decision tree model is used to generate the model. Information like age, parent's qualification, parent's occupation, academic record, attitude towards university was collected from the students to forecast the group of students needs the periodical monitoring.

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2. Materials and Methods

This study is a research through self-reported questionnaire.

2.1. Subjectives

Considering that the period of adapting to the adulthood life after graduating from high school is the early stage of adulthood, based on Arnett(2000)[14]'s theory, this study selected the people diagnosed with intellectual disabilities in their 18-25 years old, living in community. The research subjects were limited to the people with intellectual disabilities in disability grade 2-3, equipped with abilities to understand/respond to the survey questionnaire, and total 69 subjects were used for final analysis.

2.2. Treatment/Program

The subjects regularly participate in sports-for-all programs(bowling, yoga, taekkyon, line dance, track and field, kick boxing, table tennis, go, ground golf, badminton) provided by S city, twice or more a week.

2.3. Measurement Tools

The questionnaire was composed of total 109 items including five items for sociodemographic characteristics, 32 items for serious leisure, 30 items for self-determination, 48 items for social interaction risk behavior, and 26 items for quality of life

2.4. Statistical Methods

Using the SPSS version 23.0 and Amos 22.0 Program for data analysis, the structural relations between variables were verified by applying the reliability analysis, correlation analysis, and structural equation model.

3. Results and Discussion

3.1. Correlations between Variables

Table 1: Results of analysis on correlations between variables

Factor	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Serious leisure					Self-determination			Social interaction		Quality of life					
Reward(1)	1															
Inherent emotion(2)	.311*	1														
Professionalism(3)	.198*	.284*	1													
Effort(4)	.291*	.310*	.326*	1												
Patience(5)	.216*	.311*	.335*	.431*	1											
Identification(6)	.119*	.429*	.429*	.412*	.104*	1										
Selection(7)	.430*	.341*	.431*	.362*	.107*	.412*	1									
Self-advocacy(8)	.412*	.425*	.356*	.389*	.369*	.342*	.415*	1								
Self-management (9)	.369*	.420*	.466*	.423*	.418*	.220*	.481*	.301*	1							
Social support(10)	.371*	.342*	.492*	.398*	.476*	.362*	.420*	.364*	.337*	1						
Stigma(11)	.363*	.327*	.417*	.368*	.367*	.378*	.414*	.311*	.352*	.371*	1					
Overall quality of life(12)	.383*	.411*	.395*	.346*	.439*	.431*	.437*	.409*	.351*	.454*	.419*	1				
Physical area(13)	.408*	.418*	.369*	.341*	.398*	.355*	.392*	.419*	.427*	.368*	.418*	.337*	1			
Psychological area(14)	.268*	.295*	.391*	.227*	.168*	.193*	.267*	.277*	.176*	.215*	.308*	.213*	.318*	1		
Social area(15)	.363*	.413*	.398*	.408*	.592*	.518*	.438*	.561*	.308*	.367*	.403*	.412*	.417*	.415*	1	
Living environmental area(16)	.351*	.337*	.409*	.361*	.416*	.371*	.460*	.382*	.341*	.368*	.416*	.437*	.350*	.408*	.403*	1

***p<.001, **p<.01, *p<.05

Table 2. Index of goodness-of-fit test for the research model

Overall Index	χ^2	$\chi^2/df(16)$	sig	TLI	CFI	RMSEA
Research Model	59.451	1.63	.000	.941	.953	.072
Fit Index Standard		<3.0	>0.05	≥ 0.9	≥ 0.9	$\leq 0.05\sim 0.1$

Just as shown in <Table 1>, there was no variable showing the correlation coefficient value as .8 or higher, so there was no problem with multicollinea

3.2. Structural Relations between Variables

3.2.1. Verification of Goodness-of-Fit of the Research Model

The results of verifying the goodness-of-fit of the structural relation model of serious leisure, self-determination, social interaction, and quality of life of young adults with disabilities are as <Table 2>. For analyzing the goodness-of-fit of the research model, the χ^2 -test and goodness-of-fit index such as TLI(Tucker-Lewis Index), CFI(Comparative Fit Index), and RMSEA(Root Mean Square Error of Approximation) were analyzed.

Just as shown in <Table 2>, in the results of verifying the overall structural model of this study, it was shown as $\chi^2=59.451$, TLI=.941(≥ 0.9), CFI=.953(≥ 0.9), and RMSEA=.072($\leq 0.05\sim 0.1$), so the research model set up in this study was all meeting the standard of suitability.

3.2.2. Verification of Structural Model Path

Just as shown in <Table 3>, the serious leisure had statistically significant effects on the self-determination, social interaction, and quality of life. Also, the self-determination and social interaction had significant effects on the quality of life.

Table 3. Results of analysis on path coefficient of structural model

Structural path	estimate	t	p
Serious leisure → Self-determination	.441	8.356	.000**
Serious leisure → Social interaction	.418	7.886	.004**
Serious leisure → Quality of life	.436	8.315	.000***
Self-determination → Quality of life	.347	6.564	.015*
Social interaction → Quality of life	.321	6.154	.021*

***p<.001, **p<.01, *p<.05

3.2.3. Structural Relation Analysis

The results of analysis just like the verification of research model path could be displayed into a structural model just as <Figure 1>.

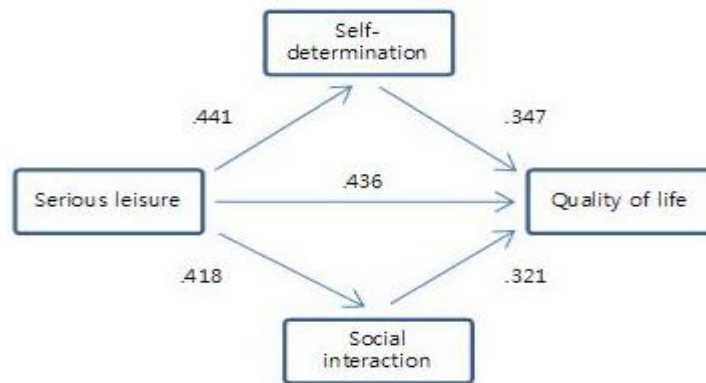


Figure 1. Verification of structural relations of serious leisure, self-determination, social interaction, and quality of life

The results of breaking down the structural effects of the research model are as <Table 4>.

Table 4. Structural effects

Path	Direct	Indirect	Effect
serious leisure → self-determination	.441	-	.418**
serious leisure → Social interaction	.418	-	.418**
serious leisure → quality of life	.436	-	.436***
self-determination → quality of life	.347	-	.347**
social Interaction → quality of life	.321	-	.321**
serious leisure → self-determination → quality of life	-	.441 × .347	.153*
serious leisure → social Interaction → quality of life	-	.418 × .321	.134*
Total effect	1.963	.287	2.250

***p<.001, **p<.01, *p<.05

Just as shown in <Table 4>, the direct effects of serious leisure on the self-determination, social interaction, and quality of life were $\beta=.441$, $\beta=.418$, and $\beta=.436$ respectively. Also, the direct effects of self-determination on the quality of life were $\beta=.347$, and the direct effects of social interaction on the quality of life were $\beta=.321$, which was all statistically significant. The indirect effects of serious leisure on the quality of life through self-determination was $\beta=.153$ while the indirect effects of serious leisure on the quality of life through social interaction was $\beta=.134$. As

the results of total effects by aggregating the direct effects($\beta=1.963$) and indirect effects($\beta=.287$), the structural effects were $\beta= 2.250$.

Thus, this study verified that the self-determination would be an important factor having direct effects on the social interaction and quality of life, and also having indirect effects on the quality of life through social interaction, according to the participation in sports-for-all programs. Therefore, the self-determination according to the participation in sports-for-all programs is in structural relations with social interaction and quality of life.

3.3. Discussion

participation in sports-for-all programs is in structural relations with social interaction and quality of life.

The serious leisure according to the participation in sports-for-all had significant effects on the self-determination, social interaction, and quality of life. Wehmeyer & Schwartz(1997)[15] said that the people with intellectual disabilities, equipped with high-level of self-determination competency could easily respond to social interactions. Also, the people with disabilities could get benefits like enhancement of selective/voluntary decision-making ability by participating in leisure activities[13], and this self-determination could have direct effects on the enhancement of social interaction and the improvement of communication skills[12], which supports the results of this study. And Kim Han-Cheol, Jeong Yeon-Taek, and Park Jeong-Bok(2011)[16] evaluated the effects of afterschool circuit exercise on the self-determination and exercise performance competency of students with intellectual disabilities, and as a result, the group who performed the circuit exercise showed the improvement of self-determination compared to the control group, which accords with the results of this study.

Above all, the results of this study partially support a research by Park Byeong-Guk & Kang Dae-Seong(2012)[17] reporting that the basic psychological needs which is one of the self-determination factors of club members participating in sports activities would have effects on the improvement of social support and social relations. And the results of this study accord with researches by Kim Eung-Su(2017)[18] reporting that the self-determination would have positive effects on the sociality.

Thus, it would be very important to provide physical activity programs that help people with intellectual disabilities independently plan their physical activities and also voluntarily participate in them. In order to improve their sociality through the participation in sports-for-all, it would be preferentially needed to establish the environment in which the people with intellectual disabilities could correctly understand the self-determination.

A research by McDougall et al.,(2016)[19] reports that when the opportunity of voluntary selection for each individual with disabilities is guaranteed more, such socially-valuable interactions would be performed more, and this could become a factor improving the life quality of the relevant person with disabilities, which is supporting this study. Moreover, a research by Ryu Hyeon-Ju(2003)[20] examining the expected effects of leisure activities targeting the people with developmental disabilities including intellectual disabilities, reports the acquisition of self-satisfaction, establishment of self-concept, development of social skills, and the improvement of overall quality of life, which partially accords with this study. And a research by Williams & Dattilo(1996)[21] reports the effects of voluntary selection of leisure activities and social interaction on the positive emotional enhancement of adults with intellectual disabilities. Similar to this, the afterschool integrated leisure programs including the elements like self-perception, decision-making, leisure plan, and evaluation would have positive effects on the formation of self-identity, improvement of leisure motivation, leisure participatory behavior, and enhancement of social skills of adolescents with developmental disabilities[22], which would eventually have effects on the overall quality of life.

4. Conclusion

This study aimed to examine the structural relations of self-determination, social interaction, and quality of life by paying attention to the participation in sports-for-all programs as various leisure activities for young adults with intellectual disabilities, and also to improve their active participation as activities for improving the quality of life of young adults with intellectual disabilities. Putting together the results and discussion of this study, the serious leisure through the participation in sports-for-all could help young adults with intellectual disabilities have smoother interactions with other members of society by improving their self-determination, which plays an important role in the qualitative improvement of life. In conclusion, the serious leisure is an influential variable on the relationships of self-determination, social interaction, and quality of life.

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