

**The Influence of Extraversion on
Leisure Constraints Negotiation Process**
A Case of Korean People with Disabilities

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Abstract

Diverse behavioral and psychological elements in the leisure constraints negotiation process are known to be closely associated with each other. Among several psychological factors, personality traits tend to be more stable over time and more influential on an individual's behavior. Nevertheless previous studies that investigated the constraints negotiation process have paid little attention to the influence of the personality traits. Further, people with disabilities likely perceive various leisure constraints differently, and adopt distinctive patterns of negotiation efforts. Thus, this paper employs the concept of extraversion as a personality trait for individuals with disabilities. Study results suggest that people with disabilities make use of different constraints negotiation mechanisms to decide on their leisure participation.

KEYWORDS: Leisure constraints, constraints negotiation process, extraversion, people with disabilities

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The number of individuals with disabilities is continuously increasing as a result of longer life spans as well as improvements in medical technology (Yau, McKercher, & Packer, 2004). According to Burnett and Baker (2001), individuals with disabilities in the United States will double, reaching 100 million by 2030. This trend is similar in other countries including Korea. A recent census report indicated that the number of Koreans with disabilities would reach 2.2 million by 2009, comprising an estimated 4.6 % of the total population (Korea Employment Agency for the Disabled, 2010).

With a rise in these numbers, there has been an increased research interest to assess leisure constraints people with disabilities commonly perceive (e.g., Burns & Graefe, 2007; Daniels, Rodgers, & Wiggins, 2005; McKercher, Packer, Yau, & Lam, 2003). Despite this plethora of the topic, leisure professionals have largely focused on identification of the constraints for those individuals with disabilities (Smith, 1987). Consequently, little attention has been paid to an understanding of their dynamic decision-making procedure for participation in preferred activities, which is known as the constraints negotiation process. In other words, there is limited information on how people with disabilities negotiate the impacts of constraints and how they ultimately determine participation in their desired activities.

The goal of this study employing the population of individuals with physical disabilities is to examine how diverse elements of the leisure constraints negotiation mechanism (i.e., constraints, motivations, negotiation, and participation) are interconnected to each other. Unlike previous studies, we also intend to test how extraversion as a key sub-dimension of personality traits affects the constraints negotiation process. According to Hogan (1987), personality traits are known to be more stable over time and more influential on individuals' leisure behaviors than any other psychological factors. Among the five factors of personality traits (i.e., extraversion, neuroticism, openness, agreeableness, and conscientiousness), several studies (e.g., Barnett, 2006; Brandstatter, 1994; Diener, Larsen, & Emmons, 1984; Furnham & Heaven, 1999) that examined the relationships between those traits and leisure behavior suggested extraversion is more closely related to leisure participation than the other personality traits. While a positive relationship was reported between extraversion and leisure participation, nevertheless, it has not been fully addressed how this personality trait is interconnected with other explanatory elements in the constraints negotiation mechanism.

To reach this goal, we employed the constraint-effects-mitigation model originally proposed by Hubbard and Mannell (2001) as a theoretical framework of the constraints negotiation process. According to this model, the operation of negotiation efforts, triggered by an increase in the levels of constraints and motivations, mitigates the negative relationship between constraints and participation but intensifies the positive association between motivations and participation. Through a comparison of four competing models (i.e., independence model, negotiation-buffer model, constraint-effects-mitigation model, and perceived-constraint-reduction model), they found that the constraint-effects-mitigation model is most appropriate to address individuals' leisure participation. Thus, we utilize this constraint-effects-mitigation model in this paper. Further, to investigate the effects of the extraversion trait on participation and negotiation

efforts, we modify the model with the trait of personality using individuals with several types of physical disabilities as the study population.

Literature Review

Leisure Constraints

Leisure constraints are typically referred to as “factors that are ... perceived or experienced by individuals to limit the formation of leisure preferences and to inhibit or prohibit participation and enjoyment in leisure” (Jackson, 1997, p. 461). Since Crawford and Godbey (1987) initially conceptualized the three different types of leisure constraints—intrapersonal, interpersonal, and structural constraints, this classification of leisure constraints has been widely employed in empirical studies (e.g., Raymore, Godbey, Crawford, & von Eye, 1993; Stanis, Schneider, & Anderson, 2009)) to explain relationships from preferences to participation.

Intrapersonal constraints are defined as “individual psychological states and attributes which interact with leisure preferences rather than intervening between preferences and participation” (Crawford & Godbey, 1987, p. 122). Some of the examples in this category include stress, depression, anxiety, and subjective assessment of the suitability and availability of leisure activities. Interpersonal constraints result from an individual’s interactions with others. For example, individuals often encounter interpersonal constraints when they are not able to find another person whom they participate with in a specific activity. Different from intrapersonal constraints which interact only with leisure preferences, interpersonal constraints influence both preferences and participation (Crawford, Jackson, & Godbey, 1991). Structural constraints are external factors that intervene between leisure preferences and participation (Mannell & Kleiber, 1997). These constraining factors such as inappropriate transportation, work commitments, and financial restrictions usually emerge after leisure preferences are developed (Walker & Virden, 2005).

While no one is free of leisure constraints, various constraints challenge individuals with disabilities because of negative public perceptions of and attitudes toward impairments as well as their physical and/or cognitive conditions (Henderson, Bedini, Hecht, & Schuler, 1995; Smith, Austin, Kennedy, Lee, & Hutchinson, 2005). Smith (1987) classified diverse constraining factors that people with disabilities typically encounter into three domains: intrinsic, interactive, and environmental. Intrinsic constraints are closely related to their level of disability. Health-related problems, social ineffectiveness, and physical/psychological dependency are included in this category. Interactive constraints result from mutual interactions between individuals’ behaviors and existing settings. Feelings of anxiety or boredom from skill-challenge incongruities, stated by Csikszentmihalyi (1975), and communication difficulties are some examples of interactive constraints. Besides, environmental constraints commonly originate from external factors such as attitudinal obstacles (e.g., negative attitudes from service providers), infrastructural obstacles (e.g., inadequate transportation and architectural challenges), and diverse rules and regulations. Similarly, Mc Kercher

et al. (2003) suggested that people with disabilities often deal with two kinds of macro-constraints (i.e., internal and external constraints) when they attempt to participate in some desired activities. Internal constraints can be divided into two sub-dimensions of intrinsic (e.g., lack of knowledge, health-related barriers) and economic (e.g., financial affordability) constraints. External constraints are also composed of two sub-categories: structural (e.g., transportation obstacles) and interactive (e.g., lack of caregivers) constraints.

During the past three decades, leisure constraints have been a popular research topic to better understand individuals' leisure behaviors (Jackson & Scott, 1999). Several studies (e.g., Carroll & Alexandris, 1997; Searle & Jackson, 1985) indicated that the concept is intimately associated with diverse behavioral and psychological aspects of leisure. Consequently, these constraints evidently play a critical role in the decision-making process for leisure participation in desired activities and help better understand individuals' leisure behaviors and choices (Crawford, Jackson, & Godbey, 1991).

Constraints Negotiation Process

Prior to the early 1990s, leisure constraints were merely understood as obstacles to participation in preferred leisure activities (Jackson & Scott, 1999). Most studies on leisure constraints conducted in this time period (e.g., McGuire, Dottavio, & O'Leary, 1986; Witt & Goodale, 1981) focused primarily on assessing the desire to participate in an activity as an important factor to overcome the influences of constraints. However, leisure constraints research has progressed significantly with the emergence of the concept of constraints negotiation (Jackson, 2005). Several empirical studies (e.g., Kay & Jackson, 1991; Scott, 1991; Shaw, Bonen, & McCabe, 1991) suggested that constraints do not necessarily restrict or preclude participation. Kay and Jackson emphasized that most individuals participate in their desired activities while continuously searching for innovative ways to address, alleviate, or overcome various kinds of constraints. In other words, participation decisions are not dependent on the absence of constraints, but on successful negotiation of leisure constraints (Jackson, Crawford, & Godbey, 1993). To cope with leisure constraints, individuals make use of diverse negotiation strategies that are commonly classified into cognitive and behavioral strategies (Jun & Kyle, 2011). According to Jackson and Rucks (1995), the selection of negotiation strategies largely relies on the types of constraints. For example, some individuals with financial restrictions are likely to adopt behavioral strategies (e.g., searching for inexpensive equipment); others with an absence of companions presumably use cognitive strategies (e.g., ignoring those constraining factors).

The concept of constraints negotiation also led to the development of a constraints negotiation process, which emphasizes the role of negotiation efforts in individuals' leisure pursuits (Jackson, 2005). The interconnected relationships among several elements in the process (i.e., constraints, motivations, negotiation, and participation) are more efficiently addressed by using several multivariate methods. Hubbard and Mannell's work (2001) employing a structural equation modeling (SEM) approach empirically tested the "balance effect", initially proposed by Jackson et al. (1993). The balance effect indicates that negotiation efforts delicately arrange the unique influences of constraints and motivations

on individuals' leisure participation. Figure 1 shows Hubbard and Mannell's constraint-effects-mitigation model.

Based on this constraint-effects-mitigation model, prior studies (e.g., Jun & Kyle, 2011; Lee & Scott, 2009; White, 2008) have attempted to identify other psychological factors that affect the constraints negotiation process. One of the most popular variables has been the concept of self-efficacy, defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 71). Using several path models, Loucks-Atkinson and Mannell (2007) tested the effects of negotiation-efficacy as an adapted concept of self-efficacy in the constraints negotiation process and identified strong positive associations between negotiation-efficacy and negotiation efforts through motivations. Thus, as an individual's confidence in his or her own ability to negotiate a variety of constraints increases, motivations and negotiation efforts also increase and, ultimately, foster participation in preferred activities.

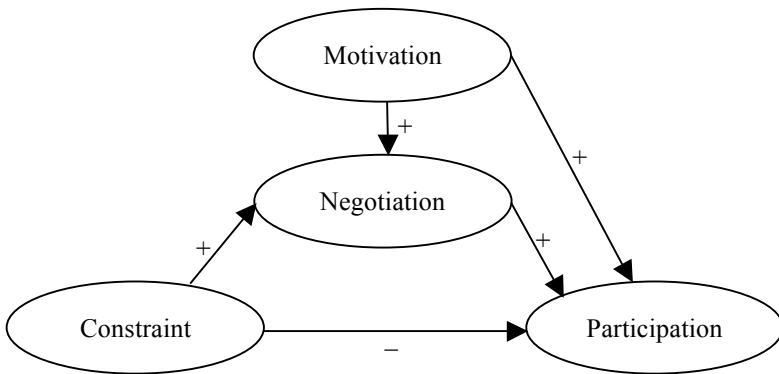


Figure 1. Constraint-Effects-Mitigation Model (Hubbard & Mannell, 2001, p.148)

Extraversion Trait

Among a variety of psychological factors, personality traits are considered as important explanatory elements in the constraints negotiation process to better understand individuals' leisure pursuits (Walker & Virden, 2005). It is reasoned that the traits represent the enduring patterns of thought, feeling, and behavior that are expressed in different situations (Costa & McCrae, 1992; Hogan, 1987). Although a vast array of personality characteristics has been identified to differentiate individuals, the five-factor model – "Big Five" – has been popularly adopted as a key personality measure (Mannell & Kleiber, 1997). Of the five personality traits, extraversion and neuroticism are considered as the "Big Two" in that they commonly show a more robust predictive strength and regularity in explaining individual differences than the other three traits (i.e., openness, agreeableness, and conscientiousness) (Eysenck & Eysenck, 1985). In particular, extraversion is frequently included in the personality taxonomies of leisure and recreation research (e.g., Diener et al., 1984; Furnham & Heaven, 1999; Nickerson & Ellis, 1991) because of its close association with an individual's propensity for seeking pleasure and excitement in leisure activities (Kirkcaldy & Furnham, 1991).

There has been no complete agreement on how to measure the concept of extraversion (i.e., the number of sub-dimensions of extraversion), but several psychological aspects including sociability (or affiliation) and venturesomeness are generally accepted as core elements of this personality trait (Campbell, 1983). Watson and Clark (1997) depicted extraverts as being “more sociable, but are also described as being more active and impulsive, less dysphoric, and as less introspective and self-preoccupied than introverts” (p. 769). In order to measure individuals’ extraversion trait, they suggested six distinctive dimensions, namely, venturesomeness, affiliation, positive affectivity, energy, ascendance, and ambition. Furthermore, Lucas, Diener, Grob, Suh, and Shao (2000) condensed the trait into four different facets: affiliation, social interaction, ascendance, and venturesomeness.

Previous research demonstrated the influence of extraversion on leisure preferences and participation. For example, Diener et al. (1984) and Furnham and Heaven (1999) indicated that extroverted people are more likely to participate in traditional team sports and pursue social interaction compared to introverted recreationists. Similarly, Brandstatter (1994) suggested that extraverted individuals tend to look for more stimulation and spend more time with friends and relatives outside their home. Nevertheless, the question of how this personality trait influences several other elements (i.e., motivations and negotiation efforts) in the constraints negotiation process still remains unanswered.

Proposed Conceptual Models

We modified Hubbard and Mannell’s (2001) constraint-effects-mitigation model to construct a conceptual framework used in this study. After inserting the element of extraversion into the constraint-effects-mitigation model, four different research models were compared with various hypothesized paths. These models are beneficial to understand how several components in the constraints negotiation process—namely, extraversion, constraints, motivations, negotiation efforts, and participation—are interconnected to each other.

For the four models proposed, it was hypothesized that participation is negatively associated with constraints, but positively connected to motivations and negotiation efforts. We also anticipated that motivations and constraints would have a positive effect on negotiation efforts. One of the central questions in this study was to examine the effects of extraversion on the other elements in the constraints negotiation process. While it is commonly accepted that motivations play a critical role in explaining leisure participation, the predictive relationship between personality traits and motivations has not yet been resolved. However, a few studies (e.g., Courneya & Hellsten, 1998; Plog, 1987) provided important evidence for this hierarchical sequence. For instance, Plog showed that allocentric recreationists tend to pursue adventurous and novel experiences while psychocentric recreationists have a tendency to choose familiar and safe activities. Simply put, individuals’ underlying personality traits affect their motivations for leisure activities (Mannell & Kleiber 1997). Accordingly, our four models hypothesized that the trait of extraversion has a positive influence on motivations. As a base, Model 1 was constructed to test the hypothesized connections as below:

- H1-1: Constraints negatively affect participation
- H1-2: Constraints positively affect negotiation efforts
- H2-1: Extraversion positively affects motivations
- H3-1: Motivations positively affect negotiation efforts
- H3-2: Motivations positively affect participation
- H4: Negotiation efforts positively affect participation

Compared to Model 1, Model 2 was developed to test how extraversion directly affects negotiation efforts. It is worth delving into the path from personality traits to negotiation efforts because the constraints negotiation mechanism is known to jointly interact between personal idiosyncrasies and social contexts (Hubbard & Mannell, 2001; Walker & Virden, 2005). We expected that the trait of extraversion would have a positive effect on negotiation efforts based on the fact that extraverts are more likely than introverts to actively search for various strategies to attenuate the impacts of leisure constraints (Furnham & Heaven, 1999). In order to construct Model 2, we inserted another hypothesis (H2-2) into Model 1 as below:

- H2-2: Extraversion positively affects negotiation efforts.

As noted earlier, previous studies have mainly explored a direct relationship between personality traits and participation. In Model 3, we inserted an additional path linking extraversion to participation in the base model to scrutinize its direct association and hypothesized a positive association between these two concepts. In other words, Model 3 included a new path that connects extraversion to participation (H2-3), instead of the path inserted in Model 2 (H2-2):

- H2-3: Extraversion positively affects participation.

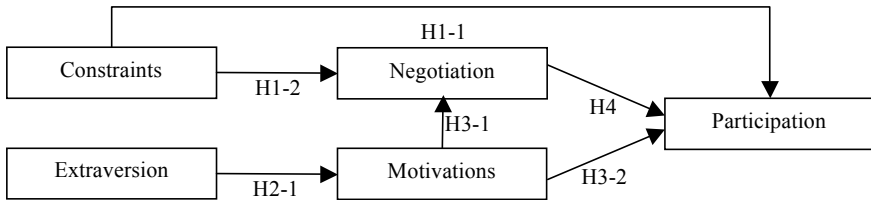
Finally, Model 4 was developed to test all possible hypotheses including H2-2 and H2-3. Figure 2 shows the hypothesized paths proposed in this study.

Methods

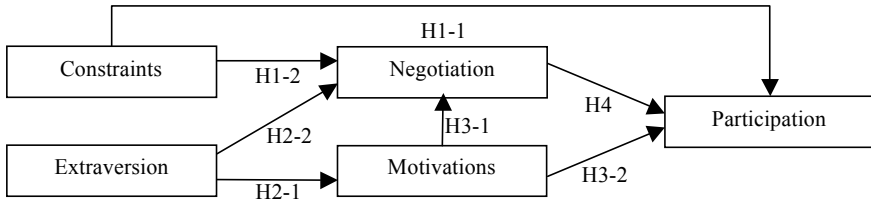
Sampling Procedures

Data were collected from people with physical disabilities at 20 different rehabilitation centers and welfare facilities located in the capital region of Korea (i.e., Seoul, Incheon, and Gyunggi-do). Due to difficulties related to data collection, we intentionally excluded people with intellectual and developmental disabilities from our study sample. According to a census report conducted in 2008 (Korea National Statistics Organization, 2009), the total population of this area amounted to more than 24 million, an estimated 48.2% of the country's total population. Almost half (40.8%) of the total number of households with one or more family members with disabilities resided in this area (Korean Institute for Health and Social Affairs, 2006).

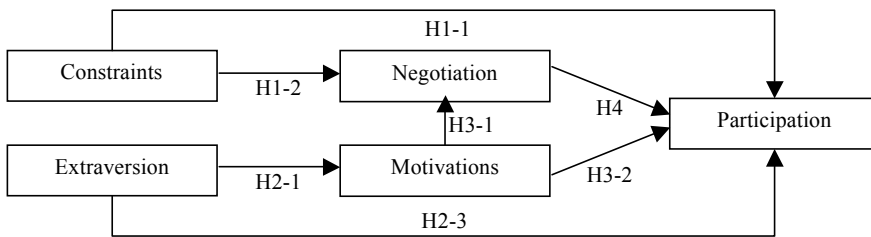
Model 1



Model 2



Model 3



Model 4

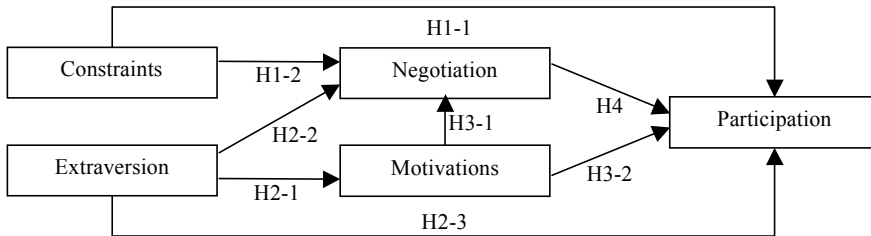


Figure 2. Proposed Conceptual Models

According to Burns and Graefe (2007), caregivers often respond to survey questionnaires on behalf of people with disabilities. This may raise validity and reliability concerns because caregivers' attitudes, opinions, and preferences do not necessarily represent those of people with disabilities. Accordingly, direct face-to-face data collection methods are preferred to other indirect techniques (e.g., mailing, telephone survey) to overcome these limitations. The on-site surveys were conducted over three weeks in September, 2007. Different interview techniques were applied depending on the types of disabilities, to reduce refusals. For exam-

ple, respondents with mobility disabilities were asked to fill in the questionnaire by themselves whereas people with visual or auditory disabilities were assisted to answer the questionnaire by trained interviewers.

Measures

This study made use of various measurement scales but some were condensed and modified to alleviate the concern about mental and physical fatigue of individuals with disabilities. For the concept of extroversion, the “New Extraversion Scale” items developed by Lucas et al. (2000) were reduced to eight items to measure the four central facets of affiliation (e.g., I am a friendly person), ascendance (e.g., if someone does something I do not like, I tell him), venturesomeness (e.g., I prefer to be with many people who are exciting), and social interaction (e.g., I prefer working with other people). A five-point Likert scale was employed with values ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Descriptive statistics and reliability scores are presented in Table 1.

In order to measure leisure constraints, this study modified several different measures employed by prior studies on leisure constraints of people with disabilities (e.g., Burns & Graefe, 2007; Daniels, Rodgers, & Wiggins, 2005; McKercher et al., 2003) and those without disabilities (e.g., Carroll & Alexandris, 1997; Hubbard & Mannell, 2001; Jackson & Rucks, 1995). Constraints items were designed to measure the four different sub-dimensions: intrapersonal (e.g., lack of skills, others’ negative attitudes), interpersonal (e.g., lack of help from family members or friends, inadequate staff services), structural (e.g., inadequate lodging and accommodation, inappropriate transportation), and financial constraints (e.g., lack of discount systems, financial restriction). The sub-dimension of financial issues was included to reflect the relatively lower household income and higher unemployment rate of people with disabilities (Korean Institute for Health and Social Affairs, 2006). A five-point Likert response format with values ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) was used to measure these items.

Because most previous studies examined the constraints negotiation process for people without disabilities, the measurement of negotiation efforts is mainly devoted to a few behavioral issues such as time management and financial adjustment (Hubbard & Mannell, 2001; Loucks-Atkinson & Mannell, 2007). Nevertheless, people who are disadvantaged (e.g., individuals with disabilities, minorities) are likely to exert different negotiation efforts because of their social and economic circumstances. Henderson and Bialeschki (1993) noted that women participate in their favorite activities by making several cognitive negotiation efforts including disregarding concern for gender role expectations and modifying preferences for desired activities. Consequently, we developed four items of negotiation efforts people with disabilities commonly adopt. The items included several negotiation efforts for physical difficulties, absence of caregivers, inappropriate transportation, and unavailability of adequate information and programs associated with leisure activities. A five-point Likert scale was employed with values ranging from 1 (*never*) to 5 (*always*).

Table 1*Descriptive Statistics of Each Variable*

Variables	Mean	S.D.	Reliability
Extraversion			.75
Affiliation	3.44	.97	
Ascendance	3.42	.91	
Venturesome	3.33	.96	
Social interaction	3.26	.89	
Participation			.80
Indoor events	2.97	.95	
Amusement facilities	2.91	.92	
Outdoor events	2.93	.90	
Parks and historic sites	3.12	.95	
Constraints			.88
Lack of interest	2.06	.96	
Lack of skills	2.55	1.10	
Others' negative attitudes	2.52	1.12	
Lack of help from family members or friends	2.86	1.23	
Lack of voluntary caregivers	2.81	1.19	
Inadequate staff services	2.79	1.06	
Financial restriction	3.48	1.12	
Inappropriate government support	3.63	1.09	
Lack of discount systems	3.36	1.06	
Inadequate programs	3.55	1.02	
Inappropriate transportation	3.50	1.08	
Inadequate lodging and accommodation	3.47	1.09	
Inadequate restaurant facilities	3.37	1.10	
Inappropriate information	3.57	1.04	
Motivations			.70
To experience a new and different things	3.76	.90	
For my physical exercise	3.75	.90	
To experience fun and enjoyment	3.72	.91	
To be close to nature	3.83	.83	
To be with other people	3.31	.99	
To educate my children	3.52	.98	
Negotiation efforts			.82
I attempt not to think about my physical disabilities	3.17	1.12	
I attempt to find ways to disregard absence of caregivers	3.10	1.14	
I attempt to forget about inadequate information and programs	3.30	1.01	
I attempt to find ways to ignore inadequate transportation	3.22	1.07	

This study developed participation measures to estimate the extent to which people with disabilities had visited recreational events and facilities for the previous year. A five-point Likert response format with values ranging from 1 (*never*) to 5 (*frequently*) was used for these measures. Respondents were asked to report their levels of visits to four different types of recreational events and facilities: indoor events, amusement facilities, outdoor events, and parks/historic sites.

Motivations items were modified from Crompton's (1979) scale for leisure and recreation activities, which are known to influence individuals' leisure choice. The motivations scale for this study was composed of six measurement items: interactions with others, nature, novelty, health, fun/enjoyment, and education. A five-point Likert response format was also employed with values ranging from 1 (*not at all important*) to 5 (*extremely important*).

Results

Respondents

A total of 426 questionnaires out of 597 contacted were completed, resulting in a raw response rate of 71.4%. Due to missing responses, 85 cases were excluded so that 341 questionnaires were included for the final data analyses. Respondents consisted of 197 males (58.3%) and 141 females (41.7%). In terms of types of predominant disability, mobility issues (e.g., spinal code injuries, paraplegia) were the most common ($n = 160$), followed by visual ($n = 113$) and auditory disabilities ($n = 68$). The mean age of the respondents was approximately 44, ranging from 20 to 76. The average number of years respondents were disabled for was around 24. Most respondents (87.7%) reported a relatively lower household monthly income of \$2,000 and under, compared to the average Korean household monthly income of \$3,400. The majority of respondents (76.0%) had a "first-class" or "second-class" certificate of disability; both of these types meaning severely impaired. While these classes are determined by Korean government through evaluating an individual's level of disabilities, the criteria vary depending on the types of impairment. A total of 26.2% had a college/university or graduate education. Table 2 shows the descriptive statistics of the respondents' sociodemographic features.

Model Tests

This study used EQS 6.1 and SPSS 16.0 to test the four path models with various concepts using maximum likelihood estimation. Overall mean scores for those concepts were calculated and treated as variables to measure the latent factors (e.g., extraversion, motivations, constraints, negotiation, and participation). Then, a path model approach as SEM was used to assess hypothesized relationships between these variables (Raykov & Marcoulides, 2000). As it is well known, SEM is based on correlation and covariance matrices but model coefficients can be interpreted as casual effects using theoretical assumptions. With our research objective to compare multiple path models, this approach is advantageous because of the simplicity of its model estimation (Kline, 2005). Table 3 shows several statistics of each variable used in this study as well as correlation and covariance matrices.

Table 2

Sociodemographic Information

Items	Responses	Frequency	Items	Responses	Frequency
Gender	Male	197(58.3%)	Type of main disability	Mobility	160(46.9%)
	Female	141(41.7%)		Visual	113(33.1%)
Age	20s	41(12.0%)	Number of years with disabilities	Auditory	68(20.0%)
	30s	97(28.4%)		Below 11 years	88(26.0%)
	40s	94(27.6%)		11–20 years	71(21.0%)
	50s	62(18.2%)		21–30 years	55(16.3%)
	60s	33(9.7%)		31–40 years	64(18.9%)
	Above 70	10(2.9%)		41–50 years	40(11.8%)
Education level	Elementary school	30(8.8%)	Household monthly income	Above 50 years	20(5.9%)
	Middle school	55(16.1%)		– \$1,000	185(55.4%)
	High school	155(45.5%)		\$1,001–2,000	108(32.3%)
	College/university	81(23.8%)		\$2,001–3,000	23(6.9%)
	Graduate school	8(2.4%)		\$3,001–4,000	8(2.4%)
	Others	11(3.2%)		\$4,001–	10(3.0%)

Table 3

Correlation/Covariance Matrices and Several Statistics of Each Variable

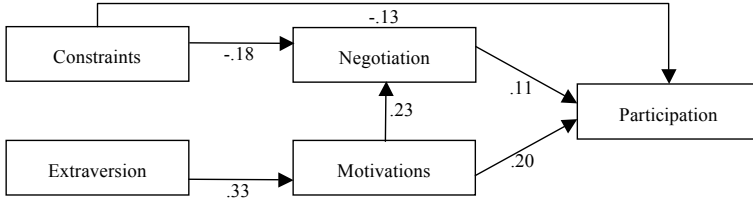
	Constraints	Negotiation	Motivations	Participation	Extraversion
Constraints	.411	-.063	.040	-.053	-.008
Negotiation	-.113*	.760	.099	.113	.155
Motivations	.091	.168*	.461	.096	.169
Participation	-.120*	.188*	.204*	.481	.083
Extraversion	-.018	.250*	.349*	.168*	.510
<i>Mean</i>	3.154	3.196	3.650	2.988	3.362
<i>S.D.</i>	.641	.872	.679	.693	.813
<i>Skewness</i>	-.265	-.154	-.560	.232	-.080
<i>Kurtosis</i>	.485	-.644	.759	.923	-.222

*p < .05

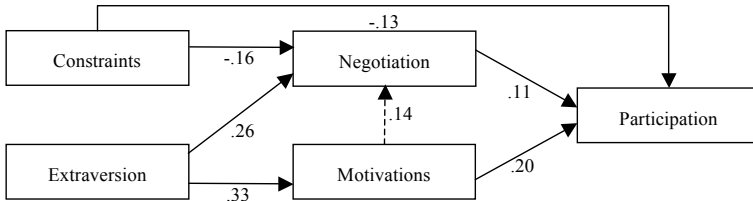
Covariances are in bold

In order to compare four hypothesized models, five different fit indices were adopted: the chi-square (χ^2) statistic, Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), Normed Fit Index (NFI), and Comparative Fit Index (CFI). According to Carmines and McIver (1981), a non-significant value of Chi-square (χ^2) suggests a good fit to the data. The RMSEA is considered adequate when its value is around 0.05 or less; a SRMR value that is less than 0.08 is also suggested as an acceptable fit. Hu and Bentler (1999) also noted that NFI and CFI values should be greater than 0.95 for a good fit. Figure 3 represents path statistics and fit indices of each model.

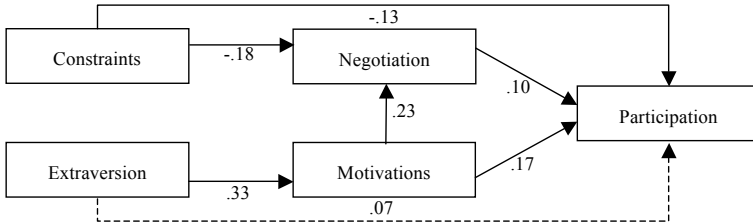
Model 1 ($\chi^2(4)=19.731, p<0.001; NFI=0.817; CFI=0.839; SRMR=0.060; RMSEA=0.108$)



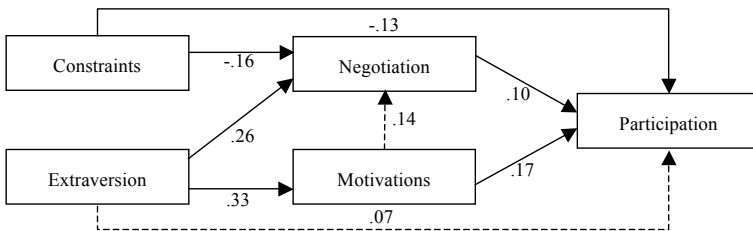
Model 2 ($\chi^2(3)=5.605, p=0.132; NFI=0.948; CFI=0.973; SRMR=0.030; RMSEA=0.051$)



Model 3 ($\chi^2(3)=17.927, p<0.001; NFI=0.834; CFI=0.848; SRMR=0.055; RMSEA=0.121$)



Model 4 ($\chi^2(2)=3.801, p=0.150; NFI=0.965; CFI=0.982; SRMR=0.025; RMSEA=0.051$)



Solid lines indicate significant paths at the level of 0.05.
Dotted lines indicate insignificant paths at the level of 0.05.

Figure 3. Path Statistics and Fit Indices of Competing Models

Model 1. All of the standardized path coefficients (β) were statistically significant. Those coefficients of the hypothesized paths between each observed variable were also consistent with the expected signs except for a path linking constraints to negotiation (H1-2, $\beta = -0.176$, $t = -2.449$). The trait of extraversion had a positive influence on motivations ($\beta = 0.332$, $t = 6.865$), supporting our hypothesis of H2-1. Insofar as the overall fit of the model is concerned, the chi-square value ($\chi^2(4) = 19.731$, $p < 0.001$), NFI (0.817), CFI (0.839), and RMSEA (0.108) did not meet the cut-off criteria except for the SRMR value (0.060). Therefore, the overall fit of Model 1 was not adequate. Our finding of the negative association between constraints and negotiation is different from previous studies. This indicates that level of negotiation efforts exerted by people with disabilities decreases as the degree to which they perceive constraints increases. While the unexpected result is more extensively explained later, this may stem from the different characteristics of the study population.

Model 2. An additional path from extraversion to negotiation (H 2-2) was inserted in Model 1. All β s were statistically significant excluding the standardized path coefficient linking motivations to negotiation (H3-1, $\beta = 0.135$, $t = 1.902$). The signs of the coefficients were consistent with prior expectations except for the path from constraints to negotiation (H1-2, $\beta = -0.162$, $t = -2.298$). As expected, extraversion was positively associated with negotiation efforts (H2-2, $\beta = 0.257$, $t = 3.803$). All of the fit indices ($\chi^2(3) = 5.605$, $p = 0.132$; NFI = 0.948; CFI = 0.973; SRMR = 0.030; RMSEA = 0.051) were acceptable, suggesting a good fit to the data.

Model 3. In order to identify the direct effect of extraversion on participation, a path between this trait and participation (H 2-3) was inserted in Model 1. All β s were significant aside from the path linking extraversion and participation (H2-3, $\beta = 0.074$, $t = 1.375$). Because none of the fit indices ($\chi^2(3) = 17.927$, $p < 0.001$; NFI = 0.834; CFI = 0.848; RMSEA = 0.121) satisfactorily met the cut-off criteria except for the SRMR (0.055), this model was not acceptable.

Model 4. This model included all hypothesized paths. The direct paths between extraversion and participation (H2-3, $\beta = 0.074$, $t = 1.347$) and between motivations and negotiation (H3-1, $\beta = 0.135$, $t = 1.902$) were not statistically significant. All fit indices ($\chi^2(2) = 3.801$, $p = 0.150$; NFI = 0.965; CFI = 0.982; SRMR = 0.025; RMSEA = 0.051) adequately met the cut-off criteria, thus this model was considered acceptable.

Model Comparison

Various fit indices suggested that Model 1 and 3 were not acceptable. Consequently, we attempted to compare Model 2 and 4, which revealed a good fit to the data. Model 2 was more parsimonious but Model 4 was preferred given its superior fit to the data. Wald tests were further performed to select a better model. Wald tests help researchers choose a better performing model by evaluating the effects of dropping free parameters (Schumacker & Lomax, 1996). The results of Wald tests ($\chi^2(1) = 1.804$, $p = 0.179$) indicated that the direct path linking extraversion to participation (H2-3) should be dropped from Model 4. Because the fit of Model 4 was not significantly improved even after deleting this path, Model 2 was eventually chosen as the final model. The results of this final model suggested that extraversion was not directly related to participation but indirectly associated with participation via negotiation efforts and motivations.

Discussion and Conclusion

The objectives of this study were first to construct predictive linkages between various concepts that comprise the constraints negotiation framework, and then investigate the importance of extraversion as a critical factor that determines participation in leisure activities. Unlike previous studies in this area, we employed a study population of individuals with physical disabilities. Compared to people without disabilities, this group is more likely to perceive leisure constraints as a major impediment to participation in such activities (Henderson et al., 1995; Smith, 1987). Consequently, the respondents in this study showed a distinctive pattern of the constraints negotiation process.

Overall, study results provided empirical evidence that extraversion is an important factor in the constraints negotiation process. Previous research using simple bivariate methods (e.g., Diener et al., 1984; Furnham & Heaven, 1999) reported that there was a positive relationship between extraversion and participation. However, this may not accurately represent the relationship between the two variables for our population of people with disabilities. Based on our final model (i.e., Model 2), extraversion was only indirectly associated with leisure participation via negotiation efforts and motivations. Provided that a highly extraverted person with physical disabilities cannot take part in a preferred leisure activity due to leisure constraints such as a lack of caregivers or inappropriate transportation, extraversion may not be a key explanatory variable that directly accounts for participation (H2-3). Accordingly, the extraversion trait of people with disabilities is likely to affect participation only through intermediate concepts such as motivations and negotiation efforts. This implies that leisure service agencies may need to prepare customized policies and management practices particularly for people with physical disabilities so they can be encouraged to overcome various leisure constraints.

It is also worth noting that there was no significant association between motivations and negotiation efforts in the constraints negotiation process (H3-1). This finding is inconsistent with the "balance proposition", suggested by Jackson et al. (1993). The balance effect means that an individual's decision to participate in desired leisure activities is dependent upon the relative strength of, and balance between, constraints and motivations. However, our study revealed that extraversion is likely to play a more important role in balancing constraints than motivations. People without disabilities are willing to participate in a specific leisure activity, when their motivations for the activity are sufficiently strong to overcome various constraints. For individuals with disabilities, however, the outcomes of internal and/or external stimuli (i.e., motivations) could be less important in the process of balancing constraints due to their impairments. Thus, the trait of extraversion is likely to serve as a more critical factor for them to determine leisure participation rather than their motivations.

Another finding is that the sign of the path coefficient between constraints and negotiation efforts was opposite to the expected outcome (H1-2), whereas the rest of the coefficients corresponded with prior expectations. This negative sign suggests that when people with disabilities face a greater level of leisure constraints

during their leisure pursuits, they are less likely to exercise negotiation efforts to participate in favorite activity. There can be several explanations for this finding. According to Son, Mowen, and Kerstetter (2008), the same predictive path from constraints to negotiation efforts was not statistically significant. The majority of respondents in their study were older, with a mean age of 63. Thus, their sample was more likely to include individuals with disabilities based on the fact that approximately 70% of people with disabilities in the United States are 65 and older (Burnett & Baker, 2001). Their results suggest that the association between constraints and negotiation efforts may vary depending on different population groups. As Son et al. indicated, the inconsistent relationship between the two concepts may also result from the measurement issues of negotiation efforts. Several dimensions of negotiation strategies frequently used (e.g., time management, financial adjustment) might not have exactly measured the characteristics of constraints individuals with disabilities commonly perceive.

Cultural differences could be another important factor that interacts with several variables such as constraints and negotiation efforts. According to Chick and Dong (2005), culture is a comprehensive concept that can embrace a series of structural constraints because such constraints develop from different cultural bases. It is known that Korean cultural practices have placed less importance on leisure and recreation activities and greater emphasis on labor and production activities (Lee & Tideswell, 2005). As a result, a number of Korean people with disabilities might be more frequently affected by non-supportive social attitudes and local cultural environments. Such insurmountable impacts of constraints may either discourage them from, or force them to abandon pursuing negotiation efforts. In order to validate the finding of a negative coefficient between constraints and negotiation efforts here, future research will be required.

Some study limitations are worth noting. First, there is a concern about generalizability based on the sample used in this study. We made use of the convenience sample in the capital area of Korea, and thus the respondents may not be representative of all Korean people with disabilities. Because this study employed a study population of individuals with physical disabilities, generalizability is limited to people with other impairment types. Further, in order to generalize our study findings to other countries, cultural specifics must be taken into account. Second, the face-to-face data collection method used may have caused some systematic errors that resulted from interviewers' biases even though they were thoroughly trained prior to the survey. Third, a cross-sectional study design could be another limitation. As Hubbard and Mannell (2001) pointed out, a longitudinal study using panel surveys is preferred to examine a better picture of how and when the constraints negotiation mechanism operates over time.

Finally, future research will be beneficial for including other personality variables, particularly neuroticism, which is the other dominant element of the 'Big Five' traits. This trait is known to be closely associated with anxiety, anger, and depression (Costa & McCrae, 1992). It will be a useful factor in understanding the constraints negotiation mechanism because an increasing number of people in contemporary society are likely to show the neurotic disposition, related to the lack of positive psychological adjustment and emotional stability (Judge, Higgins,

Thoresen, & Barrick, 1999). Further, people with various types of disabilities presumably perceive distinctive leisure constraints and manage negotiation efforts differently. Due to a relatively small sample size, this study only tested an aggregated model for people with physical disabilities. Taking into account several different subcategories of disabilities including intellectual and developmental disabilities will likely provide a more comprehensive understanding of the leisure decision-making processes individuals with disabilities experience.

In conclusion, this study attempted to identify the influence of the extraversion trait on the leisure constraints negotiation process using a group of individuals with disabilities. Findings from this study lead to important management implications. With the negative association between constraints and negotiation, this study suggests that diverse practices and policies which reduce the impacts of leisure constraints enable people with disabilities to facilitate their negotiation efforts. The leisure service delivery systems that assist in negotiating various constraints for people with disabilities would ultimately lead to their higher levels of leisure participation. Based on the result that motivations are most strongly affected by extraversion, commonly characterized by steady individual disposition, it may be beneficial for leisure service agencies and practitioners to arouse this group's latent desires for leisure participation. We hope that our findings will be a stepping stone towards a better understanding of the leisure constraints negotiation mechanism for the increasing population of people with physical disabilities.

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