



Physical activity and its determinants among adolescents with intellectual disabilities

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ABSTRACT

Physical inactivity is a global public health problem, and it has been linked to many of the most serious illnesses facing many industrialized nations. There is little evidence examining the physical activity profile and determinants for the vulnerable population such as people with intellectual disabilities (ID). The present paper aims to describe the regular physical activity prevalence and to examine its determinants among adolescents with intellectual disabilities in Taiwan. Participants were recruited from 3 special education schools in Taiwan, with the entire response participants composed of 351 primary caregivers of adolescents with ID (age 16–18 years). There were 29.9% ID individuals had regular physical activity habits, and the main physical activities were walking, sports, and jogging. There were only 8% individuals with ID met the national physical activity recommendation in Taiwan which suggests at least exercise 3 times per week and 30 min per time. In a stepwise logistic regression analysis of regular physical activity habit, we found that the factors of caregiver's educational level and preference toward physical activity were variables that can significantly predict ID individuals who had regular physical activity habit in their daily livings after controlling other factors. To maximize the positive effect of physical activity on people with ID, the present study suggests that it is needed to initiate appropriate techniques used for motivation to participate in physical activity for this population.

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1. Introduction

Physical inactivity is a global public health problem (Lamarre & Pratt, 2006), and it has been linked to many of the most serious illnesses facing many industrialized nations (Buller, 2006). According to World Health Organization (2002) reported that physical inactivity contributes to 2–3% of the global burden of disease and contributes to major direct economic costs, as well as indirect costs due to morbidity and lost productivity. Although the importance of increasing physical activity for the general population has been recognized in regular policy reports and recommendations of many effective health authorities (Institute of Medicine, 2002; Pate et al., 1995; U.S. Department of Health and Human Services, 1996; WHO, 1998, 2002, 2004). They consistently emphasized that physical activity can reduce the risk for many chronic diseases and conditions, it is associated with lower morbidity and mortality, and enhances functional status and quality of life. The measurement of physical

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activity, and of the factors influencing them, are important parts of health promoting efforts to address physical inactivity (Bauman, Phongsavan, Schoeppe, & Owen, 2006). Unfortunately, there is little evidence to examine the physical activity profile and determinants for the vulnerable population such as people with intellectual disabilities (ID). The present paper aims to describe the regular physical activity prevalence and to examine its determinants among adolescents with ID in Taiwan.

2. Methods

The Taiwan Health Promotion Program in Special Education Schools (THPPSES) is a study originally designed to initiate preventive health promotion model for school-age adolescents with intellectual disabilities (ID) in 2007–2008. Participants were recruited from 3 special education schools in Taiwan, with the entire response participants composed of 351 primary caregivers of adolescents with ID (age 16–18 years). We collected information on demographic characteristics (age and gender), disability condition (type and level), accompanied with Down syndrome, BMI, and regular physical activity (preference, prevalence and frequency) of adolescents with ID. Ethics approval was received from all the study special schools. Regular physical activity in this study was defined as leisure-time physical activity in daily living. It did not include the physical education class in school, the physical activities included most of the outdoor activities such as walking, jogging, sports, cycling, swimming, and dancing. Data were analyzed with SPSS 14.0, the main methods include number, percentage, mean, range and chi-square test to describe the participant characteristics and analyzed their relation to regular physical activity. Multivariate analysis of stepwise logistic regression method, odds ratio (OR) and 95% confidence interval (95% CI) were used to examine the determinants of regular physical activity implementation among adolescents with ID.

3. Results

Table 1 presents an overview of characteristics of the primary caregivers of adolescents with ID in this study, 69.2% were female, and the average age of the caregivers was 44.90 ± 7.41 years (range 14–80 years). There were 96.0% caregivers living with ID individuals, 39.6% were housewife, more than 80% of them were senior high school or less educational level, and more than half of the families' monthly household income was less than 40,000 New Taiwan Dollars (NTD).

Table 2 indicates that the characteristics of adolescents with ID, 60.3% were boys and the average age was 17 years (range 16–18 years). There were 64.1% of the study participants were ID solely while 35.9% were ID accompanied with other disabilities (multiple disabilities), and 10.2% ID individual had a Down syndrome as well. Among the ID cases, most of them

Table 1
Characteristics of primary caregivers of adolescents with ID.

Variable	Number	%
Gender (N = 344)		
Male	106	30.8
Female	238	69.2
Age (N = 326)	Mean = 44.90 ± 7.41 , range = 14–80	
≤30	13	4.0
31–40	42	12.9
41–50	223	68.4
>50	48	14.7
Living with ID individual (N = 347)		
No	14	4.0
Yes	333	96.0
Education level (N = 345)		
Primary school and less	40	11.6
Junior high school	108	31.3
Senior high school	139	40.3
College	36	10.4
University	22	6.4
Employment (N = 338)		
No (housewife)	134	39.6
Yes	204	60.4
Marital status (N = 344)		
Married	283	82.3
Other	61	17.7
Household monthly income, NTD (N = 307) (1 USD = 32 NTD)		
≥80,000	40	13.0
60,000–79,999	25	8.1
40,000–59,999	74	24.1
20,000–39,999	120	39.1
<20,000	48	15.6

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