

Environmental Barriers in Daily Life of Children with Special Needs and Their Family

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Background

- Participation in home, community, and society can be promoted by reducing environmental barriers encountered by children with special needs.
- The aim of this study is to **identify the impact and major type of environment barriers** perceived by parents of children with special needs in Taiwan.

Methods

- Invited parents with children aged 2-9 years to complete the Child and Adolescent Scale of Environment- Chinese version (CASE-C) to assess impact of environment factors.
- The CASE-C includes 18 items. Higher CASE-C scores indicate a greater impact of environmental problems. The 19th item is an open-ended question.
- Parents' qualitative answers of the 19th item were classified based on the ICF domains of environmental factors by content analysis.

Results

- The scores for the CASE-C indicated a median amount of environmental problems, as all of the scores were higher than 45 out of 100.
- Twenty parents identified a total of 36 environmental conditions, over half of the conditions pertained to the domain of e5 (55.5%).

Table 1
Participant characteristics

Variable	Participants (n=98)	Answer the 19 th item (n=20)
Gender (n)		
Male	66	11
Female	32	9
Age (n)		
2-6 years	60	11
6-9 years	38	9
Diagnosis (n)		
Cerebral palsy	38	7
Acquired brain injury	13	2
Developmental delay	16	4
Chromosomal disorder	17	4
Autism spectrum disorder	12	3
Congenital anomalies	2	0
Respondent (n)		
Mother	82	18
Father	16	2
Education level (n)		
Under high school	36	6
Specialist school	23	4
University	33	9
Institute above	6	1
Annual income (n)		
Under 55 million	38	6
55~100 million	38	8
100~180 million	16	4
180 million above	2	1

Note: There are 4 missing data for annual income in all participants; there is a missing data for annual income in answer 19th item group.

Table 2
Scores for CASE-C of children with special needs (n=98)

Scale/ Subscale	Scores (Means ± SD)
CASE - Total scale	46.220±16.509
CASE - assistance/attitude supports	45.691±27.605
CASE - family/community resources	45.967±13.762
CASE - physical design access problems	47.210±18.750

Table 3
Family indicate environment barriers

ICF environment factor	Mention frequency	content
e1 Products and Technology	8 	<ul style="list-style-type: none"> Most parents indicated the insufficiency of accessible facilities in public space, such as an unavailable parent-child toilets in the park, unsuitable height of the toilet, and a lack of step entrance. Most mother resigned from work for look after their children, resulting in big economic difficulties. They even can't burden the medical expenses and diaper charges.
e2 Natural environment and Human-made changes to environment	0 	None
e3 Support and Relationships	3 	<ul style="list-style-type: none"> Most parents complained the course explanation and terminology which therapists used is difficult to understand. Peers excluded to play with children with special needs.
e4 Attitudes	5 	<ul style="list-style-type: none"> Most parents indicated that people used unrespect vision and discourse make they feel uncomfortable. While taking the taxi, the driver was not friendly. Service attitude of professors in hospital was not very well.
e5 Services, Systems and Policies	20 	<ul style="list-style-type: none"> Information was unavailable and lack of integrated. People usually got the scattered and incomplete information, and did not know how and where to get information they need. It's difficult for parents and school to apply subsidy, because of many restrictions. The park was not available in all area. Some family need to find a place where children can play safely, very far away from their home. There was a lack of speech therapy in the community. Parents were not allowed to enter the therapy room while rehabilitation, so that parents cannot understand children's performance. While children transition to elementary school, the intervention services and resources will decrease rapidly. Children were hard to participate in class, because of the quota of people in special elementary school was insufficient and the professional competence of teacher was not enough. There were a lack of opportunity for children with special need to inclusion in mainstream schools, because of the low acceptance.

Discussion

- This is a **lack of integrated information platform** and parents did not know how and where to get information they need.
- The inaccessibility of the public facilities, such as park, building or public toilet.
- In Taiwan, early intervention services are provided for children less than 6 years of age. **Parents often feel nervous and helpless during their children's transition to elementary school**, due to rapid decreasing of intervention services and resources.

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