

## Assessment of Independence Levels to Children Physical Mobility Handicapped in Thi-Qar Rehabilitation Center

### تقييم مستويات الاستقلالية للأطفال المعوقين حركيا في مركز ذي قار للتأهيل

Ali Abdulreda Al-Rubaie\*

Dr. Arkan B.Naji \*\*

#### الخلاصة:

**الهدف:** تقييم مستويات الاستقلالية للأطفال المعوقين حركيا في مركز ذي قار للتأهيل.  
**المنهجية:** دراسة وصفية أجريت في مركز ذي قار للتأهيل للمدة من 1 تشرين الثاني 2014 ولغاية 15 نيسان 2015. اختيرت عينة غرضية "غير احتمالية" تكوّنت من (118) طفل معوق حركيا أعمارهم بين 9-16 سنة. الاستبيان وقد تم بناؤها وتتكون أداة الدراسة من جزئين. ويتضمن الجزء الأول خصائص المشاركين الديموغرافية من (العمر، والجنس، ومستوى التعليم، ... الخ). ويرتبط الجزء الثاني بالعوق الجسدي ذات الصلة ب (مستويات الاعتماد على الذات). تم تحديد موثوقية الاستبيان من خلال: دراسة تجريبية في حين تم تحديد صلاحية محتوى الاستبيان من خلال لجنة من الخبراء في هذا المجال، وجمع البيانات من 1 مارس إلى 15 أبريل 2015. وقد استخدم تحليل البيانات الإحصاء الوصفي ( التكرارات والنسب المئوية)، استنتاجي التحليل الإحصائي (معامل الارتباط واختبار مربع -chi).  
**النتائج:** أظهرت نتائج الدراسة إن أغلب الأطفال المعاقين من الفئة العمرية 15-16 سنة (34.7%)، من الذكور (50.8%)، ولديهم إخوة وأخوات 1-3 (59.3%)، مستمرين بالدراسة (55.9%)، الإعاقة أثرت على تقدمهم بالدراسة (78.8%)، ويمارسون هوايات معينة (76.3%)، أعلى نسبة مئوية لسبب الإعاقة الحركية للأطفال (69%) من الولادة، (29%) حوادث، (2%) أسباب مرضية أما مستويات الاستقلالية (57%) من عينة الدراسة لديهم استجابات متوسطة، في حين أن (24%) من الأطفال الاستجابات ضعيفة و(19%) استجابات جيدة. أما علاقة مستويات الاستقلالية مع المعلومات الديموغرافية للأطفال المعوقين فهناك علاقة ليست ذات دلالة إحصائية بين العمر، الجنس ومستويات الاستقلالية وهناك علاقة ذات دلالة إحصائية بين المستوى التعليمي، عدد الإخوة والأخوات، ممارسة الطفل المعوق لهوية أو لعبة معينة ومستويات الاستقلالية.  
**الاستنتاج:** واستنتجت الدراسة إن العجز يؤثر على مستوى الاعتماد على الذات.  
**التوصيات:** أوصت الدراسة برعاية الأطفال المعاقين وتقديم الدعم المالي والمعنوي لمقدمي الرعاية لهم من قبل الدولة.

#### Abstract:

**Objective:** To assess of Independence Levels to Physical Mobility Handicap children in Thi-Qar Rehabilitation center.

**Methodology:** Descriptive study was conducted at in Thi- Qar Rehabilitation Center through the period from November 1<sup>st</sup>, 2014 through April 15<sup>th</sup>, 2015 on children with physical mobility handicap age 9-16 years old. The questionnaire has been constructed after extensive review of available literature and related studies. The study instrument consists of two parts. The first part includes participants' demographic characteristics of (age, gender, level of education, ... etc). The second part is related to Physical Mobility Handicap -related (Independence Levels) Reliability of the questionnaire is determined through: pilot study while the content validity of the questionnaire was determined through a panel of experts in the field; and collected data from March 1<sup>st</sup> to April 15<sup>th</sup> 2015. The analysis of the data was used descriptive statistics (frequencies, percentages), inferential statistical analysis (correlation coefficient and chi- square test).

**Results:** The results indicate shows that most of the study subjects are within 15-16 years old (34.7%), males (50.8%), show that the majority of the study sample are have 1-3 number brothers and sister (59.3%), continue their study (55.9%), their education affected by handicap (78.8%), and they experience a hobbies (76.3%), shows that the percentage of mobility handicapped children cause (69%) was birth, (29%) Accident, (2%) Pathologic cause and Independence Levels responses (57%) of the study sample responses have a fair, while (24%) of children responses have a poor and (19%) good responses. there is a non-significant relationship between the study sample child age, gender and their independence levels and there is a significant relationship between the study sample their independence levels with their child educational Stage, number of brothers and sisters, and hobbies.

**Conclusion:** The study concluded that the disability affects the independence levels in children

**Recommendations:** The study recommended to give more care of handicapped children and to provide financial and moral support to caregivers by the State.

**Keywords:** Children, mobility, handicap, Independence Levels.

\*MS Academic Community Health Nursing Specialist, High school of midwifery and obstetrics / Thi-Qar Health Government.

\*\* PhD. Prof. and Academic supervisor, Department of community health Nursing, College of Nursing/ University of Baghdad.

E- mail: [aliabedalredha@yahoo.com](mailto:aliabedalredha@yahoo.com)

## **INTRODUCTION:**

Mobility handicap; caused by a malfunction of the nerves, muscles, bones, joints, which leads to loss of capacity Kinetics of the body as a result of amputations, spinal cord injuries, muscular dystrophy relaxant and rheumatism<sup>(1)</sup>. Person who suffers from a lack of physiological, whether genetically or acquired preclude his work or to take its destiny in hand or preclude satisfy his basic needs commensurate with the age group that passes by. Chronic illness that affects a person becomes or psychological consequence is unable to compete with their peers without handicap <sup>(2)</sup> . Also known as handicap inherent bug for a long time that will affect the physical capabilities of the handicap or psychological problems about what work can be done<sup>(3)</sup> . Physical mobility handicapped everyone loses part or all of his abilities kinetic, muscle of his body genetically, pathogenic or accident, may be accompanied by other sensory handicap or mental called dual or multiple handicap<sup>(4)</sup> .There are multiple factors and lead to a variety of physical mobility handicap they are mostly either be congenital and hereditary factors and can either be acquired factors; accidents; or illnesses that occur to the individual during the years of his life, and vary in severity and the extent of the impact caused by the change in the performance of an person with handicap physical<sup>(5)</sup>.

With the increasing number of handicapped people in the world is remarkably large, particularly in recent times of the modern era, and after a lot of demographic changes in life and the prevalence of health factors that affect the pregnant mother before and during birth, causing obstruction, emerged here great attention to the categories of disabilities at all levels, and the greater the disability rate in the world today to the equivalent of 13.5% of the total world population at the beginning of the twentieth century and atheist, it is possible that up to 15%. Based on this number of disabled people in the world today up to 900 million people will be more than 80% of them from Third World countries and developing countries<sup>(6)</sup> .There are many reasons for handicap, which occurred before the birth, including the reasons and factors facilities for the process of birth and other factors occurred after birth, in addition to genetic factors that lead to mental and physical handicap <sup>(7)</sup>.

## **OBJECTIVES**

To assess of Independence Levels to children Physical Mobility Handicapped in Thi-Qar Rehabilitation center.

## **METHODOLOGY**

Descriptive study was conducted at in Thi- Qar Rehabilitation Center through the period from November 1<sup>st</sup>, 2014 through April 15<sup>th</sup>, 2015 on children with physical mobility handicap age 9-16 years old.

**The Study Instrument:**

The questionnaire has been constructed after extensive review of available literature and related studies. The study instrument consists of two parts. The first part includes participants' demographic characteristics of age, gender, level of education,...ets. The second part is related to Physical Mobility Handicap - related Independence Levels and tool used to identify potential items for the study of instrument. It is adopted from International Lab our Organizations (ILO).

**Data Collection:**

The demographic characteristic were obtained through a direct interview with each child with physical mobility handicap the study using, adopting and developing questionnaire form (Arabic version).The data collection at Thi-Qar rehabilitation center, process had been performed from 1<sup>st</sup> March until 1<sup>st</sup> April 2015. An approximately (15-20) minutes were spent with each responded to complete the filling of the questionnaire format. Reliability of the questionnaire is determined through: pilot study which has been (0.823) as well as the validity determined through a panel of experts in the field. The demographic characteristic was obtained through a direct interview with each mobility handicapped child in the study using, adopting and developing questionnaire format.

**Data analysis:**

Data was analyzed by using Frequency and percentage, chi square. The P. value indicates that the degree of significance was ( $P \leq 0.05$ ) to just significant result, Cut of point=0.66. m.s = 1-1.66 = low, m.s =1.67-2.3=middle and m.s > 2.4= high mean of score.

**RESULTS:**

**Table (1) Distribution of demographic data for study sample**

Demographic data	Items	F	%
Age	9-10	12	10.2
	11-12	33	28.0
	13-14	32	27.1
	15-16	41	34.7
	<b>Total</b>	<b>118</b>	<b>100%</b>
Gender	male	60	50.8
	female	58	49.2
	<b>Total</b>	<b>118</b>	<b>100%</b>
Number brother and sister	0	1	0.9
	1-3	70	59.3
	4-6	43	36.4
	$\geq 7$	4	3.4
	<b>Total</b>	<b>118</b>	<b>100%</b>
Educational level	Not study	52	44.1
	continuous study	66	55.9

	<b>Total</b>	<b>118</b>	<b>100%</b>
<b>Educational Effect by handicap</b>	yes	93	78.8
	No	25	21.2
	<b>Total</b>	<b>118</b>	<b>100%</b>
<b>hobby</b>	yes	90	76.3
	no	28	23.7
	<b>Total</b>	<b>118</b>	<b>100%</b>

F= Frequency %= percentage

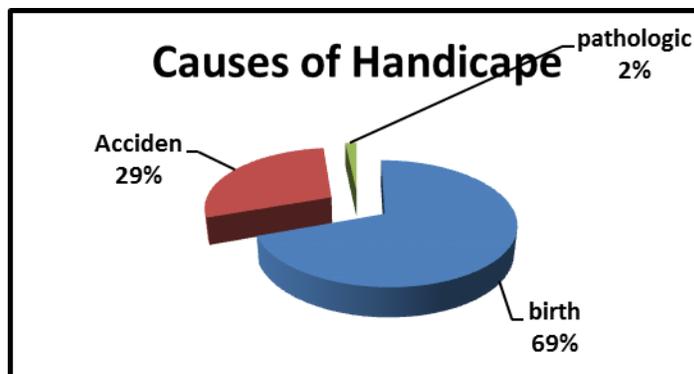
Table 1 shows that most of the study subjects are within 15-16 years old (34.7%), males (50.8%), show that the majority of the study sample are have 1-3 number brothers and sister (59.3%), continue their study (55.9%), their education affected by handicap (78.8%), and they experience a hobbies (76.3%).

**Table (2) distribution of the study sample by their responses to cause of handicap data**

	Types of handicap	F	%
Cause of handicap	Birth	82	69.5
	Accident	34	28.8
	Pathological	2	1.7
	<b>Total</b>	<b>118</b>	<b>100%</b>

F= Frequency %= percentage

Table 2 shows that (69.5%) of the study subjects are disabled from birth.



**Figure:1: Percentage of Causes the handicap**

Figure 1 shows that the percentage of MHC children cause (69%) was birth, (29%) accident, (2%) pathologic cause.

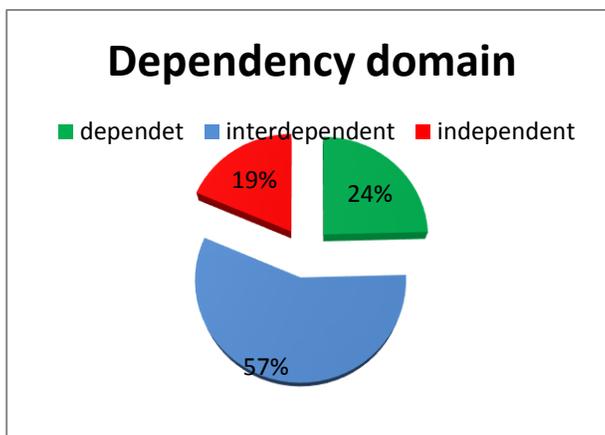
**Table (3) distribution of study sample by their responses to the dependency domain**

Main domain	Rating	F	%	Cumulative Percent	m.s.	Assess
Dependency	independent	22	18.6	18.6	2.0	fair

<b>interdependent</b>	67	56.8	75.4
<b>dependent</b>	29	24.6	100
<b>Total</b>	118	100	

F= Frequency%= Percent = participants Cut-off-point: 1-1.66 = poor; 1.67-2.3 = fair; > 2.4 =good independent =poor responses interdependent =fair responses dependent =good responses, m.s.= mean of scores.

Table 3 shows that the majority of the overall study subjects responses to the dependency domain items were fair (56.8%), with mean of scores ranging from (1.67-2.33).



independent =poor responses interdependent =fair responses dependent =good responses.

**Figure 2: distribution overall responses to the dependency domain**

Figure (2) shows that (57%) of the study sample responses have a fair, while (24%) of children responses have a poor and (19%) good.

**Table (4) correlation between independence levels and child age.**

Demographic data	Rating	Overall independence levels			Chi.Sq	D.F	Sig
		independent	interdependent	dependent			
<b>Age</b>	9-10	0	11	1	7.557	8	0.478 N.S
	11 - 12	5	25	3			
	13 - 14	2	26	4			
	15 - 16	3	28	10			

NS=(p-value > 0.05), S=(p-value < 0.05), HS=(p-value < 0.01)D.F= Degree of freedom. Chi.Sq=Chi-Square

Table (4) shows that there is a non-significant relationship between child age the study sample and their independence levels at p-value more than 0.05.

**Table (5) correlation between independence levels and gender**

Demographic data	Rating	Overall independence levels			Chi.Sq	D.F	Sig
		independent	interdependent	dependent			
<b>Gender</b>	<b>Male</b>	6	48	6	2.767a	2	0.251 N.S
	<b>Female</b>	4	42	12			

NS=(p-value > 0.05), S=(p-value < 0.05), HS=(p-value < 0.01)D.F= Degree of freedom. Chi.Sq=Chi-Square

Table 5 indicates that there is a non-significant relationship between the overall independence levels domain and the gender at p. value more than 0.05.

**Table (6) correlation between independence levels and educational data to child**

Educational data		Overall independence levels			Chi.Sq	DF	Sig
		independent	interdependent	dependent			
<b>Educational Stage</b>	Not study	3	36	13	7.196a	2	0.027 S
	Continuous Study	7	54	5			

NS=(p-value > 0.05), S=(p-value < 0.05), HS=(p-value < 0.01)D.F= Degree of freedom. Chi.Sq=Chi-Square

Table (6) shows that there is a significant relationship between the study sample their independence levels with their child educational Stage at P.value less than 0.05.

**Table (7) Correlation between independence levels and number of brothers and sisters to child.**

Number brothers and sisters		Overall independence levels			Chi.Sq	D.F	Sig
		independent	interdependent	dependent			
<b>Number brothers and sisters</b>	Not found	1	.8	.8	12.559a	6	0.014 S
	One to three	70	58.8	60.2			
	Three to six	43	36.1	96.6			
	More than six	4	3.4	100.0			

NS=(p-value > 0.05), S=(p-value < 0.05), HS=(p-value < 0.01)D.F= Degree of freedom. Chi.Sq=Chi-Square

Table 7 shows that there is a significant relationship between the study samples their independence levels with their number of brothers and sisters at P.value less than 0.05.

**Table (8) correlation between overall independence levels and hobby of child**

recreation data		Overall independence levels			Chi.Sq	D.F	Sig
		independent	interdependent	dependent			
<b>Hobby</b>	Yes	9	72	9	8.597a	2	0.014 S
	No	1	18	9			

NS=(p-value > 0.05), S=(p-value < 0.05), HS=(p-value < 0.01)D.F= Degree of freedom. Chi.Sq=Chi-Square

Table 8 shows that there is a significant relationship between the study sample demographic data and their independence levels except such as, hobby at p. value less than 0.05. While high significant with types of hobby at P. value less than 0.05.

**DISCUSSION:**

Analysis of the demographic characteristics had revealed that most of sample were 15-16 years old (34.7%), (50.8%) were male of the study sample have 1-3 brothers and sister also (55.9%) of the sample continue their study,(78.8%) of them their education was affected by handicap and (76.3%) of the sample they could experience present study are in agreement with the study of Isakov, 2007 that supportive evidence that age, gender, can affect the associated outcomes of such car. Such finding can be interpreted in a way that age 15-16 years, male; well education levels<sup>(8)</sup>.

The present study was in agreement of Tiger, 2010, which reported that which mobility handicapped children feeling of security. Patient with less number of brothers and sisters, experience a hobby <sup>(9)</sup>. Increase the number of brothers, sisters adversely affect the quality of care provided by parents of handicapped children and thus increase the dependent on others; We note that children handicapped who do not practice a certain hobby, playing increased dependent on others if compared with others who engage in some games or hobbies which shows that for hobbies, games played by a handicapped child a big role in easing the dependent on others burdens and even his health. Also present study found that handicap has an affect the continuation of the study of the child and that, partly due to commodity.

The majority of the study subjects responses to the dependency domain items were interdependent (56.8%), with mean of scores ranging from (1.67-2.33). Statistical analysis, shows association between disability dependency with others was found to be statistically significant, the study shows overall mean scores were more in the study group significantly different scores were observed among the study group. This is consistent with study done by Shephard, 2011, which proved that there is a statistically significant relationship between disability and dependency of child. The handicapped child dependent on others; by type of handicap; the daily functions more degree of severe disability was improved reliability on others more at the same time when a disabled child he cannot carry out his functions for simple daily the dependent on others increasingly there are correlation between the percentage of reliability of the child to other dependent on others the more higher reliability on others increased with the dependent on others <sup>(10)</sup>.

The majority of the study subjects have correlation between independence levels and demographic data for child age shows that there is a non-significant relationship between the study sample child age and their dependent on others at p-value more than 0.05. This is consistent with study Sporer et al, 2007 who conducted in Beijing, which proved that there is a statistically non significant relationship between age and dependent on others in children <sup>(11)</sup>.

This shows that age is not effect to child with a mobility handicap on the independence levels, that dependent on others of the handicapped child nine years is no different from the problems suffered by child 16-year-old.

The majority of the study subjects have association between independence levels and demographic data for child gender shows that there is a not-significant relationship between the study sample child gender and their independence levels at p-value more than 0.05. This is consistent with study of Rimmer and Braddock, 2012. Conducted in Beijing, which proved that there is poor relationship between gender, independence levels in children the study shows that gender is not effect to child with a mobility handicap on the

independence levels, that independence on others suffered by handicapped children male are the same as the male suffered by female<sup>(12)</sup>.

The majority of the study subjects correlation between overall independence levels and demographic data for child education stage shows that there is a significant relationship between the study sample child educational stage and their independence on others at p-value less than 0.05. This is consistent with study Rimmer and Braddock, 2012, which proved that there is a statistically significant relationship between educational stage, dependent on others of the children mobility handicapped<sup>(12)</sup>, the study shows that education stage for mobility handicapped children have an effect on the independence levels, this problems is tougher for those who does not study.

Children handicapped Continuation study problems less than others who have abandoned the study because the disabled find in the study to prove its existence as a human being like the rest of normal children, as well as possible that occupied by the study and the preparation of scientific materials thinking about disability and the problems which have, thus dependent on others and of a disabled one who does not study. The majority of the study subjects have correlation between independence levels and demographic data for child; number of brothers and sisters shows that there is a significant relationship between the study sample children; Number of brothers and sisters and their independence levels at p-value less than 0.05. This shows that the number of brothers and sisters; effect on the independence levels Whenever the number of brothers and sisters in the family, parents decrease provide care for handicapped thus no his dependent on others in daily functions. This results are supported by study Botto et al.,2010, The findings depict that more the number of children in the family, higher is the chance of having independence levels disorder.

The association was found to be statistically significant in the case group with an OR= 0.30 (95% CI= 0.1-0.83 with C2 =6.69 p-value of 0.009)<sup>(13)</sup>. These findings are in agreement with those of Verghese and Baig who found prevalence to be (8.6 %) in larger families as compared to (5.2%) in smaller families<sup>(14)</sup>.

This could be due to the fact that less individual attention is paid to the child with special needs. Due to other pressing concerns, the parents may not be aware of the child' dependence levels needs and any deviant behavior is either not noticed early, or ignored and non trained the handicapped children to do daily functions. This show that the number of brothers and sisters to handicapped children impact on the independence levels, When Increase the number of brothers and sisters in the family decreased care by parents to handicapped children thus note affect his independence levels.

The majority of the study subjects have correlation between independence levels and demographic data for hobby of handicapped children there is a significant relationship between the study sample and hobby at p. value less than 0.05. This study agree with the result of Trost et al., 2012, who showed that there are significant relationship between the independence levels and practice the children with mobility handicapped a particular sport or hobby, it appeared that there are significant relationship between hobbies handicapped child independence levels; the majority of study sample of children mobility handicapped (68%) of those who practice a particular sport or hobby psychosocial problems less than others who do not practice any sport or hobby<sup>(15)</sup>. This indicates that independence levels

of children with mobility handicap who have a hobby or a particular game to be better than who do not have hobbies.

## CONCLUSION

The study concluded that the disability affects the independence levels in children.

## RECOMMENDATIONS

The study recommended the care of handicapped children and to provide financial and moral support to caregivers by the State.

## REFERENCES:

1. Allen M & Barrett D. Psychosocial Rehabilitation: Hope, Change, and Recovery,(2010),P 54. Available at: <http://www.who.int/bulletin/volumes/87/5/09-057067/en/index.html> (Accessed at: 18-1-2012).
2. Barbeito C, Jack p.: Nonprofit compensation and Benefit Practices, New York, John Wiley & Sons Inc, 1998 Gathwala G, Gupta S; family Burden in Mentally Handicapped children, *Indian J comm. Med*,(2014),P.P 215-231.
3. Bernard R, Clare S: Breakthrough thinking for NPOs, USA, Jossey Boss,(2012),P.P 90-98.
4. Rosano A, Botto LD, Olney RS, Khoury MJ, Ritvanen A, Goujard J, et al.: Limb defects associated with major congenital anomalies: clinical and epidemiological study from the International Clearinghouse for birth defects monitoring systems. *Am J Med Genet*, (2012),Vol.93(1),P.P 110-116
5. William L. Heward O.: Exceptional Children, Forth From: Tiger Tiger (2013-03-05) 17:16:20(According to usage descending order) Edition, Macmillan Publishing, New York,(2014).
6. Alfaheed K: The disabled , the responsibility of governments, international and non- governmental organizations, *Journal Al sakena*, (Friday, April 10, 2015) Rights of the disable - sakena
7. Singhi PD, Goyal L, Pershad Singhi S, Walia BNS: Psychosocial problems in the families of disabled children. *British J Med psychology*, (2008). Vol. 3(5), PP.287-294.
8. Isakov E.: Mobility handicap of children and psychosocial problems. *Disabil Rehabil*. (2007),Vol.19(27),P.P 272–277.
9. Tiger. T: Exceptional children: According to usage descending order, First Edition, Macmillan Publishing, New York, (2014)P 8.
10. Shephard RJ.: mobility handicap among children and dependency for others: Implications for the individual and for society. *Scand J Rehabi Med.*, (2011),Vol. 23(2), P.P 51-59.
11. Sporner ML, Fitzgerald SG, Dicianno BE, et al.: Psychosocial impact of mobility handicap among children, *Rehabilitation Beijing* ,(2007),P.P 34 -51.

- 12.** Rimmer JH, Braddock D.: Health promotion to physical and psychological for children with physical mobility disabilities: An emerging national priority. *Health Promotion*, (2012), Vol.16(4), P 220.
- 13.** Botto LD, Rosano A, Olney RS, Khoury MJ, Ritvanen A, Goujard J, et al.: Limb defects associated with major congenital anomalies: clinical and epidemiological study from the International Clearinghouse for birth defects monitoring systems. *Am J Med Genet*, (2010), Vol.93(1), P.P 110-116.
- 14.** Verghese A, Beig A.: Psychiatric Disturbance in Children- An Epidemiological Study. *Indian J.Med Res*, (October 2014), Vol. 62(10), P.P 1538-1542.
- 15.** Trost SG, Owen N, Bauman AE, et al.: Correlates the psychological state of children with upper, lower activity. *Sports Exercise. Limbs handicapped participation in India*, (2012), P 51.