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Childhood Disability among Students Population in Dubai, School-based Screening Strategy, Dubai, UAE, 2016

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Abstract

Background: Disability is a health problem of public health concern. Screening procedures are an important part of the assessment process to identify children and youth who have disabilities. However, such procedures must be used with care as they provide only a preliminary sign that a child has a disability.

Objectives: This study is aiming at screening of childhood disability, physical, mental, developmental and others, among students population at school facilities in Dubai. **Methodology:** The screening was carried out at private schools facilities in Dubai for the period 2015-2016. All students population at private school facilities in Dubai (170) at both (Diera side and Bur Dubai Side) were included. Schools were screened for identification of disability. About 266000 students were approached through conducting comprehensive routine annual medical examinations by school physicians, revising students Medical records, and utilizing diagnostic reports provided by specialist doctors and hospitals.

Results: The study revealed that about 3.2% of total student's population in private schools in Dubai are suffering from some kind of disability (4.77% of total Emirati, and 2.99% of total expatriates). Learning disabilities was among the highest prevalent cause of disability followed by visual impairment and hyperactivity: 1.7%, 0.38% and 0.36 respectively; Regarding physical disability, 0.13 % of the total students population at private schools in Dubai were having some kind of it, and again it is more prevalent among UAE nationals (0.19%) compared to other expatriate nationalities (0.12%).

Conclusion: Functional and structural impairments and disabilities among Dubai school population at private schools facilities showed alarming prevalence. This raises many questions in terms of applying further tools for further identification as well as the need for early interventions and early rehabilitation services for better correction. It is recommended to apply well structured and competently operated national screening program at earlier ages for addressing both identification and intervention/ rehabilitation issues.

Keywords: Childhood disability, student population, School screening, Dubai 2016

Conflict of interest: The authors declare that they do not have any conflict of interest.

Introduction

Screening procedures are an important part of the assessment process to identify children and youth who have disabilities. However, such procedures must be used with care, as they provide only a preliminary sign that a child has a disability.¹ Most disabilities with a clear medical basis are recognized by the child's physician or parents soon after birth or during the preschool years.

In contrast, the majority of students with disabilities are initially referred for evaluation by their classroom teacher (or parents) because of severe and chronic achievement or behavioral problems. There is evidence that the prevalence of some disabilities varies by age. The high-incidence disabilities such as learning disabilities and speech-language disabilities occur primarily at the mild level. In mild disabilities, there are no clear demarcations between those who have and those who do not have the disability, and there is

a need to identify mild disabilities because they may constitute formidable barriers to academic progress and significantly limit career opportunities. Problems with the current classification system include stigma to the child, low reliability, poor correlation between categorization and treatment, obsolete assumptions still in use in treatment, and proportionate representation of the different classes.^{2,3}

Intellectual disability along with other mental disorders and epilepsy are highly stigmatizing. Stigma attached to hearing impairment has also been found. Some researchers have identified this issue and have tried to address it through their research.⁴⁻⁹

The World Health Organization (WHO) estimates that worldwide, around 15 million children aged below 15 are handicapped by vision due to uncorrected refractive disorders! The WHO estimated that in 2004, 275 million people were handicapped because of compromised hearing and 80% of these people lived in low- and middle-income countries. Recently published results show that between 2% and 8% people have visual problems and around 6% have hearing disabilities in countries with limited public health-care systems. In many low- and middle-income countries, the testing of children's senses is not part of the country's free primary health-care system. As a result, children with compromised sight or hearing may be poorly equipped for the challenges of life. Even though expenses for glasses and hearing aids may be challenging and for many, impossible to cover, the knowledge of any existing handicap is important to help these children have access to an education.¹⁰⁻¹⁷

Previous studies on the situation in Dubai and Dubai private schools couldn't be located.

Objectives

This study is aiming at screening of childhood disabilities, physical, mental, developmental and others, among students population at school facilities in Dubai

Methodology

The screening was carried out at private schools facilities in Dubai for the period 2015-2016. All students population at private school facilities in Dubai (170) at both (Diera side and Bur Dubai Side) were included. Schools were screened for identification of disability. About 266000 students were approached through conducting comprehensive routine annual medical examinations by school physicians, revising students Medical records, and utilizing diagnostic reports provided by specialist doctors and hospitals.

Results

The study revealed that about 3.2% of total student's population in private schools in Dubai are suffering from some kind of disability (4.77% in Emirati, and 2.99 in Expatriates), and about 6.3% of total Emirati males at private schools in Dubai were diagnosed with one of disabilities as shown by Table Number (1).

Nationality	Gender	Total students	Total disabilities	%
UAE	M	15699	995	6.3
	F	14330	437	3.1
	Total	30029	1432	4.77
Expatriates	M	121247	4617	3.8
	F	115067	2465	2.1
	Total	236314	7082	2.99
Grand total		266343	8514	3.2

Table 1: Total disabilities among private school students of Dubai according to nationality and gender

Figure 1 shows the distribution of the disabilities among private schools of Dubai according to the type of the disability. Current study showed that learning disability was among the highest prevalence of disability followed by visual impairment and hyperactivity (1.7%, 0.38% and 0.36) respectively.

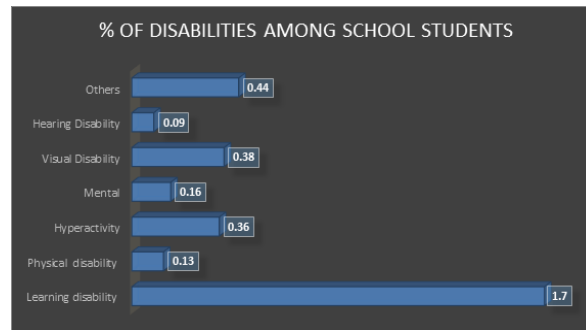


Figure 1: Disabilities among private school students of Dubai according to the type

Table 2 shows the distribution of the learning disabilities according to nationality and gender.

Table 2: Learning disabilities among private school students of Dubai by nationality and gender

Nationality	Gender	Total students	Learning disability	%
UAE	M	15699	578	3.7
	F	14330	236	1.7
Expatriates	M	121247	2183	1.8
	F	115067	1387	1.2
Total		266343	4384	1.7

This study reflected that about 0.13 % of total students population at private schools in Dubai were having some kind of physical disability and again it is more prevalent among UAE nationals comparing to other expatriate nationalities 0.19 % among UAE versus 0.12% among Expatriate as appeared in table (3).

Table 3: Physical disabilities among private school students of Dubai by nationality

Nationality	Gender	Total students	Physical disability	%
UAE	M	15699	37	0.24
	F	14330	20	0.14
Total		30029	57	0.19
Expatriates	M	121247	158	0.13
	F	115067	120	0.1
Total		236314	278	0.12
Grand total		266343	335	0.13

It has been shown that Hyperactivity disability among private school students in Dubai was 0.36%. It is about 0.64 among UAE males at private schools in Dubai and 0.16% of UAE females, while 0.56% of expatriate male at private schools in Dubai and 0.13 of expatriate females at private schools in Dubai. As shown in table (4).

Table 4: Hyperactivity among private school students of Dubai by nationality and gender

Nationality	Gender	Total students	Hyperactivity	%
UAE	M	15699	101	0.64
	F	14330	23	0.16
Expatriates	M	121247	682	0.56
	F	115067	144	0.13
Total		266343	950	0.36

In relation to mental disabilities at private schools in Dubai, the study revealed that about 0.25% of total male and 0.1 of total UAE females were having mental disability and 0.2 of expatriate male and 0.11 of expatriate females were shown to having mental disability. as appeared in table (5).

Table 5: Mental disability among private school students of Dubai by nationality and gender

Nationality	Gender	Total students	Mental	%
UAE	M	15699	39	0.25
	F	14330	15	0.1
Expatriates	M	121247	246	0.2
	F	115067	127	0.11
Total		266343	427	0.16

Concerning visual impairment among private schools students in Dubai, the study concluded that about 0.82% of UAE males and 0.64 % of UAE females were having visual impairment while it was 0.42% of expatriate male and 0.25% of expatriate females were having visual disability among Dubai private schools students populations. As shown in table (6).

Table 6: Visual disability among private school students of Dubai according to nationality and gender

Nationality	Gender	Total students	Mental	%
UAE	M	15699	39	0.25
	F	14330	15	0.1
Expatriates	M	121247	246	0.2
	F	115067	127	0.11
Total		266343	427	0.16

Table (7) in this study revealed that about 0.18% of UAE males and 0.15 of UAE females were having hearing disability among private schools students populations while it was about 0.08% of expatriate male and 0.08% of expatriate females shown hearing disability.

Table 7: Hearing disability among private school students of Dubai by nationality and gender

Nationality	Gender	Total students	Hearing Disability	%
UAE	M	15699	28	0.18
	F	14330	21	0.15
Expatriates	M	121247	97	0.08
	F	115067	93	0.08
Total		266343	239	0.09

Current study reflected that about 0.53% of total UAE males and 0.22% of UAE females have one of developmental disabilities like (Autism, Down syndrome, Speech delay, Dwarfism and others, while about 0.62% of expatriate males and 0.27% of expatriate females were shown to have one of developmental disabilities among private schools population in Dubai as appeared in table (8).

Table 8: Other disabilities (Autism, ADHD, down syndrome, dwarfism, speech delay, developmental delay) among private school students of Dubai by nationality and gender.

Nationality	Gender	Total students	Others	%
UAE	M	15699	83	0.53
	F	14330	31	0.22
Expatriates	M	121247	748	0.62
	F	115067	309	0.27
Total		266343	1171	0.44

Discussion

The study revealed that about 3.2% of total student's population in private schools in Dubai suffering from some kind of disabilities. This figure is less than other figures shown by U.S. Department of Education, 2004–05 where 5.7% of the nation's K–12 students had disabilities;18 and it is almost similar to disabilities among UAE nationals at private schools in Dubai which was almost equal to 4.7%.

The study showed that hearing disability among private school students in Dubai was 0.09%. Numbers found in other studies, like the study done by Blanchfield, et. al., refer to that as many as 738,000 individuals in the U.S. have severe to profound hearing loss, almost 8% of which are under the age of 18.19,20

Concerning visual disability, current study showed about 0.38 of total students population at private schools in Dubai have got some visual disability (Impairment), while one Indian study which enrolled 1123 students found that low vision (visual acuity

< 20/60) in the better eye was observed in 31 (2.9%) children, and blindness (visual acuity <20/200) was observed in 10 (0.9%) children.21

It has been identified that about 0.16% of total private school students in Dubai were having some mental disorders or disabilities. This figure is much less than other figures identified by other studies. Anxiety/ depression disorder prevalence was 10.28%, age range was 9-18 years. The reasons given for being anxious were poor self image, fear of death, repeated physical and sexual abuses by their care givers and other adults.22 Learning disability was the major associated comorbid disorder (18.68%). Generalized anxiety was the most common type of anxiety disorder identified (32.97%). Anxiety disorders are debilitating chronic conditions.

The study concluded that about 0.36% of the total students at private schools in Dubai were suffering from hyperactivity disability. This figure is quite less than other figures identified by other studies. These figures equate to 5.1%.23-27

Regarding physical disability, the study showed about 0.13 % of total students population in Dubai private schools are having some kind of physical activities. This figure is much less than other figures shown by other studies. For example, it was much more prevalent in Ireland and counted for about 2.8% of the total students at the age 12-15.28

Concerning learning disability, the study concluded that about 1.7% of total private school students in Dubai were having some degree of learning disability. This figure is less than other figures in USA which showed that about Twelve percent of the respondents cited having a learning disability and 8 percent of the parents surveyed had a child with a learning disability.29

Current study showed that about 0.44% of total student population at private schools in Dubai were having developmental disability (autism, down syndrome) which was less than what has been mentioned in other studies which conducted in India to determine the prevalence of learning disabilities in school children and has been reported developmental disabilities to be 3-10 per cent among students population.30

Conclusion

Functional and structural impairments and disabilities among Dubai school population at private schools facilities showed alarming prevalence. This raise many questions in terms of applying further tools for further identification as well as raising questions on early interventions and early rehabilitations for better corrections. It is recommended to apply well structured and competently operated national screening program at earlier ages for addressing both identification and intervention/ rehabilitation issues.

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