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Adolescents' Promotive, Preventive and Therapeutic Healthcare Services, Trends and Determinant, Dubai, UAE

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Abstract

Strengthening features of the settings in which health services for adolescents are provided will require explicit attention to the ways in which service environments are structured and the training and clinical experiences of health care providers. The objective is to study Adolescent coverage with relevant health care services. To study the socio-demographic trends of adolescent cohorts in Dubai in relation to health care provision process. The study reviewed the available related literature written about promotive, preventive and therapeutic health care services provided to adolescents in Dubai. Available literature and school health annual report 2015-2016 were reviewed. All of them were cross-sectional studies with sample size ranged between 1200 and 1500 individuals. They were conducted in both private and governmental schools in Dubai. The school annual report depends on record review and review of all kinds of healthcare services provided to adolescents in private schools of Dubai. The study showed that adolescent groups received health education coverage of 52% of total adolescent population on different nutritional related topics during 2015-2016 academic years in schools of Dubai. Almost 41.1% covered with Puberty related awareness, 28.9% covered with Drug and substance abuse discussions, 45.0% covered with personal and environmental Hygiene, 30.5% covered with awareness sessions related to abuse, about 26.7% of total adolescent population covered with different infectious diseases related discussions including STD and AIDS. The study concluded that there are significant health risks encountering adolescent groups whom they have been traditionally underserved. Adolescent health services are not mature enough and the adolescent friendly approach is not yet developed. A participatory assessment process ensures that clinic staff members are involved throughout the identification of needed quality improvements and the development of action plans. The Clinic Assessment of adolescent Friendly Services tool and the lessons learned from the experience can be applied to increase the efficiency and effectiveness of adolescent health services and program.

Keywords

Adolescent, Health Services, Dubai

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1. Introduction

It is estimated that there are about 1.2 billion Individuals aged 10–19 years living worldwide. The adolescents related health services are still encountering gaps and shortcomings in the accessibility, acceptability, appropriateness, effectiveness, and equity of these services. There is scarcity of current services that consistently do so; and lack of systems that provide coordinated health promotion, disease prevention, and behavioral health services for adolescents. Efforts to improve the availability of health services for adolescents and the accessibility of those services are insufficient by themselves to meet the health needs of today's adolescents. Those needs increasingly involve health

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problems resulting from behaviors that can best be addressed before the onset of obvious morbidity or during the early stages of experimentation in such areas as diet and exercise, substance use (including tobacco and alcohol), driving, and sexual behavior. Therefore, adolescent health services need to do a better job of incorporating prevention and health promotion, while also being more tailored to the developmental stage of adolescents. [1-7]

Confidentiality in a way adolescents understand and feel comfortable with can be developed and used in positive way to foster trust. The adolescents are more willing to communicate with and seek health care from physicians who assure them of confidentiality. [8, 9]

Strengthening these features of the settings in which health services for adolescents are provided will require explicit attention to the ways in which service environments are structured and the training and clinical experiences of health care providers. It will also require comprehensive integration of electronic health records and electronic tools for communicating with adolescents, and the development of sustained partnerships with sectors such as education, the media, and the entertainment industry that are important parts of the adolescent culture. It will be necessary to introduce new incentives and assessment efforts, derived from population health research, aimed at realigning the health environment, provider services, and information resources, probably in regional centers with varying levels of expertise, to achieve a more explicit focus on accomplishing the national health objectives for adolescents. [10, 11]

2. Objectives

To study Adolescent coverage with relevant health care services. To study the socio-demographic trends of adolescent cohorts in Dubai in relation to health care provision process

3. Methodology

The study reviewed the available related literature written about promotive, preventive and therapeutic health care services provided to adolescents in Dubai. Available literature and school health annual report 2015-2016 were reviewed. All of them were cross-sectional studies with sample size ranged between 1200 and 1500 individuals. They were conducted in both private and governmental schools in Dubai. The school annual report depends on record review and review of all kinds of healthcare services provided to adolescents in private schools of Dubai.

4. Results

The review explained that about 8.04% of total population of Dubai are in adolescent age groups; almost 52% are male and about 48% female. As per nationality, about 78% are expatriate while 22% are Emirati as reflected by tables 1 and 2.

Table 1. Distribution of Adolescents in Dubai According to grades, sex and nationality[1].

Grade	Gender	Nationality	2015-2016						
			No.	%	%	%	%		
G 5-8	M	UAE	3212	3.6					
		Ex.	23122	8.7					
	F	UAE	2756	3.1					
		Ex.	21706	24.5					
G 9-12	M	UAE	2167	2.4					
		Ex.	17026	19.2					
	F	UAE	1958	2.2					
		Ex.	16769	18.9					
Total Adolescents in private schools			88716	100.0	33.4				
UAE			10093						
Total Adolescents in governmental schools			10000						
Total Adolescents in schools			98716			33.4	4.03		
Total UAE Adolescents in schools			20093					9.01	
Total Expatriate Adolescents in schools			78623						3.54
Total Students in private schools			265634		100.0				
Total Students in governmental schools			30000						
Total Students in schools			295634			100.0			
Dubai Population (Mid 2015)			2446675				100.0		
UAE			222875					100.0	
Expatriates			2223800						100.0

[1] School Health Annual Report, 2015-2016

Table 2. Distribution of Emirate of Dubai Population by age group and sex (End of 2015)[2].

Age Group	Male	Female	Total	%
0-4	72,051	64,421	136,472	5.58
9-May	65,788	65,027	130,815	5.35
14-Oct	57,064	54,438	111,502	4.56
15-19	44,763	40,421	85,184	3.48
20-24	135,612	53,861	189,473	7.74
25-29	300,637	101,252	401,889	16.43
30-34	324,752	109,435	434,187	17.75
35-39	232,193	88,226	320,419	13.1
40-44	196,006	60,211	256,217	10.47
45-49	129,879	36,829	166,708	6.81
50-54	59,327	28,897	88,224	3.61
55-59	47,227	18,381	65,608	2.68
60-64	20,778	9,934	30,712	1.25
65-69	9,656	4,569	14,225	0.58
70-74	3,347	3,223	6,570	0.27
75+	4,275	4,195	8,470	0.34
Total	1,703,355	743,320	2,446,675	100

The study showed that adolescent groups received health education coverage of 52% of total adolescent population on different nutritional related topics during 2015-2016 academic years in schools of Dubai. Almost 41.1% covered with Puberty related awareness, 28.9% covered with Drug and substance abuse discussions, 45.0% covered with personal and environmental Hygiene, 30.5% covered with awareness sessions related to abuse, about 26.7% of total adolescent population covered with different infectious diseases related discussions including STD and AIDS as reflected by tables 3-7.

Table 3. Coverage with health education according to subjects, 2015-2016.

Health education Subject	No. Covered	% of the target group
Nutrition	42731	52.1
Puberty	46834	41.1
Drug and substance abuse	23707	28.9
Personal and Environmental hygiene	36883	45.0
Abuse	25011	30.5
Infectious Diseases	9356	26.7

Table 4. Coverage with health education by subject according to age, gender and nationality, 2015-2016.

			Total	Nutrition	
				No.	%
Grade 7-9 (preparatory)	M	UAE	2575	1780	69.1
		Expatriates	21669	12127	56.0
	F	UAE	2226	1520	68.3
		Expatriates	20364	10052	49.4
Grade 10-12 (secondary)	M	UAE	1574	1122	71.3
		Expatriates	16105	7749	48.1
	F	UAE	1430	1043	72.9
		Expatriates	15996	7338	45.9
Total			81939	42731	52.1

Table 5. Coverage with health education by subject according to age, gender and nationality, 2015-2016.

			Total	Puberty	
				No. covered	%
Grade 7-9 (preparatory)	M	UAE	2575	585	22.7
		Expatriates	21669	5849	27
	F	UAE	2226	1474	66.2
		Expatriates	20364	11334	55.7
Total			46834	19242	41.1

[2]Source: Dubai Statistics Center, Yearly Population Estimates, 2015. https://www.dsc.gov.ae/Publication/Population%20Bulletin%20Emirate%20of%20Dubai%202015.pdf

Table 6. Coverage with health education by subject according to age, gender and nationality, 2015-2016.

			Total	Drug and substance abuse		Personal and Environmental hygiene		Abuse	
				No.	%	No.	%	No.	%
Grade 7-9 (preparatory)	M	UAE	2575	728	28.3	1559	60.5	1078	41.9
		Expatriates	21669	6043	27.9	9977	46	6551	30.2
	F	UAE	2226	453	20.4	1297	58.3	606	27.2
		Expatriates	20364	4157	20.4	10723	52.7	5612	27.6
Grade 10-12 (secondary)	M	UAE	1574	833	52.9	917	58.3	629	40
		Expatriates	16105	6388	39.7	5597	34.8	5676	35.2
	F	UAE	1430	542	37.9	932	65.2	508	35.5
		Expatriates	15996	4563	28.5	5881	36.8	4351	27.2
Total			81939	23707	28.9	36883	45.0	25011	30.5

Table 7. Coverage with health education by subject according to age, gender and nationality, 2015-2016.

			Total	Infectious Diseases	
				No.	%
Grade 10-12 (secondary)	M	UAE	1574	437	27.8
		Expatriates	16105	4146	25.7
	F	UAE	1430	580	40.6
		Expatriates	15996	4193	26.2
Total			35105	9356	26.7

The study revealed that about 3.1% of adolescents received first aids support during the academic years 2015-2016. As for preparatory grades, 6.1% of Emirati males, and 6.0% of Emirati females received first aids support during the academic years 2015-2016. As for expatriates, 3.2% of males, and 3.1% of females received first aids support during the academic years 2015-2016. Regarding the older age group 15-19 years 4.8% Emirati males, 2.4% expatriate male, 3.8% emeriti female and 3.1 expatriate females received first aids support during the academic years 2015-2016 (Table 8).

Table 8. First aid services provided in the school clinics in the academic year 2015-2016 according to grade, gender and nationality.

Grade	Gender	Nationality	Total students	First aid cases	
				No.	How many time per one student
Received Preparatory	M	UAE	3135	19260	6.1
		Expatriates	23225	73561	3.2
	F	UAE	2723	16443	6.0
		Expatriates	21645	66866	3.1
Secondary	M	UAE	2121	10121	4.8
		Expatriates	17201	41798	2.4
	F	UAE	1880	7061	3.8
		Expatriates	16874	39650	2.3
Total			88804	274760	3.1

The study reflected that about 11.1% of the referred male Emirati and 17.5% of male referred expatriate has been referred to secondary care from the age group 10-14 in the academic years 2015-2016 for surgical causes. It showed also that 5.0% of referred female Emirati and 11.1% of referred female expatriate has been referred to secondary care from the age group 10-14 in the academic years 2015-2016 for surgical causes. As for the older age group, 38.5% of referred male Emirati, 26.6% of referred male Expatriate, 4.2% of referred female Emirati and 13.7% referred female Expatriate has been referred to secondary care from the age group 10-14 in the academic years 2015-2016 for surgical causes (Table 9).

Table 9. Referral for cases other than first aid cases in the academic year 2015-2016 according to grade, gender and nationality.

			Referred cases	Cause of referral			
				Medical		Surgical	
				No.	%	No.	%
Preparatory	M	UAE	404	359	88.9	45	11.1
		Expatriates	1927	1589	82.5	338	17.5
	F	UAE	400	380	95.0	20	5.0
		Expatriates	1153	1025	88.9	128	11.1
Secondary	M	UAE	65	40	61.5	25	38.5
		Expatriates	799	584	73.1	215	26.9
	F	UAE	144	138	95.8	6	4.2
		Expatriates	636	549	86.3	87	13.7
Total			5528	4664	84.4	864	15.6

5. Discussion

The current study showed that there are relatively high coverage with adolescent health related awareness on nutritional health, puberty, drug abuse, personal and environmental hygiene, and communicable disease. This result comes similar to the Saudi study (Fadia S, 2014). [12] It stated that there is a lack of training in adolescent health and/or the health-care issues that are specific to adolescents as compared with adults and children. This has been identified as an obstacle in achieving adequate health-care for adolescents. In addition, research suggests that specific training in adolescent health can be efficacious in improving clinical skills and practice, improving medical trainee confidence and improving physicians' own perceived competence in working with young people. Medical and nursing schools in Saudi Arabia need to urgently integrate adolescent health in their curriculums. Continuing professional education training and conferences are important venues to provide practicing health-care providers with the necessary education and training on adolescent health. [13-19]

As for adolescent first aid services, the current study showed that significant first aid services has been demanded by adolescent's group similar to other study (amro al Habib. 2014). [20] It is the largest in Saudi Arabia that has addressed traumatic spine injuries in children and adolescents. Spine injuries were involved in 3.2% of all admitted pediatric trauma cases, and this proportion is similar to what is published in other studies. Adolescent boys were the most likely to be affected, which is likely attributable to the increased exposure to outdoor activities and risk-taking behavior of males. Alternately, this finding may be due to the greater exposure of male to car accidents because women do not drive in Saudi Arabia.

As for adolescent referral services, the study showed reasonable part of adolescents are in need for further care at secondary or tertiary level.

6. Conclusion

The study concluded that there are significant health risks encountering adolescent groups whom they have been traditionally underserved. Adolescent health services are not mature enough and the adolescent friendly approach is not yet developed. A participatory assessment process ensures that clinic staff members are involved throughout the identification of needed quality improvements and the development of action plans. The Clinic Assessment of adolescent Friendly Services tool and the lessons learned from the experience can be applied to increase the efficiency and effectiveness of adolescent health services and program.

Conflict of Interest

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

References

[1] ACT for Youth Downstate Center for Excellence and ACT for Youth Upstate Center of Excellence. (2003). A Guide to Positive Youth Development. New York: Mount Sinai Adolescent Health Center.

[2] Adair, S. M., Bowen, W. H., Burt, B. A., Kumar, J. V., Levy, S. M., Pendrys, D. G., Rozier, R. G., Selwitz, R. H., Stamm, J. W., Stookey, G. K., and Whitford, G. M. (2001). Recommendations for using fluoride to prevent and control dental caries in the United States. Recommendations and Reports: Morbidity and Mortality Weekly Report, *50* (RR14), 1–42.

[3] American Academy of Pediatrics. (1989). Confidentiality in adolescent health care. AAP News, 5, 9.

[4] American Academy of Pediatrics, American College of Critical Care Medicine, and Society of Critical Care Medicine. (2000). Consensus report for regionalization of services for critically ill or injured children. Pediatrics, 105, 152–155.

[5] American Medical Association. (1997). Guidelines for Adolescent Preventive Services (GAPS), Recommendations Monograph. Chicago, IL: American Medical Association.

[6] Anthony, Y. E. (2007). The Youth Development Institute of the Detroit Department of Health and Wellness Promotion. City Lights, *15* (4), Spring.

[7] Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., and Montiero, M. G. (2001). The Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Care (2nd Ed., WHO/ MSD/MSB/01.6a). Geneva: World Health Organization.

[8] Ford, C., English, A., and Sigman, G. (2004). SAM position statement: Confidential health care for adolescents. Journal of Adolescent Health, 35, 1–8.

[9] Fox, H. B., and Limb, S. J. (2008). State Policies Affecting the Assurance of Confidential Care for Adolescents. Fact Sheet No. 5. Washington, DC: Incenter Strategies, the National Alliance to Advance Adolescent Health.

[10] National Research Council and Institute of Medicine. (2004). Reducing Underage Drinking: A Collective Responsibility. R. J. Bonnie, editor; and M. E. O'Connell, editor. (Eds.). Washington, DC: The National Academies Press.

[11] Newacheck, P. W., Brindis, C. D., Cart, C. U., Marchi, K., and Irwin, C. E. (1999). Adolescent health insurance coverage: Recent changes and access to care. Pediatrics, 104, 195–202.

[12] Fadia S AlBuhairan and Tina M Olsson. Advancing adolescent health and health services in Saudi Arabia: exploring health-care providers' training, interest, and perceptions of the health-care needs of young people Adv Med Educ Pract. 2014; 5: 281–287. Published online 2014 Sep 4. doi: 10.2147/AMEP.S66272 PMCID: PMC4159223.

[13] Michaud PA, Stronski S, Fonseca H, MacFarlane A, EUTech Working Group The development and pilot-testing of a training curriculum in adolescent medicine and health. J Adolesc Health. 2004; 35 (1): 51–57.

[14] Sanci LA, Coffey CM, Veit DC, et al. Evaluation of the effectiveness of an educational intervention for general practitioners in adolescent health care: randomised controlled trial. BMJ. 2000; 320 (7229): 224–230.

[15] Sawyer S, Shea L, Patton G. Do we need specialist units for adolescents hospital? Such units are valuable in Australia. BMJ. 2001; 323 (7309): 401.

[16] Gooding HC, Blood EA, Sharma N. An educational intervention to increase internists' confidence with and provision of preventive services to adolescents and young adults. Teach Learn Med. 2012; 24 (4): 321–326.

[17] Lustig JL, Ozer EM, Adams SH, et al. Improving the delivery of adolescent clinical preventive services through skills-based training. Pediatrics. 2001; 107 (5): 1100–1107.

[18] Ozer EM, Adams SH, Lustig JL, et al. Increasing the screening and counseling of adolescents for risky health behaviors: a primary care intervention. Pediatrics. 2005; 115 (4): 960–968.

[19] Wintersteen MB. Standardized screening for suicidal adolescents primary care. Pediatrics. 2010; 125 (5): 938–944.

[20] Al-Habib A, Alaqeel A, Marwa I, Almohammadi M, Al Shalaan H, AlEissa S. Causes and patterns of spine trauma in children and adolescents in Saudi Arabia: implications for injury prevention. Ann Saudi Med 2014; 34 (1): 31-37. DOI: 10.5144/0256-4947.2014.31.