

Special Care Dentistry for the Arab World: A Promising Challenge a Mini-Review

Mohamad Saad El Masri*

Special Care Dentistry, University College London, Beirut Arab University, Saida, Lebanon

***Corresponding Author:** Mohamad Saad El Masri, Special Care Dentistry, University College London, Beirut Arab University, Saida, Lebanon.

Received: July 24, 2018; **Published:** October 31, 2018

Abstract

Special Care Dentistry (SCD) is concerned with: "The improvement of oral health of individuals and groups in society, who have a physical, sensory, intellectual, mental, medical, emotional or social impairment or disability or, more often, a combination of a number of these factors". Why is SCD important in the Arab world? The Arab region of the world is rapidly changing and advancing. There are striking differences from the developed world in terms of prevalence and type of diseases leading to various forms of disability. Furthermore, political challenges, financial constraints, limited healthcare systems, and negative attitudes and beliefs towards individuals with disability are all factors that influence the provision of healthcare services for these individuals, which impact the access to oral healthcare. Approximately 15% of the population in the Arab states are living with a disability. Attitudes toward disability in this region have been found to be negative. Dental education and training to provide oral health care for patients with disability in the Arab world are remarkably limited. Countries in the region should take advantage from the available evidence provided by the International Association for Disability and Oral Health (iADH) and the British Society for Disability and Oral Health (BSDH) and consider establishing SCD within the undergraduate and postgraduate curriculum. Currently, there is no well-defined policy in any of the relevant countries in the Arab region with regards to SCD. The aims of the current mini-review are to assess the impact of disability across the region, identify factors that may influence access to oral health care, discuss the evolution of SCD, study the challenges in order to address the provision of SCD, and outline the pathway that will enable the establishment of the academic and clinical aspect of SCD in the Arab world, and particularly in Lebanon.

Keywords: *Special Care Dentistry (SCD); Oral Health; International Association for Disability and Oral Health (iADH)*

Introduction

Disability has a diverse understanding and meaning by the public, legal bodies and clinicians, hence it can be confusing. The World Health Organisation (WHO) has defined disability, as an umbrella term, covering impairments, activity limitation, and participation restriction [1,2]. In other words, disability includes individuals and groups in society, who have a physical, sensory, intellectual, mental, medical, emotional or social disability or, more often, a combination of a number of these factors. Each region of the world has its own distinct profile regarding the prevalence of disability, politics and disability, economy and disability and so on. However, this does not justify having different understandings of what a disability is.

In the Arab world, the public misunderstands the term disability by linking it particularly to people who have a learning disability. In 2005, the "Human Development Department Middle East and North Africa Region" highlighted in a document of the World Bank that a social stigma and discrimination exists against people with disabilities in the Arab region, not only in the physical and cultural

environment surrounding individuals with disabilities, but also within their own families. The social stigma and discrimination associated with disability can lead to confusion in defining disability in the region.

Mapping disability prevalence in the Arab states depends on the method of data collection as well as on the definition of disability that is applied [3]. Thus the international comparison can be misleading if the methodological differences are not taken into account [4-6]. In 2015, The WHO predicted that the number of disabled people in the region should be around 30 million individuals- equivalent to 15% of the population [7].

In the Arab world as in the rest of the world, regardless the type of disability, it is evident that people with disability have poorer oral health than the non-disabled population. Each type of disability affect the quality of life of each individual differently, hence it impacts their oral health differently. Therefore, the dental management for each affected individuals is different. Patients with disabilities are a major component of our society, and they should have equal oral health care rights as non-disabled population. Thus, every dentist should act as a special care dentist.

Demand for SCD service; prevalence and causes of disability!

In 2015, The WHO predicted that the number of disabled people in the Arab region should be around 30 million individuals- equivalent to 15% of the population [8-10] (Figure 1). In the Arab world, as indeed applies across the globe, each type of disability can be caused by several factors. For example, physical disability may be due to major traffic road accidents or by medical conditions such as diabetes mellitus. Mental health illness such as post-traumatic stress disorders (PTSD) may possibly be related to wars and political instability. Intellectual and cognitively driven physical disability can be linked to figure 1 interfamilial marriage. In many instances, people may have a combination of these disabilities.

- For instance, in the Arab states, job-related disabilities is estimated to be caused by arthritis of a range of about 17%, followed by back or spinal problems 14%, heart disease 11%, lung and respiratory problems 8%, and high blood pressure 6% [11].
- On the other hand, cancer is one of the most common conditions found in this region. The WHO estimated that in the Eastern Mediterranean (EM) region there were 555,318 cases of cancer in 2012 and by 2030, the number may increase to 961,098, meaning that EM will have the highest prevalence of all regions in the world. It is predicted that in the future, dentists will be more likely to observe children and adults in their care who may present before or after cancer treatment and require urgent dental care [12].
- With regards to learning disability, Down Syndrome (DS) has attracted scientific attention in Arab countries such as United Arab Emirates (UAE), Egypt, Kuwait, and Oman. The Centre for Arab Genomic Studies, through its Catalogue for Transmission Genetics in Arabs (CTGA), gathered research data from nine Arab countries that focus its attention on DS. These data study DS throughout the periods that extend over the late 20th century to early 21st. The study shows that in six of these countries the prevalence of DS is greater than international figures. For example, United States recorded 1 in every 700 babies born having DS [13,14] whereas, in the Arab region, DS rate among UAE is (1:319), which is somewhat higher but comparable to that of Oman (1:500) and Qatar (1:546). Similarly, Saudi Arabia and Kuwait are also on the greater end of global incidence rates with (1:554) and (1:581) respectively [15,16].
- Mental health illness continues to rise across the globe, and the Arab states are not an exception to this trend. Some studies have mentioned that poverty, instability, and conflicts in the region can impact the mental health of the population, and they have provided evidence for the increased rate of depression and PTSD [17]. The levels of medical care of individuals with mental illness seem to be low in the region. For instance, three nations (Lebanon, Kuwait, and Bahrain) had in 2007 more than 30 psychiatric beds per 100,000 population.
- As age increases, the risk to develop a disability also increases. In general, the lifespan of most populations is continuing to increase. This trend is a consequence of improved nutrition and social factors as well as advancing health care. However, with increasing age comes a great burden of cardiovascular disease, respiratory issues, diabetes mellitus, Parkinson's disease, and dementia of many causes. It is thus predicted that there will be an increased demand for healthcare. The percentage of the population over the age of 65 years in the Arab world is recently estimated at 4.7%. The scale varies from under 2% in the UAE to ~10% in Lebanon [18-22]. It is predicted that by 2050, the proportion of older persons (60 years or more) will increase to 19% [23].

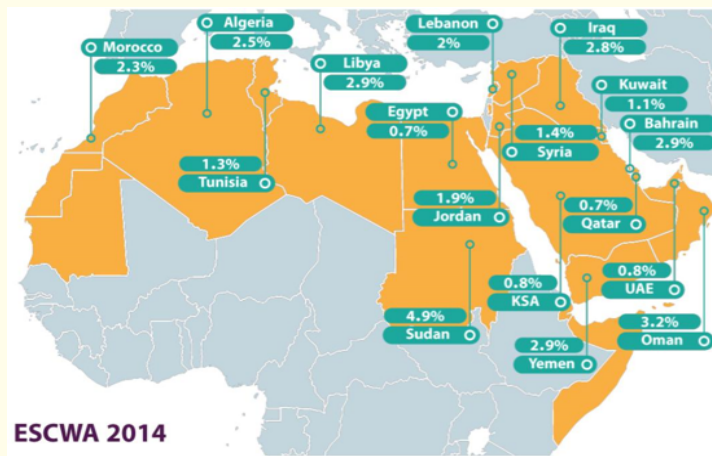


Figure 1: Mapping disability in the Arab world (ESCWA 2014).

Factors influencing access to SCD service in the Arab world

Political challenges, financial constraints, limited healthcare systems, and negative attitudes and beliefs towards individuals with disability are all factors that can influence the provision of healthcare services for these individuals. These factors can additionally impact access to oral healthcare, which is often not considered a priority.

- Poverty and disability are linked from different aspects. People with disability are usually poorer than the healthy population and poor people are more likely to become disabled. For instance, after the onset of a disability, obstacles to health and rehabilitation services, education, and employment can trap individuals with disabilities in a permanent cycle of poverty. While 1 in 10 of the world's population is disabled, 1 in 5 of the world's population lives with a disability [24]. Persons with disabilities are twice likely to live in poverty as non-disabled persons [25]. For instance, 17% of the region's population lives below \$2 - a day in 2005. As many as 17% of Egyptians, 15% of Yemenis and 10% of Moroccans have consumption levels which are no more than 50 cents per day above \$2 a day [26,27].
- The impact of politics on disability is often a contentious subject across the globe. Many factors may be associated with politics and disability. These factors include political systems, disability policies, and attitudes toward individuals with disabilities. For example, politics can also impact disability through war-related injuries. Conflicts in the region have been abundant and include Palestinian-Israeli conflict, the U.S intervention in Iraq 2003, the rise of Islamic State of Iraq and Syria (ISIS), and the Arab Spring, which spread with it the war on Syria, Libya, and Yemen [28]. These wars have led to long-term disability for many persons. For instance, recent records indicate that nearly half (45%) of the surveyed Syrian refugee children have experienced PTSD symptoms-more than ten times the rate observed in other children around the world [29,30].
- The unclear definition of disability in the Arab region can adversely impact the development of legal policies and healthcare systems for people with disabilities.

Policies and healthcare systems are a major component for the establishment of SCD service in the region. In fact, nations in the Arab world have taken several actions for advocating policies and healthcare systems to support individuals with disabilities. These actions are remarkable facing political and legal arguments, which are preventing its accomplishments [31].

- Healthcare systems for people with a disability vary widely across the Arab nations. In KSA, medical services and rehabilitation are provided to all people mainly by the government through the Ministry of Health including people with disabilities [18]. On the other hand, in Egypt, the government does not provide all healthcare services for people with disability [32].
- Civil Society Organisations (CSOs) that are supporting people with disability can greatly influence the situation of the disabled population in many countries across the world. Therefore, it is a key component to consider when planning to establish health care services for people with disability such as SCD service in the Arab world.

Oral health vs disability in the Arab world

It is evident that people with disabilities have poor oral health and require care as non-disabled individuals. There is little data with regards to the oral health of individuals with disabilities in the Arab region. In 2004, a study of a sample of 204 athletes participating in Special Olympics event held in the region during 2002. Athletes from 17 countries in the Arab world found a high prevalence of molar caries 54.1%, and gingival disease 53.4%. In the study group, 22.4% needed urgent dental care, and 56.7% needed non-urgent care [33] (Figure 2). In Saudi Arabia, a study assessed the prevalence of dental caries and oral hygiene status among a group 244 individuals with Down Syndrome (DS), shows that 89% of them had experienced dental caries, whereas only 25% had good oral hygiene [34]. In another study, individuals with DS showed a high prevalence of plaque levels (46.9%) compared to that of the non-disabled population (34%) [35-37].

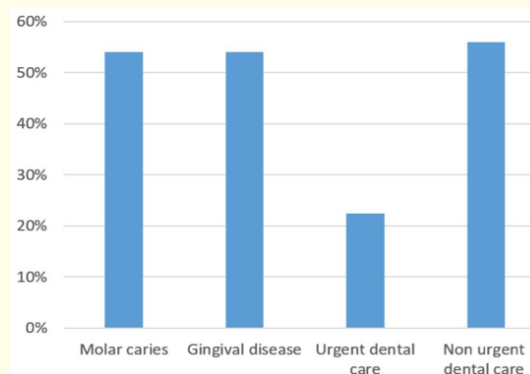


Figure 2: Oral health assessment for people with disability at the age of 12 in the Arab region.

With regards to dental treatment for patients with disability and particularly patients with intellectual disability, general dental practitioners in the region tend to treat the majority of them under General Anaesthesia (GA). Dental treatment under GA for patients with disabilities may perhaps improve their quality of life, but it should not always be the first choice of treatment due to the medical risk involved [38].

Each type of disability affect the quality of life of each individual differently, hence impact their oral health differently. Therefore, the dental management for each affected individuals is different. Hence, it is evident that to provide healthcare service such as SCD in the Arab world, it is important to appreciate the common types of disability and their impact upon the oral health of individuals with a disability.

Evolution of SCD

SCD is concerned with: "The improvement of oral health of individuals and groups in society, who have a physical, sensory, intellectual, mental, medical, emotional or social impairment or disability or, more often, a combination of a number of these factors".

In the 1950s, Dental care services for people with disabilities started to be established in the US, and with it, the beginning of hospital dentistry was noted. By 1981, The Journal of Special Care in Dentistry was created, and indeed this was possibly the first time the term “Special Care” was used by the dental profession [39]. In 1990, The Australian Society of Special Care in Dentistry (ASCID) was founded, and in 2005, The Australian Dental Council approved the request for recognizing SCD as a Specialty. Finally, SCD was recognized as a Dental Specialty across the whole of Australia in 2010 [40]. In the UK a Joint Advisory Committee for Special Care Dentistry (JACSCD), was established in 2000 and five years later the General Dental Council (GDC) approved, in principle, the establishment of a Speciality of SCD [41]. This specialty was formally recognized by GDC in 2008 [42] (Figure 3).

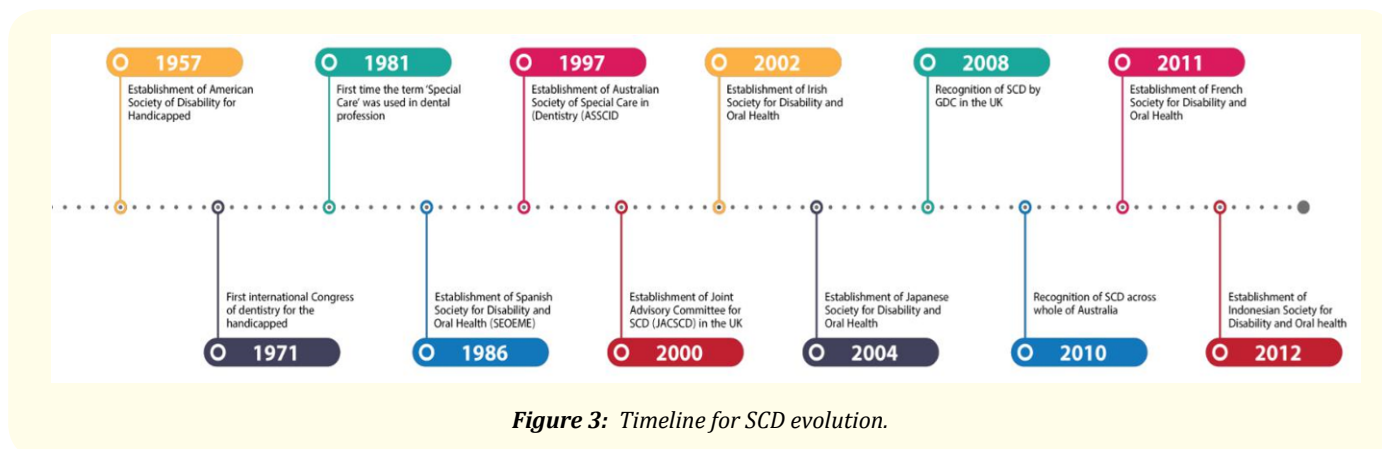


Figure 3: Timeline for SCD evolution.

Reducing inequalities in oral health care can be achieved by integrating and enhancing SCD within the different dental educational systems across the globe. The evidence shows that there is a lack of education in SCD worldwide, particularly in the Arab region, and this may be related to the absence of recognition of SCD as a clinical or academic specialty and appropriate clinical guidelines [43]. The International Association for Disability and Oral Health (IADH) has initiated the development of undergraduate and postgraduate curriculum guidance in SCD. Moreover, the IADH has created educational networks involving leading experts in SCD from 46 countries [44]. Hence, there is no justification for dental faculties across the world and particularly in the Arab world to deny the establishment of academic and clinical core in SCD [45-47]. Subsequently, it is presumed that experts in SCD will emerge, and recognition of SCD as a specialty will become a reality.

Challenges to overcome

The establishment of SCD service in the Arab world can face multiple barriers. Lack of understanding disability, social exclusion of people with disabilities, negative attitude toward people with disabilities, and lack of public awareness of the importance of oral health care for individuals with disabilities are all significant cultural and social barriers [48].

In the Arab states, barriers with reference to the government may be associated with factors such as lack of funding for disability healthcare services, lack of disability policies, and political attitude toward individuals with disabilities. People with disabilities are more likely to be unemployed and poor than non-disabled people; hence financial barriers to affording oral healthcare services can be noted. Individuals with disabilities can also experience difficulty in accessing oral health care services due to physical barriers that may exist in most Arab countries. There is insufficient data on the provision of SCD service in the Arab nations. However, it is evident that dental professionals are lacking the training and the knowledge for managing patients with disabilities.

How can SCD be a reality?

Introducing a new dental specialty for the Arab world is a challenge by itself. The pathway that leads to the accomplishment of SCD as a recognised dental specialty in the Arab world requires a lot of effort, time, and commitment. Understanding the challenges will help in developing an action plan to overcome them and to enable the establishment of the academic and clinical aspect of SCD.

Paving the way to introducing SCD to the Arab world should start with awareness campaigns in regards to a holistic definition of disability, rights of people living with disability, alongside the importance of having a dental specialty for people with disabilities. Those campaigns should involve the general public, governments, dental communities, medical communities, and of course patients with disabilities and their careers. Accordingly, the SCD team in Lebanon have designed a long-term project that is divided into 5 different aspects. The clinical, academic, civil society organisations, governmental, and the regional aspect.

The clinical aspect targets dentists and general practitioners interested in SCD. The SCD team in Lebanon have arranged several appointments with this regards. They have presented their vision on SCD in Lebanon to review the possibility of collaboration and ways to accelerate the clinical provision of SCD in the country. The outcome for these appointments seems to be very positive.

The academic aspect will represent a significant role to support the clinical and vice-versa. This aspect will aim to introduce the undergraduate and postgraduate curriculum of SCD to the dental faculties in the Arab world, particularly Lebanon. The SCD team in Lebanon addressed this aspect by visiting dental schools in Lebanon and reviewed the importance of introducing SCD into their dental curriculum. This step will be followed by an introductory lecture about SCD including a case-based study that will be followed by a survey. This survey will determine the students’ concern in SCD, and upon that, an action plan will be developed to introduce the BSDH and iADH, undergraduate and postgraduate curriculum in SCD (Figure 4).

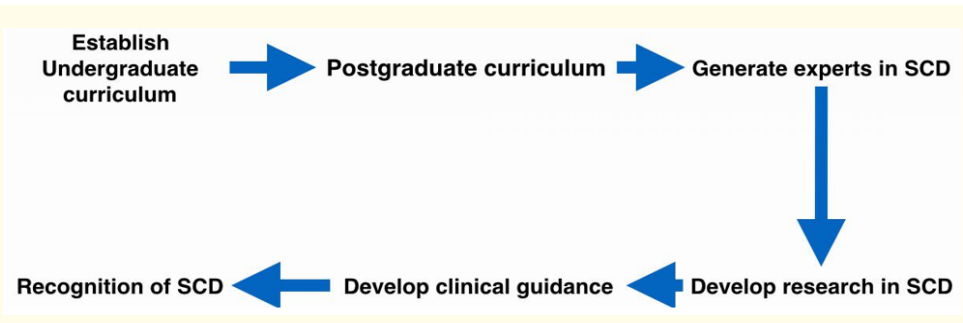


Figure 4: The pathway for SCD recognition.

Civil society organisations (CSO’s) in the country are numerous, and they can present a major part of the aforementioned project. It is evident that the most accessible way to approach people with disability is through CSO’s. Furthermore, CSO’s can collaborate with SCD team in Lebanon by undertaking awareness campaigns and funded projects to serve people with disabilities in the country.

Besides, on the regional level, the SCD team in Lebanon is working on the development of a society that will include all Special Care Dentists from all Arab countries, namely “Arabic Society for Disability and Oral health” (ASDH). The society aims to establish a common strategical plan to trigger the establishment of the clinical and academic aspect of Special Care Dentistry across the whole Arab region, promoting positive attitudes to disability and diversity, and reducing inequality in oral health care for people with disability. The strategical plan will include developing a scientific dental journal for the society, producing a clinical guide for special care dentists and general dental practitioners in the region who are interested in practicing SCD, conferences, workshops and so on.

Conclusion

To begin with, the definition of disability in the Arab world remains vague, due to the social stigma and discrimination practiced against people with disabilities in the region. The prevalence of disability is high and is predicted to increase in the future, also the causes of disability are different across the world. In the Arab nations, political instability, ageing, and poverty are major factors that impact upon disability. Given that each human has the right to receive equal health care, people with disability should enjoy the same rights as non-disabled people in regard to oral health care.

Reducing inequalities in oral health care in the Arab region can be achieved through introducing a recognised SCD in the academic realm and evolving it through clinical provision. Even though SCD might face challenges in the region due to the aforementioned factors. However, there are several steps that might aid in diminishing the hurdles. First, the help of the awareness campaigns supported from the civil society organisations will aim to clarify the definition of disability, alongside the rights of people living with disability. Second, introducing the undergraduate and postgraduate curricula to dental schools in the Arab world will produce experts in SCD. Those experts alongside the ASDH will simultaneously accelerate the recognition of SCD. Finally, the collaboration of all special care dentists in the Arab region under the umbrella of ASDH shall reduce the inequality in oral health care for people with disability.

This mini-review provides a unique strategical approach to enable the recognition of SCD in the Arab world through shedding light on the demand for SCD, acknowledging the factors that may impact access to oral health care, and finally by investigating its challenges (Figure 5).

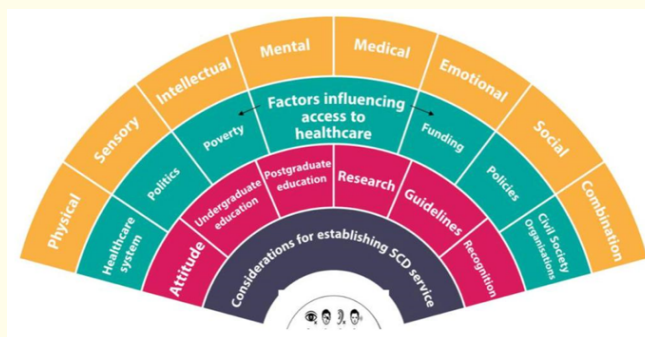


Figure 5: Diagram representing the overview of SCD provision.

Steve Job said, “The people who are crazy enough to think they can change the world are the ones who do”. Introducing SCD to the Arab world and particularly Lebanon is a dream that will become a reality in the near future. Hence, SCD for the Arab world is a promising challenge.

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Volume 17 Issue 11 November 2018

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