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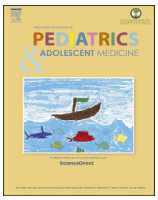

Review article

Adolescent health and health care in the Arab Gulf countries: Today's needs and tomorrow's challenges

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A R T I C L E I N F O

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A B S T R A C T

This review article documents the evidence regarding the health status of adolescents aged between 10 and 19 years in the Arab region and the Gulf Cooperation Council countries (GCC) and also considers the state of adolescent health care in the region compared to the recommended guidelines for such services. Adolescents make up more than 25% of the population of the GCC countries, a percentage that is far higher than that in other high-income countries, yet their health status and health care needs are not given proportional attention in the region. Thus, the burden of mortality and morbidity for adolescents in the region has shifted from communicable diseases to road traffic injuries, mental health issues, non-communicable diseases, and health-compromising behaviors and conditions that contribute to those issues. Whereas the sources of evidence are limited with respect to some issues, such as mental health issues, sexual and reproductive health, and alcohol use, other health issues, such as rising rates of tobacco use, low levels of physical activity, minimal consumption of fruit and vegetables, and high levels of obesity, are better-documented. Many health care providers see adolescents who have limited or no training in adolescent health care and adolescents who are transitioned to the adult care system at young ages without the necessary health care transition services, thus creating challenges for these individuals to access developmentally appropriate health care. Recommendations include prioritizing health care practice, health care facilities, clinical education, and adolescent health research to address key aspects of adolescent health and adolescent medical care in the GCC countries. This could be accomplished through the development of adolescent health care centers that bring together expert interdisciplinary care, excellent health provider training, and cutting-edge adolescent health research to provide leadership throughout the region and further both the health of adolescents and their access to high-quality, holistic health services.

1. Introduction

Adolescence, which represents a critical period in each individual's life, is characterized by significant biological, physical, psychological, and emotional changes, and hence, it is important for the future of both individuals and nations. Social roles, social relationships and social expectations for the developing individual provide the foundation for adult functioning, though these, too, are subject to significant changes during adolescence [1,2]. Many of the behaviors and health conditions that influence one's life-long health begin during adolescence.

The current 1.2 billion adolescents aged between 10 and 19 years comprise just under one-fifth of the world's population [1]. As such, this population influences social and economic developments in many countries and will continue to do so as they transition into adulthood. Accordingly, the healthy development of adolescents is one of the foundations of the world's future, and as such, it is influenced by their environment, education, supportive relationships, and access to high quality health services. Therefore, fostering the conditions for the healthy development of adolescents and supporting their health should be a global priority [1].

Adolescent populations vary widely throughout the world, and similarly, their health issues also vary. The Arab region in general, and the countries in the Gulf Cooperation Council (GCC) specifically, are rapidly growing both economically and demographically.

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Over the last four decades, the Arab region's population has increased to an estimated 359 million in 2010 [3], and more than half of that population is comprised of children and young people age 24 and younger. This rapid population increase peaked around 2005, but it is expected to continue until 2050, when the number of children and young people in the region may reach 217 million [3,4].

In the GCC region, the proportion of youth is lower than it is in other Arab countries in the region, but still higher than it is in other high income countries. It is estimated that more than one-third of the current population is under the age of 24 years [5]. However, the health services dedicated to this population are not proportional to their population size, and thus, adolescents and their families often do not know where to obtain medical help should they need it [6]. Adolescents have specific health care needs based on their developmental stage and individual life circumstances. While there is some progress in the health systems of the GCC, as in many countries, a gap exists between the training, knowledge and skill-set of existing health-care providers and the needs of the adolescents for whom they provide care [7].

This review focuses on the health status of adolescents in the countries that make up the GCC, namely, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE). We examine the changing causes of morbidity and mortality among this age group. We also identify the state of evidence in these countries for key adolescent health issues, including health-compromising behaviors that are global targets for prevention and intervention. As a case example, we focus on the country of Qatar. We identify the call for specific health care services for adolescents in the GCC, including the specific needs for adolescent-responsive hospital care and support during the transition to adult health care settings for youth with special health care needs. Finally, we present a set of recommendations for addressing the health of adolescents in the GCC, and as supplementary material, we offer a brief proposal for improving the health system for adolescents through a national adolescent health center for clinical care, training, and research.

2. Review

2.1. The state of adolescent health in Arab Gulf countries

Throughout the world, the leading causes of death and the burden of diseases for health systems have shifted from communicable diseases, which were the primary causes in the 1990s, to non-communicable diseases (NCD), such as ischemic heart disease, stroke, diabetes, and cancers, as well as mental health problems [8,9]. Non-communicable diseases kill more people each year than all other causes combined [10], and four of the key modifiable risk behaviors—tobacco use, excessive use of alcohol, unhealthy diet, and insufficient physical activity—begin or become entrenched during the adolescent years. These behaviors can lead to weight issues including and obesity, high blood pressure, and high cholesterol—all directly related to NCDs.

Although most adolescents are healthy most of the time, the assumption that adolescence is a healthy stage that needs little attention is inaccurate, as evidenced by the recently released 2012 estimates of mortality and morbidity for adolescents [9]. While there has been a notable decline in many causes of death and disability among infants, children and adults, mortality has declined more modestly among adolescents [9], even though most causes of adolescent death are preventable. The leading causes of morality and of disability-adjusted life years (DALYs), an estimate of years of healthy life lost prematurely due to death, disease, or living with a disability, also reveal issues in adolescent health that have received less attention, especially within the Arab region, such as road injuries and other unintentional injuries, depression, suicide, alcohol abuse, interpersonal violence, and war [9].

2.2. Leading causes of mortality

According to the World Health Organization (WHO), there are challenges to accurately estimating country-specific leading causes of adolescent mortality in many regions of the world, thus estimates are grouped within WHO regions to improve accuracy. An exception is high income countries, which are grouped together throughout the world, because of their similarities in patterns of mortality [9]. Although the WHO Eastern Mediterranean Region includes the GCC countries, they are primarily high income countries, and therefore, their mortality patterns likely differ from the low and middle income countries in their region. When leading causes differ for high income countries and the Eastern Mediterranean Region, both are reported.

Road traffic injuries are among the top five leading causes of death among adolescents worldwide, in all regions, among both male and female adolescents, and for both younger (10–14) and older (15–19) age groups [9]. For high income countries such as the GCC, road traffic injuries are the number one cause of death, at 3.74 deaths per 100,000 for girls and 9.10 deaths per 100,000 for boys. The other four top causes of death among younger adolescents include self-harm (suicide), leukemia, and congenital anomalies for both boys and girls, plus drowning for boys and lower respiratory infections for girls. Among older adolescents in high income countries, four of the top five causes of death are the same for boys and girls, namely, road traffic injuries, self-harm, interpersonal violence, and drug use disorders, while the fifth is drowning for boys and congenital anomalies for girls. Among the low and middle income countries in the WHO Eastern Mediterranean Region, another leading cause of death for both 10- to 14-year-olds and 15- to 19-year-olds is war, which accounts for the highest rate of death for both older and younger boys, the second highest rate for younger girls, and the fourth highest rate for older girls [9]. Maternal mortality is the leading cause of death among older girls in the Eastern Mediterranean Region, although it is not in the top five causes among girls in high income countries.

2.3. Leading contributors to disability-adjusted life years (DALYs)

Not only are accidents, mental health issues, violence and substance use disorders among the leading causes of death, but they also contribute to premature loss of healthy life for adolescents in high income countries of the GCC [9]. The leading contributors to DALYs among adolescents in 2012 have not changed much since 2000 and are quite similar for boys and girls, as well as older and younger adolescents. Among adolescents overall, the leading contributors are unipolar depressive disorder, anxiety disorders, alcohol use disorders, road traffic injuries, back and neck pain, and asthma. Among younger adolescent girls (10–14 years), migraine is also a leading contributor to DALYs, whereas childhood behavioral disorders are among the top five contributors for younger boys. Among older male and female adolescents, alcohol use disorders outrank asthma, whereas for boys, self-harm contributes more to DALYs than anxiety. Together, mental health and substance use issues account for more than one-half of the top-ranked DALYs among adolescents in high income countries such as those in the GCC [9]. Though these DALYs capture the current burden of disease among adolescents, they may not best document the role that health-compromising behaviors that begin during adolescence play in contributing to DALYs in later years. Other analyses have estimated the impact of long-term contributors and have identified

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