

## Analysis of Iranian Youth Health Policy: Necessity of Action-oriented Interventions

### Abstract

**Background:** Protecting the youth and adolescents' health is considered to be an indicator of health equity. The current study was conducted to analyze health status of the Iranian youth and adolescents, identify service gaps, and design action-oriented interventions. **Methods:** In this study with multimethods design conducted in 2014, first to identify and analyze the current situation, related articles and national and international documents were searched and reviewed. Then, stakeholders' analysis, interviews, group discussion, and analysis of the youth and adolescent health management system were done, and the policy document was drawn up in three sections of recognition, orientation, and suggested interventions. **Results:** The most important focus areas of the youth and adolescents' health were identified to be their behavior and lifestyle, less advantaging of primary health care in cities, and high rates of educational dropouts. Considering a responsive national structure to develop and implement a comprehensive and integrated program for educating healthy lifestyles and reducing risky behaviors and focusing on accident prevention as a first priority at the level of impact and planning on risk factors of noncommunicable and communicable diseases related to sexually transmitted infections and AIDS at the outcome-level indicators is a necessity through intersectoral collaboration and community participation strategies. **Conclusions:** Achieving premiere indicators of the Iranian youth health requires political commitment and support of the state, more than ever. To cooperate and utilize the capacity of other sectors to implement the Ministry of Health and Medical Education programs, establishment of the youth health commission is recommended with participation of the main partners.

**Keywords:** Adolescence, equity, public health, youth

### Introduction

The youth and adolescents are ongoing assets and potential adults in a society and supporting them increases their tolerance against obstacles and difficulties.<sup>[1]</sup> Promoting a healthy lifestyle during adolescence and attempting to protect them from health risks to prevent adulthood problems for future health and social infrastructures of countries is considered an important public health goal as well as an issue of public health ethics.<sup>[2]</sup>

Based on the definition given by the WHO, adolescence refers to ages 10–19 years. According to this definition, a majority of teenagers are classified in the age group under 18 as stated in age-oriented definition given by children's rights convention. This overlapping also exists with other definitions, for example, UN definition for youth (15–24-year-old). WHO and others call individuals who range between 10 and 24 years as young people.<sup>[3]</sup>

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About one out of every six people in the world is a teenager. In other words, 1.2 billion people equal to 16.4% make up population of 10–19 age groups.<sup>[3]</sup> In the Eastern Mediterranean region, Iran ranks in the second place after Egypt for having a young population, and its young population ratio is equivalent to world ratio. According to the census 2011, young people (10–24) constitute 27.5% of the total population while the adolescents (10–19) make up 16.34%.<sup>[4]</sup>

The WHO report 2014 on “Health for the World's Adolescents,” while notifying death of 1.3 million teenagers in 2012 due to preventable and treatable diseases and disasters, has emphasized maintaining and improving adolescents' health. The WHO has pointed out supporting the adolescent health is one out of ten key functions of health sector and also indicator of equity and emphasized investing in the adolescent health research as a priority.<sup>[3]</sup>

Recent studies underscore rights of the youth. Human rights have a central

**How to cite this article:** Damari B, Alikhani S, Akrami F. Analysis of Iranian youth health policy: Necessity of action-oriented interventions. *Int J Prev Med* 2018;9:39.

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10.4103/ijpvm.IJPVM\_341\_16

### Quick Response Code:



role in our approach toward action on health social determinants.<sup>[5]</sup> The emphasis on the early years of life is followed by some recommendations for young people and adolescents. Transformation and globalization is taking place rapidly while supporting structures of the previous generations of young people are eroding. Neglecting basic supports to empower those results in leaving school due to socioeconomic reasons.<sup>[5]</sup> If countries lacking a comprehensive and coherent system fail to bring about real changes, despite bearing high costs will confront a great number of citizens deprived of health. They have to promote both utility and justice.<sup>[6]</sup> Ensuring universal coverage of health care is an answer to all. Alcohol and tobacco consumption, physical inactivity, unprotected sexual relationships, and exposure to violence threaten their future health<sup>[1,3]</sup> which indicates focusing on risky behaviors and conditions considered the immediate causes of some health inequalities.<sup>[3]</sup>

Resulted index of global school-based health survey and Caspian surveillance system,<sup>[7-9]</sup> Noncommunicable Disease Risk Factor InfoBase,<sup>[10]</sup> and state statistics<sup>[11]</sup> raises a question stating that what are necessary interventions to develop health status of the Iranian youth and adolescents? On what age limit, where and how do these interventions should be applied? According to the new population policies of the country with the approach of birth increasing,<sup>[11]</sup> the present study has been conducted to analyze health status of the Iranian youth and adolescents, identify service gaps, and design necessary interventions.

## Methods

In this multimethods study conducted in 2014,<sup>[12]</sup> first to identify and analyze the current situation, related articles and national and international documents were searched and reviewed. Then, stakeholders' analysis, interviews, group discussion, and analysis of the youth and adolescent health management system were done. After drawing up the policy document in three sections of recognition, orientation, and suggested interventions and requirements, prepared document was handed over to the Technical Steering Committee (TSC) to be amended and completed. The details were been described as followings:

1. To analyze the changing trend of indicators, published and unpublished reports and articles were identified and analyzed. For databases searching, appropriate keywords as "youth" or "adolescent health" or "youth health" or "schools' health" and "Iran" were used as follows:
  - Report of surveillance system for health behaviors of adolescent students (CASPIAN)<sup>[7-9]</sup>
  - Reports of surveillance system regarding risk factors of noncommunicable diseases during 2004, 2006, and 2007, for age group of 15–24 years<sup>[10]</sup>
  - Studies and reports of UNFPA in the Islamic Republic of Iran (IRI)<sup>[13]</sup>

- The last reports of Death Registration System in IRI<sup>[14]</sup>
  - Report of disease burdens and risk factors in IRI<sup>[15,16]</sup>
  - National document for special multisector development of organizing the youth affairs<sup>[17]</sup>
  - National survey of mental health in IRI<sup>[18]</sup>
  - The survey two decades of prevalence studies among Iran university students<sup>[19]</sup>
  - Reports of performance and issued programs of the Ministry of Health and Medical Education (MOHME) on the youth health (MOHME Performance Report, 2006–2010)<sup>[20]</sup>
  - Study on dropouts in Iran<sup>[21]</sup>
  - A selection of Labor Force Survey Results 2014<sup>[22]</sup>
  - Studies on health content of school textbooks.<sup>[23-25]</sup>
2. Reviewing upstream documents: All upstream documents were collected from top positions, parliamentary rules, legislations and regulations of executive bodies, and related agreements and memorandums of understanding (MU). These documents were collected through searching in internet websites of stakeholder organizations and interview with STC members
  3. Stakeholders' analysis: This analysis was done using a commitment and influence matrix and a TSC. List of selected legal entities with high influence and commitment was organized in the form of TSC and an official notice from the head of the Secretariat of Supreme Council of Health and Food Security (SCoHFS). To elect aforementioned members, two criteria of expertise and executive background have been considered
  4. Interview and group discussion: In conducting interviews, intentional sampling method was used and members of TSC were selected as interviewees. All people got familiarized to the items of the interview in an introduction meeting and after obtaining appointment; interviews were implemented and recorded with their consent. Overall, 14 members were interviewed and the answers were classified in the four main interview questions below:
    1. What is the health status of the Iranian youth and adolescents?
    2. What are the causes and influencing factors of the current situation?
    3. How do you assess the success of previous related interventions?
    4. What are the priority interventions?
  5. SWOT Analysis: In this analysis, the youth and schools health office and the related Bureau was considered as internal environment, and other offices of Ministry of Health and Medical Education (MOHME) and prioritized stakeholder organizations out of it, are deemed to be external environment. To analyze internal environment, three main functions of health system including stewardship, resources

(financial, human, and information), and services are investigated. Strengths and weaknesses of internal environment were listed in the form of context, purpose, method of management, resources (human, information, money, and equipment), and standard processes using the above data. Threats and opportunities were determined in near and far parts, respectively. The near environment included the attitude and performance of stakeholders whereas the far environment consisted of six major factors: political, economic, technological, social, environmental, and international macro factors.

In this study, adolescent refers to the age group of 10–19 and the youth applies to the age group of 10–24 years old.

## Results

### The current situation

In the age group of 15–29 years, the greatest burden of disease dedicates to intentional and unintentional events and known as the priority of the youth health; 59% of men’s disability-adjusted life years (DALYs) and 27% of women’s DALYs. The incidence of unintentional injuries depending on its type in 2003 among population covered by 12 universities of medical sciences was identified, respectively, as traffic accidents, falls, trauma, burns, bites, poisoning, drowning, electric shock, suffocation, etc. [details has been summarized in Table 1].

The youth national document, in a 20-year vision, has identified the most important issues of the young group. The existence of about three million drug addicts in the country is a serious threat to this age group. There exists no integrated attitude for the youth’s recreation. Investment in this area is very limited, and no national program is

designed and implemented regarding the issue. Double-digit unemployment rates in the country, housing, employment, and marriage are interrelated issues. Analysis of indices reflects the priority needs to intervene in the age group of 10–19 years as an increase of tobacco use and lowered age of beginning it, especially among girls, violence, unhealthy behaviors, inadequate physical activity, obesity, and the shortage of reproductive health literacy.

Based on the CASPIAN studies and surveillance system for 15–24 age groups, in 2004, 2006, and 2007, nonuse of seat belts in the front seat, physical inactivity, obesity and overweight, and smoking followed an upward trend. Intervention-required priorities among the age group of 19–24 years include nonuse of seat belts in the front seat, low physical activity, obesity and overweight, tobacco consumption, especially hookah and reducing age of the first use to 11, sexual contact, and reproductive health [Table 2].

### Current programs of Deputy of Public Health and other relevant organizations

Two existing programs of the youth and adolescents’ health office related to the deputy of health are as follows:

- Service packages for the youth and adolescents’ health (only new entering students) notification to implement from June 2011
- Health promoting schools (piloting stage from October 2010)
- Other departments and sections of MOHME are attempting to implement following items as proper interventions to this age group
- Parenting skills and life skills programs in schools (mental, social health, and addiction Bureau)
- AIDS strategic plan focusing on young group: Teenage friendly service centers offering life skills training services, preventing AIDS and addiction, and sport programs in 6 universities and 14 centers (communicable diseases managing center)
- Marriage training program for marrying couples according to emotional and matrimonial relationships in Islam (healthy fertility and population office)
- Joint programs of the United Nations Children’s Fund and other organizations including social health of young people, developing indices and conveying related researches, reduction of road traffic accidents in cooperation with Red Crescent, health promotion of the adolescents out of school, and pilot programs for teenage friendly services
- Fundamental reform program of the Ministry of Education with physical and mental health promotion approach, national curriculum allocating two or three chapters to physical health education and life skills, programs to develop swimming pools and sports facilities for early morning physical exercises, training life skills, family instructors, and holding sporting and religious camps.

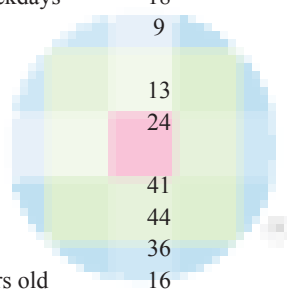
**Table 1: The impact-level indicators**

	Rate (%)	Trend	Study source-year
Burden of disease and injury DALYs in 15-29 years	33	Increase	The Burden of Disease and Injury in Iran, 2003 <sup>[15]</sup>
YLL due to intentional and unintentional injuries (ages 15-29), DALYs per one thousand	360.93		
YLL due to mental diseases and behavioral disorders (ages 15-29), DALYs	274.61		
YLL due to nutritional and metabolic diseases (ages 15-29), DALYs	24.16		
YLL due to suicide and self-inflicted violence (ages 15-29), DALYs	20.55		
YLL due to murder and other-inflicted violence (ages 15-29), DALYs	11.43		

DALYs=Disability-adjusted life years, YLL=Years of life lost

**Table 2: The outcome-level indicators**

	Rate (%)	Trend	Study source-year
<b>Behavioral indicators</b>			
Bullying	27.4	Increase	CASPIAN IV study, 2011-2012 <sup>[9]</sup>
Committing violence and being imposed to violence	17.5		
Reporting injury and having need for school health caregiver	20.3		
Students exposure to indirect tobacco smoke	53		
Students struggling to smoke	5.9		
Average age of the first smoking (years)	11.9	Decrease	
Treatment requiring injuries in youth (during the past 12 months)	42	Increase	Center for disease management: Noncommunicable Disease Risk Factor InfoBase. Iran: 2007-2009 <sup>[10]</sup>
Clashes and fights (during the past 12 months)	60		
Being bullied at school in the past month	37.5		
Bullying at school in the past month	38.4		
Carrying of weapon by young people in the past month	12		
Substance abuse (years)	13.56	Increase	Prevalence studies among Iran University Students 2011 <sup>[19]</sup>
Rate of substance abuse 15-19	16.83		
Rate of substance abuse 20-24	18		
Rate of substance abuse 25-29	14.32		
Prevalence of hookah tobacco smoking in boys	31.5		MOHME, 2015 <sup>[11]</sup>
Prevalence of hookah tobacco smoking in girls	20		
Smoking prevalence in boys	5		
Smoking prevalence in girls	9		
30 min of daily physical activity in leisure time all weekdays	18		CASPIAN study, 2011-2012 <sup>[8]</sup>
No leisure time with physical activity	9		
Regular physical activity			
Girls	13		
Boys	24		
Using computers			
Every day	41		
Weekends	44		
Low physical activity among students 13-17 years old	36		
Watching TV >4 h a day among students of 13-17 years old	16		
Students' brushing			
Once daily			
Rural	42		
Urban	34		
More than once a day			
Boys	34		
Girls	29		
Not washing hands before eating	65		
Not washing hands after toilet	35		
Excess weight higher than normal	12.2		
Low weight less than normal	9.7		
Obesity	11.9		
Abdominal obesity	19.1		
Whole wheat bread consumption in urban and rural families	37		
Oil consumption in urban households	39		
Hydrogenated oil consumption in urban households	53		
Hydrogenated oil consumption in rural families	32		
Rate of table salt consumption in students			
Rural	36		
Urban	29		
<i>P</i>	<0.05		



Contd...

**Table 2: Contd...**

	Rate (%)	Trend	Study source-year
Eating breakfast during weekdays	13		
Weakly consumption of junk foods	36		
Weakly consumption of Soft beverages	31		
Weakly consumption of ready meals	24		
Daily consumption of fresh fruits			
Rural	59		
Urban	45		
<i>P</i>	<0.05		
Social environment			
Dropouts			
6-10 years old	3.32	Increase	Rahbari, <i>et al.</i> , 2014 <sup>[21]</sup>
11-13 years	12.68		
14-17 years	27.08		
Allocation of a small content of school textbooks to healthy behaviors	0.0004		Sarvesrani 2004 <sup>[27]</sup>
The number of centers providing reproductive health services to adolescents and youth	9		Ramezanzadeh <i>et al.</i> , 2010 <sup>[28]</sup>
Status of this center			
Physical criteria/standards	Moderate	Decrease	
Nonmedical expertise	Weak		
The number of street and labor children	22-7/1000		
Rate of population employment of 10 years and more	37.3	Increase	Statistical Center of Iran 2014 <sup>[22]</sup>
Unemployment rate at ages 15-24 years	25.7		

MOHME=Ministry of Health and Medical Education

Review of the documents and interventions of the last decade implies necessity of paying more attention to the health of this age group. However, only one comprehensive health program was been planned for young people with direct collaboration of MOHME and the National Youth Organization (NYO). Despite being approved by MOHME in 2009, there exists no evaluation documentary of implementing this program. Diversity and coverage of interventions for health promotion of both age groups in accessible situations (such as education place, workplace, and life and recreation places) is weak; so that, practically, there is no systematic plan for out of school teens, most college students, off-campus youth, the employed, and the unemployed.

#### Analyzing organizational situation

The analysis revealed that the managing system is in a weak position while in internal environment and is in a threatened position when located in the external environment.

#### Orientation (focus areas, landscape, and strategic goals)

##### Focus areas

The most important focus areas of the youth and adolescents' health were identified to be their behavior and lifestyle, less advantaging of primary health care in cities, and high rates of educational dropouts. Thus, to achieve better health indicators in this age group, developing public policies of the youth health, designing

education and workplace-oriented interventions, and providing urban primary health-care system is necessary [Figure 1].

##### Landscape

Formation of intersectoral collaboration to promote the youth health throughout the country and planning the 5-year action plan can become feasible with the cooperation of main partners.

*Strategic goals (all percent are forecasted according to the base year 2013)*

- Communicable and noncommunicable diseases by 10%
- Increase of the health literacy level among the youth and adolescents, parents, educators, and administrators by 30%
- Decline of events and accidents by 10%
- Decrease of psychiatric disorders by 5%
- Enhanced vitality score
- Reduction of the violence and stress in workplaces.

Stabilizing the percentage of school dropouts among teenagers, reducing the number of runaways, labor and street teenagers, and divorce and unemployment.

##### Action-oriented interventions (in terms of roles and situations)

To improve the health status of adolescents and young people and achieve specified goals, it is necessary to deal

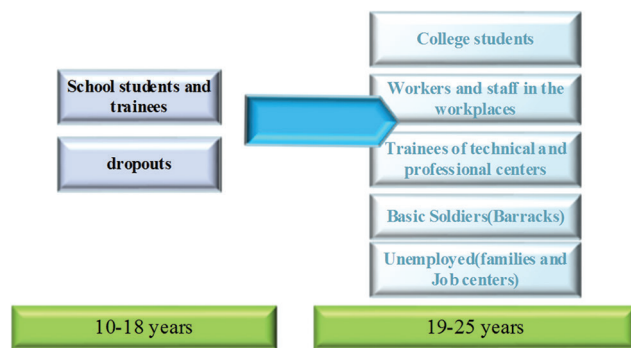


Figure 1: The multisettings to intervene in young and adolescents groups

with existing gaps in policymaking and planning through multilevel and multisetting interventions as follows:

### Mandatory interventions

- Supporting and serious participation of the Ministry of Sports and the Youth and NYO as the official administrator of age group over 15 years through revising the youth national document and supervising its proper implementation
- Designing information management system of indices by integration of current surveillance systems and eliminating overlaps and redefining of valid indices for the young group in physical, mental, social, and spiritual dimensions
- Changing traditional approach of school health into the modern integrated approach for comprehensive and coordinated planning of school-based health, staff health promotion, and community and school programs, describing health services, staffing standards for schools, covering education survivors in workplaces, barracks, and stadiums through health networks and trade unions, and training model groups as a systematic and provincial program
- Adolescents' participation in planning, implementing, monitoring, and evaluating interventions
- Codifying and approving laws for reproductive health services and reviewing caregivers law and amendment law of 1995
- Evidence-based development of health-promoting schools initiative and extending it to all schools, developing parent-teacher association partnership and its connection to the health model of public participation
- Establishing permanent commission of the youth health, making regulations and its approval by SCoHFS is anticipated to hold meetings with participation of main stakeholders, approve, and monitor the suggested interventions.

### Promotional interventions

Note: In all programs of age group 10–14 years, giving information about physical changes of puberty for teenagers, the parents and teachers should be considered.

### Establishment of the program

For establishing a comprehensive program, there are four prerequisites including legitimacy and popularity of document (approved by authorities and partners), funding, empowered human resources (at national, provincial, and sector level), program monitoring, and evaluation system. Because of defensive organizational position, it could not be expected that in the first 5 years of implementing this policy document, significant changes be presented in indicators of impact level. However, the following three underlying strategies are necessary to improve institutional position of the system:

- Obtaining multilateral support of governmental, nongovernmental, and private sectors
- Creating fields of public participation
- Empowering and strengthening internal management system of the youth and adolescents' health.

### Discussion

The findings reflect the necessity of practical multilevel and multisetting interventions to prevent risky behaviors and improvement of healthy behaviors and services, with a healthy lifestyle approach while promoting social conditions in different situations. To achieve best indices in this age group, developing healthy public policies, designing education or workplace-based interventions, and providing urban primary health-care system are recommended. To measure and compare the trend of young people and adolescents' health, there are many "information gaps" for policymaking that requires redefining of reliable indicators for the youth and designing comprehensive management system of the information and integrating it into the available surveillance systems.

A more important point is the insufficient etiologic studies of risky behaviors. The significant relationship between perceived susceptibility, benefits, barriers, and cues to action with puberty health in female adolescents,<sup>[29]</sup> increasing smoking particularly in girls, and process of illiteracy, and school dropouts in the age group of 15–24 years particularly in boys is notable.<sup>[11,30]</sup> That's why planning for health coverage of this age group is considered necessary through schools, workplaces and health networks, and trade unions while developing quality and quantity of health promoting schools project.<sup>[31,32]</sup>

A major challenge of the youth health as a cultural and religious subject is sexual and reproductive health. Due to the reduction of adolescent friendly health-care centers,<sup>[28]</sup> legislation for reproductive health training of married and unmarried adolescents, monitoring indices, training in various opportunities, and providing these services in the youth friendly clinics along with other health services and its integration into family medicine centers are some proposed interventions. Seeking effective and continuous support for reproductive health

to influence government policies and also participating of NGOs is required to pose the problem on every occasions.<sup>[33]</sup>

Findings suggest the necessity of developing the youth surveillance system to monitor health-related behaviors, determining the trend and its causes to design evidence-based effective interventions and provide high-quality services in achieving health equity. Our suggestion to the researchers is studying the behavioral and environmental factors of youth health and reasons of its changing to design, implement, and monitor policies and interventions in cooperation with stakeholders and community. Political commitment of the government to consider a coherent and responsive national structure through development and implementation of a comprehensive and integrated program to educate healthy lifestyles and reduce risky behaviors with a focus on social determinants of health and considering accident prevention as a first priority at the level of impact indicators and planning on risk factors of noncommunicable and communicable diseases related to sexually transmitted infections and AIDS at the outcome-level indicators is a necessity. It can be realized by applying intersectoral collaboration and community participation strategies under supervision of the SCoHFS. Social marketing and public mobilization as well are effective strategies in the youth health policy using mass media. The WHO report 2014 on “Health for the World’s Adolescents” has recommended four main areas to promote managing system of the adolescent health: offering health services, collecting and utilizing required data to advocacy and monitoring interventions related to the health sector, implementing health-protecting policies, and collaborating of other sectors.<sup>[3]</sup>

The strengths of this study include an extensive review of documents and adopting various methods to decide on action-oriented interventions. Nonparticipation of the NYO in this study is counted as a limitation.

## Conclusions

Achieving premiere indicators of the Iranian youth and adolescents’ health is subject to policymaking and simultaneous intervening on social determinants of health such as parental education, employment, and provision leisure facilities with gender equity approach. To coordinate and monitor the youth health-oriented action plans in other organizations and utilize the capacity of other sectors to implement MOHME programs, establishment of the youth health commission following SCoHFS is recommended with participation of the main partners.

## Suggestions

The following scheduled measures are recommended to establish the youth and adolescents’ health policy document in accordance with the Sixth Development Plan:

- Capacity building in the 1<sup>st</sup> and 2<sup>nd</sup> years

- Implementing and monitoring the program in the 2<sup>nd</sup> and 3<sup>rd</sup> years
- Evaluation of the program at the 5<sup>th</sup> year.

## Acknowledgments

We acknowledge the cooperation of the expert staff of the youth and schools health office of the Deputy of Public Health, MOHME.

## Financial support and sponsorship

We appreciate the WHO for its financial and technical support (APW/09/03383).

## Conflicts of interest

There are no conflicts of interest.

**Received:** 28 Sep 16 **Accepted:** 25 Jul 17

**Published:** 26 Apr 18

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