An Overview on the Comprehensive Program on Prevention and Control of High Risk Behaviors in 7-18-year-old Individuals in Isfahan, Iran

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Editorial

Health is a dynamic concept which is influenced by economic, social and cultural status of the community. Now-a-days health is no longer defined as a lack of disease conditions; instead it refers to the state of complete physical, psychological, social and spiritual welfare for and individual leading a happy life.

As communities experience dramatic changes due to the development and application of new technologies, new risks also emerge that may threaten different social strata or age groups. Adolescents are basically among the most vulnerable groups of the community. Engagement in high-risk behaviors seriously interfere with and in many cases hamper natural physical growth, normal social activities, skill acquisition, sense of competence and stepping into higher developmental phases.

With respect to the great importance of adolescence and the large population of teenage students, we decided to carry out this innovative study on Isfahan province students in 2009. We enjoyed the collaboration of 14 executive bodies. Our study aimed to prevent high-risk behaviors in adolescent students and therefore we basically needed to collect the required data of the current status of high-risk behaviors among our study group. This was critically necessary for setting our priorities and planning our interventional policies.

Adolescence is a phase of physical and psychological development that discriminates adulthood from childhood. According to World Health Organization, adolescence is a developmental period from 10 to 19 years of age. Significant global changes are taking place in absolute and relative number of adolescents especially in developing countries. The age of drug abuse onset, unfortunately, has fallen within the years of adolescence. In a study in Tehran, 6.9% of students had an experience of drugs and 16.9% had already smoked. The most common types of drugs used by Iranian adolescents were opium and marijuana.[1]

Studies showed that the age range of drug abusers is decreasing worldwide. This has in particular put adolescents at a higher risk for addiction which is a real concern in many communities.

Negligence to the threat of drug abuse will undoubtedly lead to catastrophic consequences such as social insecurity, devastation of economic and social resources and increase in crimes and misconducts.[2] In general, drug abuse is the product

of the interaction between individual, substance and the environment. Therefore, personal attitude towards drugs and their effects was shown to be an important determinant for addiction. Another determinant was the quality and availability of drugs.[3] It was shown that behavioral change in addiction largely depends on knowledge and attitude.[4]

Drug abuse is a common phenomenon all around the world and is considered as the most important social threat aiming human communities.[5,6] Drug abuse refers to a pattern of substance use which leads to unpleasant consequences including a wide range of psychological behavioral and cognitive signs and symptoms.[1] Smoking and drug abuse usually begins in adolescence.[5] More than 90% of smokers began smoking before 18.[6] In 2001 in the United States (US) it was estimated that more than half of adolescents finishing high school had at least used 1 illegal drug. In the same year, it was shown that the most commonly used drugs in the US were extasis (methylenedioxymethamphetamine), marijuana, heroin, lysergic acid diethylamide and cocaine.[5] Alcohol and cigarettes were the 2 most commonly abused substances in the US.[6] Studies showed that age, male gender, high-risk behaviors, a smoking fellow, experience of substance use and positive attitude towards smoking cigarettes were closely associated with adolescence smocking.[7] It is not yet clear to what extent may an adolescent resist his peers' offer for substances.[8] Studies showed that in the 1st year of educational interventions, tendency and use of substances decreased dramatically.[9]

Violence is an acute social problem which affects almost all people in different parts of the world regardless of their race, religion, education, occupation and socioeconomic status.[10]

Not only scientific studies, but also media reports showed that violence has increased in recent years. In most countries of the world, this includes a wide range of physical, emotional or verbal assaults, which put a painful effect on both physical and mental health of the individual. Violence is one of the main concerns of almost all communities.[11]

In the year 2007 in the US, a total of 5764 people from 10 to 24 years were murdered.

In many societies today, poverty, lack of spirituality, development of materialism, disrespect of family values and excessive fun and joy have given rise to hopelessness and future phobia, which may serve as bases of violence.[12]

Some studies suggested an undeniable role for parents' education in controlling children's violence.[13] They also found that this role was more pronounced for mothers.[14]

Accidents are the cause of 2 adolescents' deaths out of every 5 in the US. The risk of accidents for the 16–19-year-old age group increase 4 times per every mile of driving.[15] Road traffic accidents are counted the 2nd cause of death for the 5–29-year-old age group worldwide.[16]

Concerning traffic accidents, children and adolescents are the most vulnerable age groups. Physical disability of this stratum causes a significant recession in social activities and the extensive domain of their damage ranges from individual's physical and psychological injuries to social economic burdens.[17]

It was shown that most injuries posed to children occurred during their school hours.[17,18] Violence has changed its pattern in the western world. There have been reports of violence in 9% to 54% of school-age children[19] and violence was considered as the top cause for youth injuries especially in low socioeconomic communities.[16,20]

In a study by Cohall in 1998, individuals younger than 18 years were engaged in 19% of violent crimes. Almost half of all crimes were committed by males.[16]

Adolescents with a history of violence showed a greater risk for school dropout, depression and Posttraumatic Stress Disorder.[20]

According to the US Center for Disease Control and Prevention, violence is the 2nd cause of death in the 10–24 years age group. In 1995, a report showed that up to one fourth of American students carried guns even when they were at school.[21]

In another report in the US, 30% of students were either engaged in or were victim of violence. A different survey also showed that 7% of 12–18-year-old students had a history of violence. Violence was more common among the students in public schools and in rural areas.[19]

Improper food habits are usually acquired from family, friends and peers. Obesity depends on genetic factors, eating habits, life style and right food availability. In a study in the US in 2001, <25% of adolescents had 5 servings of fruit and

vegetables a day. Furthermore, only 16% had a minimum of 3 glasses of milk a day.

Our first priority was developing a valid comprehensive questionnaire for our survey. To achieve this goal, we invited experts from 14 different organizations who were linked to high-risk behaviors of the youth. Then in a pilot study, each questionnaire was tested for validity and reliability using Cronbach's α (>0.7) among 30 individuals. Necessary modifications were made and a questionnaire for every high-risk behavior was finalized.

We included all students in both rural and urban parts of Isfahan province regardless of their age, year of education and gender into our study.

The sample size for each high-risk behavior was calculated with a confidence coefficient of 95%. We applied multistage stratified cluster random sampling in this study.

The sample size for different high-risk behaviors were as follows:

- Improper diet (malnutrition): 4700 students ranging from 10 to 14 years of age
- Physical inactivity: 3500 students ranging from 7 to 14 years of age
- Accidents: 7000 students ranging from 7 to 14 years of age
- Violence: 5500 students ranging from 13 to 17 years of age
- Smoking: 5500 students ranging from 13 to 17 years of age
- Drug abuse: 5000 students ranging from 14 to 17 years of age.

With respect to the extent of the project and importance of the data, an experienced staff of 50 was briefed in a 1-day workshop. They received necessary instructions for unification of data collection and bias control. They were closely monitored and checked during the project by a team of supervisors.

Questionnaires were filled by the students themselves however 10% of the questionnaires were rechecked by 2 supervisors. There were 22 supervisors in 20 towns of the province. Questionnaires with more than 20% unanswered questions were excluded.

With respect to the fact that behavioral habits acquired in the youth may persist all through an individual's life and also the complexity of new generation's behaviors, having a clear picture of high-risk behaviors in this age group especially in a country with growing population of the youth seems quite necessary.

Moreover, behavioral patterns change over time and therefore without an updated profile of adolescents' high-risk behaviors, any interventional policy dooms to failure.

Multi organizational engagement in the process not only helps share the experience but also provides grounds for more extensive studies and broader ranges of interventions that lead to promotion of youth health and prevent their high-risk behaviors.

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