



Opinion

A Call for Comprehensive Cardiac and Psychological Screening among School Students in Iran Following Recent Sudden Deaths

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In October 2025, the Iranian media reported three tragic deaths among school students over a short period, two of whom died of sudden cardiac arrest and one died of suicide after being said to suffer psychological distress in school.¹ These incidences have raised profound public concerns and highlighted the debate over the effectiveness of health monitoring systems in the Iranian schools. Although sudden death among children and adolescents is usually multifactorial, the experience in other countries indicates that both undiagnosed cardiac diseases and psychological stress can be pivotal factors.

One of the preventable cases, though rare, is sudden cardiac death (SCD) among the young population. Major contributors are undiagnosed structural or electrical heart diseases, including hypertrophic cardiomyopathy (HCM), congenital abnormalities of the coronary artery, and syndromes of inherited arrhythmias.² A number of countries have implemented preventive screening programs. For example, Italy has initiated a compulsory pre-participation screening of young athletes, using electrocardiogram (ECG) in the 1980s, which reduced the incidence of SCD by 89% in the screened populations.³ Similarly, Japan requires ECG screening of school-going children at the time of admission, which ensures early diagnosis of asymptomatic heart conditions.⁴

Comparatively, most nations, such as Iran, lack standardized guidelines for cardiovascular evaluation in school-age children. Although there are some efforts through family medicine practices, the vast majority of the students do not receive any systematic evaluation, unless they show symptoms or have a known family history of cardiac disease. This model does not consider the silent yet possibly fatal abnormalities. A possible first step could be the implementation of a targeted screening protocol, including reviewing medical history, physical examination, and resting ECG of high-risk groups. Priority should be given to students who have

a family history of sudden death, fainting episodes, and palpitations.

The psychological dimension is also important. The suicide of a middle-school student in Shiraz after he was reported to have been humiliated by school staff (though not confirmed) is a testimony to the importance of mental health screening and a supportive environment. Global evidence confirms that the risk of adolescent suicide can be greatly decreased through early detection of signs of psychological distress and bullying prevention programs.^{5,6} The physical health screening program can be supplemented by integrating periodic mental health assessment by trained counsellors and having confidential reporting systems to detect mental illness.

To achieve both feasibility and impact, Iran might adopt a phased, school-based system of health surveillance:

- Annual physical examination of all the students (including blood pressure, pulse rate, and basic cardiovascular examination)
- ECG screening for at-risk students (e.g. those with a significant family history of cardiac diseases, including sudden death below 40 years of age)
- ECG screening for those participating in competitive sports
- Mandatory psychological screening and education on mental health, integrated into the school curriculum
- Training of teachers on early detection of symptoms related to cardiac diseases (e.g. unexplained fainting), as well as the warning signs of emotional distress.

Such a dual approach, addressing both the cardiac and the psychological health, would place Iran's educational health policies in line with the best global practices and would help avoid tragedies similar to the recent ones. Notably, intersectoral collaboration with the Ministry of Education, the Ministry of Health, and academic medical centers should be considered in the process of its implementation to ensure sustainability and data-driven

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assessment.

Competing Interests

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