

# School-Based Mental Health Promotion and Suicide Prevention in Yamagata, Japan: A Sustainable Model of Help-seeking Behavior Education

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## Abstract

In response to persistently high suicide rates in the Tohoku region of Japan, Yamagata Prefecture implemented a school-based mental health education program called "How to Express SOS," aiming to promote help-seeking behaviors among children and adolescents. The initiative involves collaborative development of model lessons by educators, public health nurses, and university faculty. Its core philosophy integrates both population-wide and high-risk approaches, emphasizing self-disclosure, mutual support, and community-based mental health literacy.

Interactive techniques, such as metaphorical use of paper balloons to visualize psychological stress and recovery, help students internalize the concept of resilience. Local health professionals are introduced in classrooms to provide accessible support networks. Early outcomes show increased student willingness to seek and offer help, and a reduction in youth suicide rates—from an annual average of 8 (2018–2022) to 1 in 2023.

This opinion piece presents a culturally grounded and systemically integrated model of suicide prevention. It offers transferable lessons for public health and nursing professionals engaged in mental health promotion and school-based interventions.

## Introduction

Japan has long faced serious challenges with suicide prevention, with particularly elevated suicide rates in the Tohoku region, including Yamagata Prefecture [1]. Over several years, Yamagata's suicide rate remained higher than the national average, especially among adolescents and working-age populations. However, in 2023, Yamagata's suicide rate dropped below the national average for the first time in years. This paper presents an overview of the "How to Express SOS" program—a model that integrates mental health education into all elementary, junior high, and public high schools in the prefecture. The program aims to cultivate a culture where students feel safe to express distress, support their peers, and access available community resources when needed.

## Context and Rationale

Youth suicide in Japan has shown a disturbing upward trend in recent years. National data indicate a sharp increase in suicide among teenagers and individuals in their twenties since 2020, reversing previous years of gradual decline (Figure 1). This increase coincided with the COVID-19 pandemic and related disruptions in social life, education, and family stability. In Yamagata, approximately 80% of male suicide cases and 60% of female cases had no previous recorded suicide attempts, making proactive detection and upstream intervention crucial. These figures highlight the need for broad, population-based approaches that can reach individuals who may never explicitly express suicidal intent. In this context, early educational interventions in schools become not only relevant but necessary as a means of equipping young people with the language, confidence, and social structures to express distress and seek help.

## Program Description and Implementation

The "How to Express SOS" education program was designed with the goal of normalizing help-seeking behavior, reducing stigma, and enhancing mental health literacy among students in elementary,

## Publication History:

Received: June 13, 2025  
Accepted: June 27, 2025  
Published: June 28, 2025

## Keywords:

Mental Health, Bhavior education, Health literacy, Suicide prevention

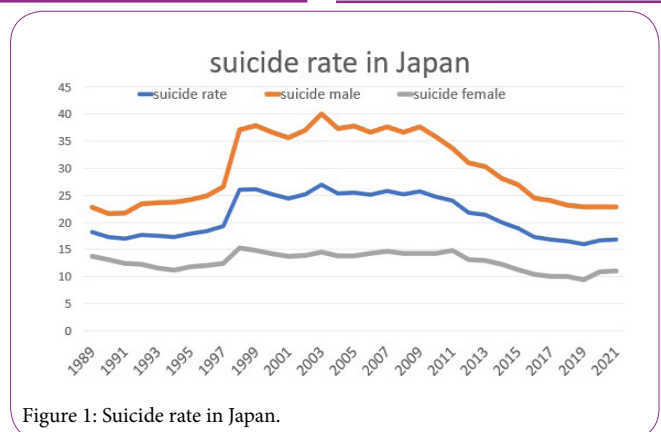


Figure 1: Suicide rate in Japan.

junior high, and high schools. This initiative is unique in that it targets the entire student population while also preparing mechanisms to identify and assist at-risk individuals [2].

Model lessons were developed and delivered collaboratively by faculty from Yamagata Prefectural University of Health Sciences, public health nurses from municipal offices, and school educators. These model lessons were observed by teachers and administrative staff, who later replicated them as part of a sustainable roll-out strategy. Prior to implementation, involved staff underwent training sessions emphasizing the principles of gatekeeping and interdisciplinary collaboration.

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**Citation:** Ambo H (2025) School-Based Mental Health Promotion and Suicide Prevention in Yamagata, Japan: A Sustainable Model of Help-seeking Behavior Education. Int J Nurs Clin Pract 12: 418. doi: <https://doi.org/10.15344/2394-4978/2025/418>

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**Educational Strategies and Metaphors**

To effectively convey psychological concepts to students, the program incorporates engaging and age-appropriate metaphors. A central metaphor is the use of a paper balloon to explain stress and recovery. When pressed or deflated, the balloon represents mental and emotional exhaustion. The lesson teaches that simple, daily activities-sleep, nourishment, play, and connection-can “bounce” the balloon back into shape, symbolizing recovery. However, a severely deflated balloon may require external support, i.e., help from others, reinforcing the importance of seeking help in difficult times.

This metaphor allows students to understand that mental fatigue is not a sign of weakness but a physiological state that requires care, just like physical injury. Another metaphor commonly used is the “Doraemon model,” representing nonjudgmental support and multiple solution pathways. Students are encouraged to adopt a strengths-based mindset, recognizing that asking for help is a responsible and proactive act of self-care [3].

**Fostering Peer Support and Positive Communication**

A distinctive feature of the program is the promotion of peer support. Instead of simply encouraging students to disclose their struggles, the program teaches them how to support peers in distress through positive and non-threatening communication. Students practice checking in on each other with questions derived from the WHO-5 Wellbeing Index. For example, instead of asking “Are you okay?”-which may prompt defensiveness-they are taught to ask, “How much time did you feel relaxed and cheerful this week? [4]”

This approach not only encourages open dialogue but also enables mutual emotional awareness. By framing conversations positively and reflectively, students become more willing to express vulnerabilities and accept help. This in turn fosters a culture of empathy and emotional safety within the classroom (Figure 2).

**Community Involvement and Gatekeeper Training**

The program also ensures that students are introduced to community-based resources. Public health nurses are invited to participate in classroom sessions and directly address students,

presenting themselves as accessible sources of support. They explain where they work, how they can be contacted, and what kinds of issues students may bring to them. This demystifies the help-seeking process and makes support more tangible [5].

At the same time, teachers and public health professionals receive training on how to identify signs of distress, initiate support, and connect students to appropriate services. These training sessions underscore the importance of collaboration between the education and health sectors, thereby distributing responsibility across professionals and preventing burnout or isolation among individual staff.

**Impact and Outcomes**

The impact of the “How to Express SOS” education program has been observed both quantitatively and qualitatively. Surveys administered before and after lessons revealed a significant increase in students’ willingness to seek help-from peers, teachers, and healthcare professionals. More notably, these improvements were sustained even three months after the intervention. The proportion of students who indicated that they would talk to their teacher in a time of need increased dramatically [6].

Additionally, the number of suicides among individuals under 20 in Yamagata dropped from an annual average of 8 (2018–2022) to just 1 in 2023. While a direct causal link cannot be firmly established, the data support the hypothesis that upstream educational interventions can contribute meaningfully to suicide prevention.

**Lessons Learned and Implications for Practice**

Yamagata’s model offers several important lessons. First, suicide prevention efforts can be effective when integrated into the school curriculum in a way that is age-appropriate and culturally resonant. Second, sustainability is enhanced when local professionals, including public health nurses and teachers, are trained and involved from the outset [7]. Third, help-seeking can be promoted not merely through knowledge transfer, but through experiential learning, peer interactions, and the cultivation of empathetic relationships that make students feel psychologically safe. When students experience both the ability to express distress and the experience of being heard and understood, they are more likely to seek support in times of need.

The use of metaphors and culturally familiar narratives (e.g., Doraemon, the “Giant Turnip” folk tale) provides a relatable framework for complex emotional concepts. Encouraging both self-compassion and compassion for others creates a classroom climate where mental health challenges can be discussed without fear or shame.

**Conclusion**

The “How to Express SOS” program in Yamagata Prefecture exemplifies an innovative and culturally responsive approach to suicide prevention. By combining universal mental health education with targeted supports for at-risk youth, and by fostering intersectoral cooperation, the program achieves both scale and depth. Its positive early outcomes suggest it may serve as a valuable reference for other regions, both within Japan and internationally, seeking to develop school-based mental health promotion strategy.

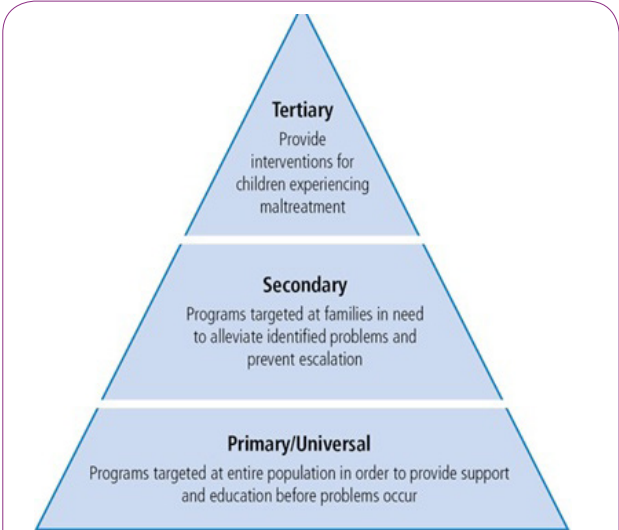


Figure 2: Primary prevention + Secondary prevention for education.

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## Competing Interests

The authors declare that they have no competing interests.

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