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# Suicide risk among adolescents in Sarawak, Malaysia: prevalence and determining factors

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## Abstract

**Objectives:** Adolescent suicide is a significant global public health concern. Although numerous studies have investigated factors that influence the risk of suicide among adolescents around the world, limited data are available in the Malaysian context, especially among the diverse ethnic communities of Sarawak. This study aimed to determine the factors associated with the risk of suicide among adolescents in Sarawak, Malaysia.

**Methods:** A community-based cross-sectional study was conducted among 1,344 adolescents in Sarawak using face-to-face interviews. Hierarchical binary logistic regression analysis was performed to identify factors that determine the risk of suicide among adolescents.

**Results:** Two predictive models were constructed. Both models revealed that being female (OR=1.578, 95 % CI: 1.191, 2.092,  $p=0.001$ ), having Malay ethnicity (OR=1.733, 95 % CI: 1.236, 2.429,  $p=0.001$ ) and having a disease significantly increased the risk of suicide (OR=1.895, 95 % CI: 1.221, 2.942,  $p=0.004$ ). In particular, Model 2, which showed a better fit, found that occasional religious practice (OR=1.610, 95 % CI: 1.126, 2.303,  $p=0.009$ ), poor parental relationships (OR=1.739, 95 % CI: 1.035, 2.922,  $p=0.037$ ) and higher addiction (OR=1.015, 95 % CI: 1.008, 1.022,  $p=0.001$ ), depression (OR=1.919, 95 % CI: 1.241, 2.968,  $p=0.003$ ), and stress (OR=2.707, 95 % CI: 1.689, 4.340,  $p=0.001$ ) scores were significantly associated with an increased risk of suicide.

**Conclusions:** This study sheds light on multiple factors that contribute to the risk of suicide among adolescents in Sarawak. These findings underscore the importance of holistic prevention strategies, including psychological and social dimensions, to mitigate the risk of suicide in this population.

Further research is warranted to understand the complex interplay of these factors and guide the development of targeted interventions.

**Keywords:** adolescents; suicide risk; suicidal attempt; suicidal ideation; Sarawak

## Introduction

Suicide, a major public health concern, takes around 800,000 lives worldwide every year [1] and is the fourth leading cause of death among older adolescents aged 15–19 years worldwide [2]. Understanding adolescent suicide risk factors, warning signs, and opportunities for prevention and intervention is imperative to reduce these tragic deaths.

The distribution of adolescent suicide deaths and attempts shows marked geographic variability worldwide. In the USA, between 2000 and 2018, the suicide rate among youth aged 10–24 years rose from 6.8 per 100,000 to 10.7 per 100,000 [3]. This rise made suicide the second leading cause of death for people aged 10–14 in 2021 [4]. However, the overall suicide rate declined in 2019 and 2020 before rising nearly back to its 2018 peak again in 2021 [3]. In total, 17.2% of the young adolescents evaluated reported having attempted suicide in the past year. The prevalence of suicide attempts was highest in the Western Pacific region (28.6%) and lowest in the Asian region (8.9%) [5]. According to a 2023 study, East Asian countries, such as China and South Korea, have higher rates of suicide among young people than other age groups. The World Health Organization database also states that the suicide rate in the western Pacific region is 12.6 per 100,000 people aged 15–29 years [6]. The annual prevalence of suicide in Africa was found to be 34,000, with an incidence of 3.2 per 100,000. The median point prevalence of suicidal ideation in adolescents aged 10–19 years from several countries in sub-Saharan Africa was 11.6% [7]. Data also indicate differences in the sex distribution of suicidal behaviour by region and national income level [8]. Global suicide rates have decreased by more than one-third in the last 30 years, but youths in low- and middle-income countries (LMIC) still have a high representation in suicide statistics and are under-represented in research [9].

Alarming high rates of suicidal thoughts and behaviours among Malaysian youth have become a significant public health concern [10]. The National Health and Morbidity

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