



The role of parental and peer support in adolescent suicidal behavior in eight South-East Asian countries

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DECLARATION

This thesis is a presentation of my original research work submitted in fulfilment of the requirements for the degree of Master of Public Health and entitled ‘The role of parental and peer support in adolescent suicidal behavior in eight South-East Asian countries’. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. I also declare that I adhered to all principles of academic honesty, integrity and have not misinterpreted or fabricated or falsified any idea/data/fact/source in my submission.

Moomtahin Sultana



Date: August 2021

DEDICATED TO

THE DEPARTED SOUL OF MY BELOVED FATHER
WHO GAVE ME THE GREATEST GIFT ANYONE COULD EVER
GIVE TO ANOTHER PERSON, 'HE BELIEVED IN ME'.

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ALL THE PRAISES AND THANKS BE TO ALLAH, THE LORD OF THE 'ALAMIN

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Abstract

Background: Suicide is a significant global health issue and a leading cause of death among adolescents, including South-East Asian countries. Little research related to suicide has been undertaken in this region. The aim of this study is to estimate the prevalence of suicidal behavior i.e. suicidal ideation (SI), suicidal plan (SP), and suicidal attempt (SA) among adolescents and understand the factors with a special focus on parental and peer support that contributed to these behaviors in eight South-East Asian countries (Bangladesh, Bhutan, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka & Thailand).

Methods: Data were drawn from Global School-based Student Health Survey (GSHS) of adolescents aged 11 to 17 years from eight South-East Asian countries. Weighted prevalence of SI, SP and SA overall and at country level were estimated and adjusted association between outcome variable and independent variables was also estimated using binary logistic regression.

Results: The sample comprises 42,888 adolescent students aged between 11 and 17 years, with 19,113 (44.9%) males and 23,441 (55.1%) females. Overall prevalence of SI, SP and SA is 9.10%, 10.42% and 8.54%, respectively, in the 12 months preceding the survey. Prevalence of SI is lowest in Myanmar (1.07%) and highest in Maldives (14.13%), SP is lowest in Myanmar (0.18%) and highest in Maldives (19.02%) and SA is lowest in Indonesia (3.79%) and highest in Maldives (13.38%). Adolescent suicidal behaviors were associated with being female, high levels of sedentary behavior, involvement in physical fighting, being seriously injured, being bullied, feeling lonely, lack of parental support and not having close friends.

Conclusion: The prevalence of adolescent suicidal behaviors varies across these eight South-East Asian countries, yet a consistent set of risk factors emerged across all of them. In order to reduce the risk of suicide, enhancement of parental and peer support, control of suicidal means, school and clinic based suicide screening and preventive programs among adolescents must be strengthened.

Keywords: Adolescent suicide, Suicidal ideation, Suicidal plan, Suicidal attempt, Global School-based Student Health Survey (GSHS), Parental and Peer support, South-East Asia.

1. Introduction

Every suicide is a tragedy that affects families, communities and has long-lasting effects on the people left behind and to the country. Every year 703,000 people take their own life and there are many more people who attempt suicide (WHO, 2021). The global age-standardized suicide rate was 9.0 per 100,000 population in 2019 (Geneva: World Health Organization, 2021). Suicide is ranked fourth by the age standardized mortality rate in eastern Europe, sixth in industrialized countries of Asia Pacific region, seventh in Australasia, and tenth in both central Europe and the industrialized countries of North America (WHO, 2008; Naghavi, 2019). Suicide accounts for 1.3% of all deaths worldwide, with 8.5% of incidence rate among young people aged 10-24 years (Rodriguez et al., 2018) which is a serious public health concern around the world. It continues to be 4th leading cause of preventable death in young people aged 15–29 years for both sexes, after road injury, tuberculosis and interpersonal violence (Geneva: World Health Organization, 2021). Low and middle income countries (LMICs) are the most affected countries, accounting for over 77% of global deaths due to suicide (WHO, 2021). Most adolescents who died by suicide (88%) were from low- and middle-income countries where nearly 90% of the world's adolescents live (Geneva: World Health Organization, 2021). South-East Asia region covers a total of 11 low and middle-income countries, accounting for 26% of the world's population. More than one-third (39%) of all suicides globally, occur in this region, and it has the highest suicide rate of 17.7 per 100,000, which is likely to be an underestimate due to differences in study populations, research methodology, and uncomprehensive data registration systems (Vijayakumar *et al.*, 2020).

Suicidal behaviors (non-fatal) are classified into three categories: suicidal ideation (SI), which refers to thoughts of engaging in behavior intended to end one's life; suicidal plan (SP), which refers to the formulation of a specific method through which one intends to die; and suicidal attempt (SA), which refers to engagement in potentially self-injurious behavior in which there is at least some intent to die (Nock *et al.*, 2008). The prevalence of suicidal behaviors varies significantly across countries, cultures, and racial/ethnic groups (Nock, 2009). Even within the same country, there are considerable differences among different populations. In developed countries like USA, there are no group differences until mid-adolescence (ages 15–19 years), at which time the suicide rate among males increases dramatically relative to the rate among females.

The rise for males is greatest among Native Americans/Alaskan Natives, increasing more than fivefold during adolescence and young adulthood, from 9.1 per 100,000 (ages 10–14 years) to 51.9 per 100,000 (ages 20–24 years) (Nock *et al.*, 2008). The lifetime prevalence of SA among African-American women was 5.4% compared with 2.6% among men (Juon and Ensminger, 1997). Adolescents of Indian/Alaskan descent have the highest rates of fatal suicidal behavior of all ethnic groups, and Latino and Caucasian youth have the highest rates of SI and deliberate self-harm (DSH) (Joe, Canetto and Romer, 2008). Similarly, extremely high rates of suicide have been recorded for adolescents among the Inuit population in Canada (Wexler *et al.*, 2008) and the Ethiopian population in Israel (Shoval *et al.*, 2007) which share similar characteristics of being a traditional culture trying to integrate with modern Western culture. In South Africa, suicide is responsible for around 9.5% of non-natural deaths among young people, with school-based studies reporting wide-ranging SI rates of 4%-47% (Cluver *et al.*, 2015). According to WHO's Global Health Estimates 2015, suicide or self-harm is the second most common cause of mortality, after road-traffic injuries among people aged 15–29 years in the South-East Asia Region (WHO, 2017). The estimated suicide rates per 100,000 populations in this age group in South-East Asia varied from 3.6 in Indonesia to 25.8 in Nepal to 35.5 in India (WHO, 2017). However, the 'reported' suicide rate in the countries may be much lower due to stigma, social taboos, and legal issues around reporting of suicide, and hence may significantly underestimate the problem.

Suicidal thoughts, or ideation (SI) are a common phenomenon during adolescence (10-19 years) and among young (15-24 years) adults (Hawton, Saunders and O'Connor, 2012). Childhood and adolescence are prime suicide "prevention window" periods, yet knowledge of suicide prevention pathways during these periods through universal interventions is limited (Wyman, 2014). Several categories of risk factors have been identified for suicidal behaviours including demographics, family environment, child abuse, personality and individual factors, mental health disorders, and stressful life events. Fergusson *et al.* (2000) hypothesized that adverse childhood and family environmental factors increase the likelihood of mental health problems and stressful life events, which, in turn, increase the risk for suicidal behavior (Fergusson, Woodward and Horwood, 2000). There is support both from cross-sectional and prospective studies for SI and SA being more frequent in families with poorer systemic functioning (e.g., cohesion, adaptability, etc.) and more negative parent-child relationships (e.g., more conflict, less maternal responsiveness). Aspects of family and parent-child relationships, child maltreatment, family loss and separations, and family

psychopathology, including suicidal behaviors, are all associated with suicidal behaviors in children and adolescents (Wagner, Silverman and Martin, 2003).

Most individuals presenting with suicidal behavior are affected by mental health illnesses (major depressive disorder (MDD), schizophrenia, substance-related disorders, and/or personality disorders), and association of mental health illnesses are strongest among suicide completers (Turecki, 2014). Half of all lifetime cases of diagnosable mental illness began by age 14 and three-fourths by age 24 (Kessler *et al.*, 2005). There is evidence that suggests that childhood suicidal behaviors are significantly associated with suicide later in adulthood (McNamee and Offord, 1990). However, a 2016 meta-analysis based on longitudinal studies found that these associations were not strong (Ribeiro *et al.*, 2016). Other studies suggest that suicidal behaviors, including SI, SP and SA not only lead to life-threatening events (e.g. physical injury) for adolescents, but also result in trauma and other psychological issues (CDC, 2020). As stated above there are many factors that significantly affect mental health and well-being in adolescence, and these factors have often been overlooked in global health programming. Yet, in the UN Sustainable Development Goals (SDGs), mental health is critically recognized as an important component of global health, and include a target (3.4) that addresses NCDs and mental health with an aim to reduce suicide by a third by 2030 (UN, 2015). The inclusion of mental health in the SDG's is a crucial step toward reducing preventable deaths among adolescents worldwide. Mental health problems in young people thus present not only a major public health challenge but are also a development issue in low and middle-income countries and may be central to achieving different Sustainable Development Goals.

This current paper provides an update on suicide prevalence, associated factors and suicide prevention strategies of adolescents in eight countries of South-East Asia region (Bangladesh, Bhutan, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka & Thailand). Out of these eight countries, six are lower-middle income and two (Maldives and Thailand) are upper-middle income countries as per recent World Bank classification (World Bank, 2021). The risk profile of people who die due to suicide and the characteristics of suicide in South-East Asia are distinctly different from other regions in many ways i.e. in this region the male–female ratio for suicide is closer to 1, compared with 3:5 in high-income countries, and the overall reported prevalence of mental disorders, such as depression or other psychiatric conditions, are lower (Vijayakumar *et al.*, 2020).

Suicide by intentional pesticide ingestion is among the most common methods of suicide globally, and is of particular concern in rural agricultural areas in the South-East Asia Region. Therefore, a better understanding of suicide dynamics in this region is essential to inform and improve the region's public health prevention programs.

1.1. Study Aim

Given the underrepresentation of South-East Asian countries in the global evidence base in terms of suicide related data, this study provides new and updated information on the prevalence of suicidal behavior & associated factors among adolescents in eight South-East Asian countries (Bangladesh, Bhutan, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka & Thailand). Moreover, despite arguments that adolescents from South-East Asia may be at particularly high risk for negative mental health outcomes and suicidal thoughts, few data are available in comparative studies to conclude whether nonfatal suicidal behaviors are relatively high or low among this group of adolescents (Jordans *et al.*, 2018). This study aims to fill this evidence gap, particularly focused on adolescents in eight South-East Asian countries.

2. Methods and Materials

2.1. Study design and data source

A cross sectional study design was adopted to investigate the prevalence and associated factors of suicide among adolescents in eight South-East Asian countries (Bangladesh, Bhutan, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka & Thailand). Data for this study were generated from the most recent World Health Organization Global School-based Student Health Survey (GSHS) (WHO, 2020a). GSHS is a collaborative surveillance project of school-going children and adolescents aged 11 to 17 years around the world. The GSHS provides data on different aspects of adolescent behaviors and protective factors, with the aim to help countries develop suitable school and adolescent health programs and policies, and to facilitate comparison of these behaviors and related factors across countries. The questions in each GSHS are tailored according to the context

of each country, but the study design and participant selection procedure are similar across the 101 GSHS countries.

2.2.Sampling procedure

A standardized scientific survey procedure was followed consisting of a common methodology, including core questionnaire modules, core-expanded questions, and country-specific questions that were combined to form a questionnaire that could be self-administered during one regular class period (WHO, 2020b). To obtain a representative sample of students, a two-stage cluster sampling technique was used. Schools representing geographic regions of a specific country were selected during the first stage. Then during the second stage, schools were chosen with a probability proportional to enrolment size, followed by a random selection of the classes within these schools, so that all students in a selected class and school had an equal probability of participation. All students in these selected classes were eligible to participate in the survey. A total of 42,888 students were drawn from the eight South-East Asian countries.

2.3.Measures

Outcome measures

Adolescence suicidal behaviors which include SI, SP and SA were considered as the outcome variables. Each of these outcome variables was measured with a single self-reported item or question. SI and SP were assessed using two items with a response option of ‘yes’ or ‘no’: “During the past 12 months, did you ever seriously consider attempting suicide?” and “During the past 12 months, did you make a plan about how you would attempt suicide?” SA was measured based on the question "During the past 12 months, how many times did you actually attempt suicide?" Each response was dichotomized (1 = 'yes' if the participants reported suicide behavior during the past 12 months or 0 = 'no' otherwise).

Explanatory variables

Most studies have shown that the risk of suicide increases with age and rates are higher among males than females (Kotila and Lönnqvist, 1988; Lee *et al.*, 2019). Therefore, these two demographic factors were included as explanatory variables. Age was grouped as follows: '11–12', '13', '14', '15', '16', and '17 years'. The gender of the participants was coded as 'male' or 'female'.

Lifestyle factors included questions on sedentary behaviors, overweight and obesity related information. Students were asked, "How much time do you spend during a typical or usual day sitting and watching television, playing computer games, talking with friends, or doing other sitting activities?" Students' daily sitting activities were categorized as follows: 'none', '<1 hour', '1–2 hours', '3–4 hours', '≥5 hours'. Some questions asked participants about their weight and height and from the results BMI were calculated and obesity status was determined following the standard measure (WHO, 2004). Violence and unintentional injury were assessed by asking students how often they had been physically attacked or participated in a physical fight and the frequency they experienced serious injuries or bullying victimization. Physical violence by peers was assessed with the questions: "During the past 12 months, how many times you were physically attacked?" and "During the past 12 months, how many times were you in a physical fight?" Student responses for being physically attacked and fighting one or more times were recoded as 'yes' or 'no' otherwise. If they reported being seriously injured one or more times according to the question "During the past 12 months, how many times were you seriously injured?", their response was coded 'yes', otherwise, it was coded 'no'. Participants' bullying victimization was defined as dichotomized (1 = 'yes' if the participant reported bullying experiences on one or more days, or 0 = 'no' otherwise).

Anxiety and feeling of loneliness were included as psychological factors. Participant's level of anxiety was assessed using the following question: "During the past 12 months, how often have you been so worried about something that you could not sleep at night?" This item indicates loss of sleep due to worry and was used as a proxy for anxiety (Biswas *et al.*, 2020a). Feeling loneliness was assessed using the question "During the past 12 months, how often have you felt lonely?" These responses were coded as 'never', 'rarely or sometimes', 'most of the time' or 'always'. Protective factors measured peer social support at school and parental regulation and monitoring. Peer support was assessed using a proxy variable based on the question "During the past 30 days, how often were most of the students in your school kind and helpful?" To which students could

respond ‘never’, ‘rarely’, ‘sometimes’, ‘most of the time’, or ‘always’. Responses were recoded as 0 = ‘never’, 1 = ‘rarely or sometimes’, or 2 = ‘most of the time and always’. The number of close friends was recorded as 0 = ‘none’, 1 = ‘1–2 friends’, or 2 = ≥ 3 friends based on the survey question “How many close friends do you have?” Parental regulation and monitoring were assessed as the role of parental supports using three variables: parents checking homework (i.e., “During the past 30 days, how often did your parents or guardians check to see if your homework was done?”), parents understanding the problem (i.e., “During the past 30 days, how often did your parents or guardians understand your problems and worries?”), and parental monitoring (i.e., “During the past 30 days, how often did your parents or guardians really know what you were doing with your free time?”). Responses were recorded as ‘never’, ‘rarely or sometimes’, ‘most of the time or always’.

2.4. Statistical analysis

All analyses were weighted using a sampling unit, which is derived from the probability of a school being selected, a classroom being selected, school and student level non-response, and gender. This included using strata and primary sampling units at the country-specific level. Weighted estimates of prevalence were expressed. In the analytical exploration, binary logistic regression (outcome variables: adolescents’ suicidal behaviors as dichotomized) were employed to examine the association between participants’ suicidal behaviors (SI, SP, and SA) and a set of explanatory factors (e.g., sociodemographic, violence and unintentional injury, psychological, non-communicable disease risk, and protective factors). Regarding the explanatory variables, the category levels found to reflect a lower risk of suicidal behaviors (or magnitude of suicidal behaviors) were considered the reference for constructing odds ratios using binary logistic regression with a 95% CI. The study also looked at interaction effects in the regression models. Statistical significance was considered at the 5% risk level. All analyses were performed using the statistical software Stata/SE 15 (StataCorp, College Station, Texas, USA).

3. Results

3.1. Participant characteristics

A total of 42,888 adolescent students aged between 11 to 17 participated in the survey (Table 1). The highest number of participants (22.7%, $n = 9,708$) were from age groups 14 and the lowest number (10%, $n = 4,292$) were from 11-12 years' category. More than half of the participants (55%, $n = 23,441$) were female. About, 5% ($n = 2,204$) were overweight and 1.7% ($n = 742$) were obese with 11.8% ($n = 4,616$) being very inactive. Thirty-four percent (34%) ($n = 12,320$) students were physically attacked while 27.8% ($n = 10,050$) were involved in a physical fight with 37% ($n = 11,791$) being seriously injured in past 12 months. More than one-quarter (28.4%, $n = 11,402$) reported bullying in past 30 days.

More than half of students (53%, $n = 22,463$) reported feeling lonely sometimes or rarely, while 9% ($n = 3,850$) reported feeling lonely most of the time or always, in the past 12 months. Quite similarly 56.6% ($n = 24,112$) students felt anxious sometimes or rarely while 6.1% ($n = 2,609$) felt anxious most of the time or always. Respondents reported their parents check homework 39.6% ($n = 16,666$), understand the problem 42.3% ($n = 17,795$) & monitor what respondents are doing in their free time (45.7%, $n = 19,269$), most of the time or always. More than half of the participants, 67.6% ($n = 28,699$) reported having three or more friends, while 5.7% ($n = 2,427$) reported having no close friends whilst approximately half (49.3%, $n = 6,847$) had supportive peers.

Table 1: Distribution of participant's characteristics

Characteristics	Observations, n (%)	95% CI
Demographic factors		
Age in years		
11- 12 years	4292 (10.04)	(9.76 , 10.33)
13 year	7893 (18.47)	(18.10 , 18.83)
14 year	9708 (22.72)	(22.32 , 23.11)
15 year	8621 (20.17)	(19.79 , 20.55)
16 year	5938 (13.89)	(13.56 , 14.22)
17 year	6285 (14.71)	(14.37 , 15.04)

Sex		
<i>Male</i>	19113 (44.91)	(44.44 , 45.38)
<i>Female</i>	23441 (55.09)	(54.61 , 55.55)
Lifestyle factors		
Adolescent obesity status		
<i>Normal weight</i>	39942 (93.13)	(92.88 , 93.36)
<i>Overweight</i>	2204 (5.14)	(4.93 , 5.35)
<i>Obese</i>	742 (1.73)	(1.61 , 1.85)
Sitting activities per day		
<i><1 hour</i>	15472 (39.79)	(39.30 , 40.27)
<i>1-2 hours</i>	12964 (33.34)	(32.87 , 33.81)
<i>3-4 hours</i>	5832 (15)	(14.64 , 15.35)
<i>>4 hours</i>	4616 (11.87)	(11.55 , 12.19)
Violence and unintentional injury		
Physically attacked		
<i>No</i>	23680 (65.78)	(65.28 , 66.26)
<i>Yes</i>	12320 (34.22)	(33.73 , 34.71)
Physically fighting		
<i>No</i>	26117 (72.21)	(71.74 , 72.67)
<i>Yes</i>	10050 (27.79)	(27.32 , 28.25)
Seriously injured		
<i>No</i>	20055 (62.97)	(62.44 , 63.50)
<i>Yes</i>	11791 (37.03)	(36.49 , 37.55)
Victimisation (bullied)		
<i>No</i>	28699 (71.57)	(71.12 , 72.00)
<i>Yes</i>	11402 (28.43)	(27.99 , 28.87)
Psychosocial factors		
Loneliness		
<i>Never</i>	16075 (37.92)	(37.46 , 38.38)
<i>Sometimes or rarely</i>	22463 (52.99)	(52.51 , 53.46)
<i>Most of time or always</i>	3850 (9.08)	(8.81 , 9.36)
Anxiety		
<i>Never</i>	15883 (37.28)	(36.82 , 37.74)
<i>Sometimes or rarely</i>	24112 (56.6)	(56.12 , 57.06)
<i>Most of time or always</i>	2609 (6.12)	(5.90 , 6.35)
Protective factors		
Parents check homework		
<i>Never</i>	9546 (22.71)	(22.30 , 23.11)
<i>Sometimes or rarely</i>	15827 (37.65)	(37.18 , 38.11)
<i>Most of time or always</i>	16666 (39.64)	(39.17 , 40.11)
Parents understand problem		
<i>Never</i>	7890 (18.77)	(18.39 , 19.14)
<i>Sometimes or rarely</i>	16351 (38.9)	(38.43 , 39.36)
<i>Most of time or always</i>	17795 (42.33)	(41.86 , 42.80)
Parental monitoring		
<i>Never</i>	7197 (17.1)	(16.74 , 17.46)
<i>Sometimes or rarely</i>	15612 (37.1)	(36.64 , 37.56)

<i>Most of time or always</i>	19269 (45.79)	(45.31 , 46.26)
Peer were supportive		
<i>Never</i>	1414 (10.18)	(9.68 , 10.69)
<i>Sometimes or rarely</i>	5630 (40.53)	(39.71 , 41.34)
<i>Most of time or always</i>	6847 (49.29)	(48.45 , 50.12)
Number of close friends		
<i>None</i>	2427 (5.72)	(5.50 , 5.94)
<i>1-2 friends</i>	11306 (26.64)	(26.22 , 27.06)
<i>≥ 3 friends</i>	28699 (67.64)	(67.18 , 68.07)

3.2.Distribution of suicidal behaviors

Data related to SI, SP and SA were analyzed to find the distribution pattern of suicidal behavior of the stated countries. Data of SA were missing for Myanmar and Sri Lanka. Overall prevalence of SI, SP and SA is 9.10%, 10.42% and 8.54%. Examining country specific prevalence rates, SI is lowest in Myanmar (1.07%) & highest in Maldives (14.13%) while similar high patterns are observed in Bhutan (11.51%), Nepal (12.73%), Sri Lanka (10.27%) & Thailand (11.78%). Prevalence of SP among adolescents is lowest in Myanmar (0.18%), highest in Maldives (19.02%) with similar high patterns in Bhutan (13.81%), Nepal (13.32%), Sri Lanka (13.49%) & Thailand (12.88%). Analyzing SA, it is observed that the highest prevalence is in Maldives (13.38%) while lowest is in Indonesia (3.79%) & is also high in Bhutan (10.99%), Nepal (9.22%) & Thailand (12.59%). Bangladesh & Indonesia have similar prevalence across the three categories: SI (Bangladesh 4.31%, Indonesia 5.50%), SP (Bangladesh 5.77%, Indonesia 5.71%), although SA were lower in Indonesia (3.79%) than in Bangladesh (5.12%) (Figure 1).

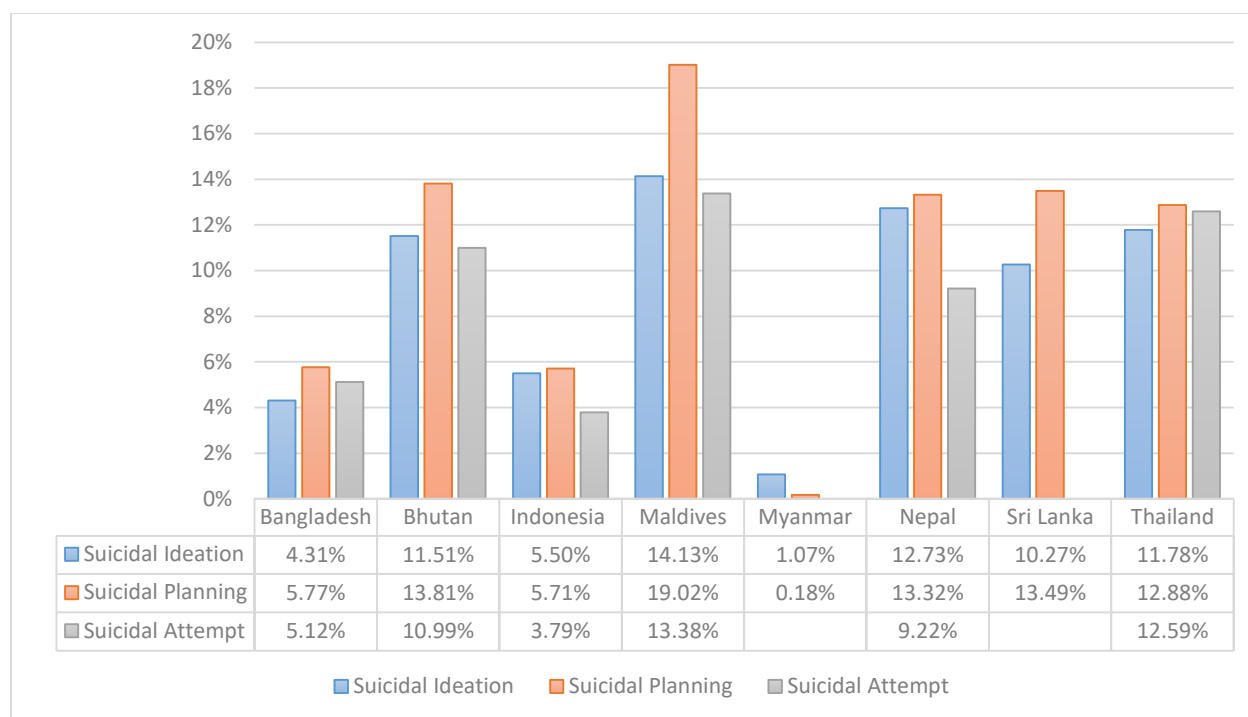


Figure 1: Country-specific prevalence of suicidal ideation, suicidal planning and suicidal attempt

3.3. Adolescent suicidal behaviors and associated characteristics

In Table 2 the associated risk and protective factors for SI, SP and SA are presented. After controlling for factors, adolescents who reported experiencing violence and unintentional injury were at a higher risk of suicidal behaviors. For example, adolescents who reported participating in physical fights, being seriously injured, and being bullied were respectively, at higher odds of SI (AOR = 1.30, 95% CI: 1.07-1.58; AOR = 1.40, 95% CI: 1.17-1.67; AOR = 1.68, 95% CI: 1.39-2.02), SP (AOR = 1.37, 95% CI: 1.14-1.65; AOR = 1.44, 95% CI: 1.22-1.69; AOR = 1.34, 95% CI: 1.12-1.60), and SA (AOR = 1.50, 95% CI: 1.17-1.90; AOR = 1.74, 95% CI: 1.39-2.17; AOR = 1.88, 95% CI: 1.50-2.36) than those who were not involved in any physical fighting, were injured or bullied. Being physically attacked increases the odds of SI (AOR = 1.21, 95% CI: 1.01-1.46).

Table 2: Association of suicidal behavior with participant's characteristics

	Suicidal Ideation				Suicidal Plan				Suicidal Attempts			
	Unadjusted model		Adjusted model		Unadjusted model		Adjusted model		Unadjusted model		Adjusted model	
	OR (95% CI:)	P-value	AOR (95% CI:)	P-value	OR (95% CI:)	P-value	AOR (95% CI:)	P-value	OR (95% CI:)	P-value	AOR (95% CI:)	P-value
Demographic factors												
Age in years (ref = 11- 12 years)												
13 year	0.99 (0.86 , 1.14)	0.840	0.93 (0.68 , 1.29)	0.693	1.10 (0.96 , 1.25)	0.158	1.06 (0.78 , 1.43)	0.693	1.11 (0.96 , 1.29)	0.159	1.00 (0.67 , 1.47)	0.996
14 year	1.08 (0.94 , 1.23)	0.273	0.81 (0.59 , 1.12)	0.212	1.11 (0.98 , 1.27)	0.095	0.99 (0.73 , 1.34)	0.978	1.05 (0.91 , 1.22)	0.489	0.93 (0.63 , 1.36)	0.717
15 year	1.22 (1.06 , 1.39)	0.004	0.79 (0.57 , 1.10)	0.182	1.23 (1.08 , 1.40)	0.001	0.89 (0.65 , 1.21)	0.464	1.08 (0.93 , 1.25)	0.292	0.67 (0.44 , 1.01)	0.061
16 year	1.33 (1.15 , 1.53)	0.000	0.84 (0.58 , 1.21)	0.365	1.30 (1.14 , 1.49)	0.000	0.74 (0.51 , 1.06)	0.104	1.23 (1.05 , 1.43)	0.009	0.68 (0.43 , 1.08)	0.106
17 year	1.56 (1.36 , 1.79)	0.000	1.18 (0.80 , 1.74)	0.398	1.59 (1.40 , 1.81)	0.000	1.05 (0.72 , 1.53)	0.774	1.35 (1.17 , 1.56)	0.000	0.78 (0.49 , 1.24)	0.305
Sex												
Female (ref = Male)	1.20 (1.12 , 1.29)	0.000	1.26 (1.06 , 1.50)	0.007	1.16 (1.09 , 1.24)	0.000	1.34 (1.14 , 1.57)	0.000	0.91 (0.85 , 0.98)	0.014	1.21 (0.97 , 1.50)	0.077
Lifestyle factors												
Adolescent obesity status (ref = normal weight)												
Overweight	1.23 (1.07 , 1.41)	0.004	1.08 (0.74 , 1.56)	0.678	1.15 (1.01 , 1.32)	0.042	1.04 (0.73 , 1.48)	0.796	1.11 (0.96 , 1.29)	0.155	0.67 (0.42 , 1.06)	0.090
Obese	1.12 (0.88 , 1.43)	0.365	0.66 (0.34 , 1.30)	0.234	1.07 (0.85 , 1.35)	0.570	0.99 (0.57 , 1.74)	0.997	0.74 (0.55 , 0.99)	0.045	0.73 (0.37 , 1.44)	0.367
Sitting activities per day (ref = <1 hour)												
1-2 hours	1.03 (0.94 , 1.12)	0.543	1.26 (1.01 , 1.58)	0.049	0.91 (0.84 , 0.99)	0.028	0.97 (0.78 , 1.19)	0.775	0.97 (0.88 , 1.07)	0.546	1.06 (0.79 , 1.42)	0.674
3-4 hours	1.40 (1.26 , 1.56)	0.000	1.53 (1.18 , 1.97)	0.001	1.20 (1.08 , 1.32)	0.000	1.22 (0.97 , 1.55)	0.084	1.29 (1.15 , 1.45)	0.000	1.47 (1.07 , 2.02)	0.015
>4 hours	2.04 (1.84 , 2.26)	0.000	2.08 (1.62 , 2.66)	0.000	1.70 (1.54 , 1.88)	0.000	1.86 (1.49 , 2.32)	0.000	1.86 (1.66 , 2.08)	0.000	1.96 (1.45 , 2.64)	0.000
Violence and unintentional injury												
Physically attacked (ref = no)	1.97 (1.82 , 2.12)	0.000	1.21 (1.01 , 1.46)	0.047	1.86 (1.73 , 1.99)	0.000	1.17 (0.98 , 1.39)	0.078	2.57 (2.37 , 2.79)	0.000	1.19 (0.95 , 1.51)	0.123
Physically fighting (ref = no)	2.27 (2.11 , 2.46)	0.000	1.30 (1.07 , 1.58)	0.008	2.08 (1.94 , 2.23)	0.000	1.37 (1.14 , 1.65)	0.001	2.99 (2.76 , 3.25)	0.000	1.50 (1.17 , 1.90)	0.001
Seriously injured (ref = no)	2.48 (2.29 , 2.69)	0.000	1.40 (1.17 , 1.67)	0.000	2.25 (2.09 , 2.43)	0.000	1.44 (1.22 , 1.69)	0.000	3.56 (3.25 , 3.90)	0.000	1.74 (1.39 , 2.17)	0.000
Victimisation (ref = no)	2.50 (2.33 , 2.68)	0.000	1.68 (1.39 , 2.02)	0.000	2.15 (2.01 , 2.30)	0.000	1.34 (1.12 , 1.60)	0.001	3.35 (3.10 , 3.62)	0.000	1.88 (1.50 , 2.36)	0.000
Psychosocial factors												
Loneliness (ref = never)												
Sometimes or rarely	1.72 (1.58 , 1.87)	0.000	1.64 (1.34 , 2.01)	0.000	1.45 (1.35 , 1.56)	0.000	1.09 (0.91 , 1.30)	0.304	1.74 (1.59 , 1.91)	0.000	1.25 (0.97 , 1.62)	0.080
Most of time or always	5.78 (5.22 , 6.40)	0.000	3.41 (2.60 , 4.46)	0.000	4.31 (3.91 , 4.74)	0.000	1.92 (1.48 , 2.47)	0.000	5.38 (4.81 , 6.01)	0.000	2.25 (1.62 , 3.13)	0.000
Anxiety (ref = never)												
Sometimes or rarely	1.35 (1.22 , 1.46)	0.000	0.38 (0.27 , 0.54)	0.000	1.25 (1.16 , 1.34)	0.000	0.65 (0.48 , 0.87)	0.005	1.83 (1.67 , 2.00)	0.000	1.01 (0.62 , 1.63)	0.972

<i>Most of time or always</i>	5.42 (4.86 , 6.04)	0.000	1.16 (0.59 , 2.26)	0.655	4.58 (4.13 , 5.09)	0.000	1.65 (0.88 , 3.10)	0.116	6.51 (5.80 , 7.32)	0.000	1.64 (0.76 , 3.54)	0.202
Protective factors												
Parents check homework (ref = most of time or always)												
<i>Never</i>	2.03 (1.86 , 2.21)	0.000	1.59 (1.25 , 2.02)	0.000	1.98 (1.83 , 2.14)	0.000	1.52 (1.22 , 1.90)	0.000	1.72 (1.56 , 1.89)	0.000	1.12 (0.84 , 1.50)	0.424
<i>Sometimes or rarely</i>	1.38 (1.27 , 1.50)	0.000	1.19 (0.97 , 1.46)	0.089	1.34 (1.24 , 1.45)	0.000	1.26 (1.04 , 1.52)	0.014	1.32 (1.21 , 1.44)	0.000	1.12 (0.87 , 1.45)	0.367
Parent understand problem (ref = most of time or always)												
<i>Never</i>	2.21 (2.03 , 2.42)	0.000	1.08 (0.73 , 1.60)	0.676	2.12 (1.95 , 2.30)	0.000	1.32 (0.91 , 1.90)	0.131	2.13 (1.93 , 2.35)	0.000	1.57 (0.89 , 2.76)	0.112
<i>Sometimes or rarely</i>	1.50 (1.38 , 1.62)	0.000	1.34 (0.98 , 1.84)	0.061	1.38 (1.28 , 1.48)	0.000	1.12 (0.81 , 1.53)	0.476	1.47 (1.34 , 1.60)	0.000	1.28 (0.77 , 2.13)	0.336
Parent monitoring (ref = most of time or always)												
<i>Never</i>	2.00 (1.83 , 2.19)	0.000	1.38 (0.94 , 2.05)	0.099	2.10 (1.93 , 2.28)	0.000	1.33 (0.90 , 1.96)	0.145	1.97 (1.78 , 2.18)	0.000	1.24 (0.69 , 2.21)	0.461
<i>Sometimes or rarely</i>	1.55 (1.44 , 1.68)	0.000	1.23 (0.90 , 1.68)	0.180	1.56 (1.45 , 1.68)	0.000	1.63 (1.20 , 2.21)	0.002	1.63 (1.49 , 1.77)	0.000	1.32 (0.81 , 2.17)	0.260
Peer were supportive (ref = Sometimes or rarely)												
<i>Most of time or always</i>	1.84 (1.51 , 2.24)	0.000	1.04 (0.86 , 1.24)	0.664	1.68 (1.40 , 2.01)	0.000	1.20 (1.01 , 1.43)	0.030	1.91 (1.54 , 2.37)	0.000	0.96 (0.76 , 1.21)	0.743
<i>Never</i>	1.43 (1.25 , 1.64)	0.000	1.10 (0.83 , 1.45)	0.484	1.20 (1.05 , 1.36)	0.006	1.11 (0.85 , 1.44)	0.413	1.63 (1.39 , 1.91)	0.000	0.99 (0.72 , 1.37)	0.997
Number of close friends (ref = ≥ 3 friends)												
<i>None</i>	2.87 (2.57 , 3.22)	0.000	2.19 (1.66 , 2.89)	0.000	3.03 (2.72 , 3.37)	0.000	2.26 (1.74 , 2.94)	0.000	4.82 (4.30 , 5.40)	0.000	4.23 (3.10 , 5.78)	0.000
<i>1-2 friends</i>	1.49 (1.38 , 1.60)	0.000	1.07 (0.89 , 1.30)	0.425	1.44 (1.34 , 1.54)	0.000	1.08 (0.91 , 1.28)	0.356	2.12 (1.96 , 2.30)	0.000	1.67 (1.33 , 2.10)	0.000
Interaction of parental supports and level of anxiety												
Parents understand problem and level of anxiety (ref = most of time or always \times level of anxiety-never)												
<i>Never \times level of anxiety (sometimes or rarely)</i>	2.79 (2.43 , 3.22)	0.000	2.62 (1.56 , 4.40)	0.000	2.31 (2.03 , 2.63)	0.000	1.33 (0.83 , 2.14)	0.230	3.73 (3.16 , 4.40)	0.000	1.77 (0.89 , 3.51)	0.098
<i>Never \times level of anxiety (most of time or always)</i>	10.08 (8.38 , 12.12)	0.000	2.44 (1.02 , 5.80)	0.043	8.45 (7.09 , 10.07)	0.000	1.80 (0.79 , 4.07)	0.158	11.14 (9.09 , 13.67)	0.000	2.51 (0.96 , 6.54)	0.058
<i>Sometimes or rarely \times level of anxiety (sometimes or rarely)</i>	1.77 (1.56 , 2.01)	0.000	1.18 (0.76 , 1.82)	0.446	1.51 (1.35 , 1.69)	0.000	1.16 (0.77 , 1.73)	0.459	2.46 (2.12 , 2.86)	0.000	1.17 (0.63 , 2.18)	0.606
<i>Sometimes or rarely \times level of anxiety (most of time or always)</i>	6.15 (5.13 , 7.37)	0.000	1.15 (0.52 , 2.56)	0.721	4.63 (3.89 , 5.50)	0.000	1.34 (0.63 , 2.88)	0.440	8.36 (6.87 , 10.17)	0.000	2.25 (0.92 , 5.47)	0.073

Parents monitoring and level of anxiety (ref = most of time or always × level of anxiety-never)												
<i>Never × level of anxiety (sometimes or rarely)</i>	2.79 (2.41 , 3.22)	0.000	1.04 (0.61 , 1.75)	0.879	2.51 (2.20 , 2.87)	0.000	1.32 (0.80 , 2.17)	0.267	4.01 (3.39 , 4.75)	0.000	1.20 (0.60 , 2.41)	0.591
<i>Never × level of anxiety (most of time or always)</i>	7.62 (6.24 , 9.31)	0.000	0.51 (0.21 , 1.18)	0.120	7.35 (6.08 , 8.90)	0.000	0.79 (0.35 , 1.77)	0.567	9.44 (7.57 , 11.77)	0.000	0.61 (0.24 , 1.56)	0.308
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	1.90 (1.68 , 2.15)	0.000	1.06 (0.70 , 1.60)	0.763	1.81 (1.62 , 2.03)	0.000	0.95 (0.64 , 1.40)	0.805	2.76 (2.38 , 3.21)	0.000	0.92 (0.51 , 1.65)	0.784
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	7.42 (6.23 , 8.83)	0.000	1.02 (0.51 , 2.04)	0.948	5.75 (4.86 , 6.81)	0.000	0.73 (0.37 , 1.44)	0.378	10.20 (8.41 , 12.36)	0.000	1.22 (0.56 , 2.65)	0.609

Among the psychosocial factors, feeling lonely most of the time or always remained significant with increasing odds of SI (AOR 3.41; 95% CI: 2.60-4.46), SP (AOR 1.92; 95% CI: 1.48-2.47) & SA (AOR 2.25; 95% CI: 1.62-3.13) while feeling lonely sometimes or rarely is significant for SI (AOR 1.64; 95% CI: 1.34-2.01) after controlling all other variables. Among protective factors, never checking homework by parents increased odds of SI (AOR 1.59; 95% CI: 1.25-2.02) & SP (AOR 1.52; 95% CI: 1.22-1.90) while checking homework sometimes or rarely increases the odds of SP (AOR 1.26; 95% CI: 1.04-1.52). Infrequent parental monitoring (sometimes or rarely) of free times increases the odds of SP (AOR 1.63; 95% CI: 1.20-2.21). Not having any close friends, also increased odds of SI (AOR 2.19; 95% CI: 1.66-2.89), SP (AOR 2.26; 95% CI: 1.74-2.94) & SA (AOR 4.23; 95% CI: 3.10-5.78).

While analyzing demographics & lifestyle factors, it was evident that being female increased odds of SI (1.26; 95% CI: 1.06-1.50) and SP (AOR 1.34; 95% CI: 1.14-1.57). Sedentary behavior, for 1-2 hours in a day increases the odds of SI (1.26; 95% CI: 1.01-1.58), for 3-4 hours increases the odds of SI (AOR 1.53; 95% CI: 1.18-1.97) and SA (AOR 1.47; 95% CI: 1.07-2.02) and for >4 hours in a day also increases odds of SI (AOR 2.08; 95% CI: 1.62-2.66), SP (AOR 1.86; 95% CI: 1.49-2.32) & SA (AOR 1.96; 95% CI: 1.45-2.64) after controlling all other variables.

While identifying risk factors for SI country wise, it were observed that being female (Bhutan AOR 1.47; 95% CI: 1.23-1.76; Indonesia AOR 2.06; 95% CI: 1.64-2.58;); being overweight (Indonesia AOR 1.62, 95% CI: 1.15-2.27) and obese (Nepal AOR 3.96, 95% CI: 1.48-10.54) ; sitting activity >4 hours a day (Bhutan AOR 1.55, 95% CI: 1.20-2.02; Indonesia AOR 3.20, 95% CI: 2.34-4.37; Nepal AOR 1.79, 95% CI: 1.25-2.56; Thailand AOR 1.55, 95% CI: 1.11-2.16); physically attacked (Bhutan AOR 1.38, 95% CI: 1.14-1.66; Indonesia AOR 1.54, 1.21-1.96; Thailand AOR 1.55, 1.11-2.16), being involved with physical fighting (Bhutan AOR 1.35, 1.12- 1.64; Maldives AOR 1.44, 95% CI: 1.06-1.96); seriously injured (Bhutan AOR 1.64, 95% CI: 1.37-1.96; Indonesia AOR 1.37, 95% CI: 1.09-1.72; Maldives AOR 1.55, 95% CI: 1.17-2.05; Sri Lanka AOR 1.48, 95% CI: 1.04 , 2.11, Thailand AOR 1.28, 95% CI: 1.01-1.63) , being bullied (Bangladesh AOR 1.84, 95% CI: 1.14-2.98; Indonesia 2.13, 95% CI: 1.70-2.67; Maldives AOR 1.67, 95% CI: 1.25-2.23; Nepal AOR 1.38, 95% CI:1.15-1.65; Sri Lanka AOR 1.46, 95% CI: 1.02-2.10; Thailand AOR 1.41, 95% CI: 1.09-1.82), feeling lonely sometimes or rarely (Nepal AOR 1.22, 95% CI: 1.01-1.49; Sri Lanka AOR 1.78, 95% CI: 1.17-2.69) and most of the time or always (Bangladesh AOR 3.90, 95% CI: 2.01-7.59, Bhutan AOR 2.17, 95% CI: 1.59-2.95,

Indonesia AOR 2.80, 95% CI: 1.97-3.97; , Maldives AOR 1.99, 95% CI: 1.32-2.99;, Nepal AOR 2.99, 95% CI: 2.22-4.03, Sri Lanka AOR 3.03, 95% CI: 1.72-5.36, , Thailand AOR 2.88, 95% CI: 1.99-4.16) feeling anxious most of the time or always (Bhutan AOR 3.21, 95% CI: 1.79-5.75; Indonesia AOR 3.19, 95% CI: 1.49-6.81; Maldives AOR 2.78, 95% CI: 1.24-6.24), Nepal AOR 3.38, 95% CI: 1.85-6.17) increased the odds significantly after adjusting all other variables.

Among the protective factors, never checking homework by parents (Indonesia AOR 1.44, 95% CI: 1.07-1.95; Nepal AOR 1.53, 95% CI: 1.18-1.97; Sri Lanka AOR 2.79, 95% CI: 1.60-4.88), no parental monitoring of free times (Maldives AOR 2.19, 95% CI: 1.05-4.56; Nepal AOR 1.82, 95% CI: 1.23-2.70; Thailand AOR 2.23, 95% CI: 1.12-4.44), having no close friends (Indonesia AOR 1.76, 95% CI: 1.04-2.95; Maldives AOR 2.08, 95% CI: 1.36-3.16; Myanmar AOR 8.32, 95% CI: 1.30-53.09; Nepal AOR 1.80, 95% CI: 1.25-2.60; Sri Lanka AOR 2.2, 95% CI: 1.23-3.94; Thailand AOR 2.56, 95% CI: 1.75-3.74) increased the odds of SI as well.

Being Female (Bhutan AOR 1.46, 95% CI: 1.24-1.72; Maldives AOR 1.30, 95% CI: 1.01-1.67; Nepal AOR 1.23, 95% CI: 1.03-1.46), being overweight (Maldives AOR 1.60, 95% CI: 1.09-2.35-0.37), sedentary activities for 3-4 hours in a day (Bhutan AOR 1.27, 95% CI: 1.02-1.59; Nepal AOR 1.49, 95% CI: 1.09-2.03; Sri Lanka AOR 0.55, 95% CI: 0.35-0.85) and > 4 hours a day (Bhutan AOR 1.50, 95% CI: 1.18-1.91; Nepal AOR 1.55, 95% CI: 1.07-2.25; Thailand AOR 1.70, 95% CI: 1.24-2.33); being physically attacked (Bhutan, AOR 1.40; 95% CI: 1.18-1.67, Indonesia AOR 1.35; 95% CI: 1.08-1.70; Maldives AOR 1.51; 95% CI: 1.15-2.00), involving with physical fighting (Bhutan AOR 1.21, 95% CI: 1.01-1.44; Maldives AOR 1.64, 95% CI: 1.25-2.15), being seriously injured (Bhutan AOR 1.47, 95% CI: 1.25-1.73; Sri Lanka AOR 1.41, 95% CI: 1.04-1.91; Thailand AOR 1.34, 95% CI: 1.07-1.68); being bullied (Bhutan AOR 1.23; 95% CI: 1.03-1.46; Indonesia AOR 1.49, 95% CI: 1.19-1.87; Maldives AOR 1.61, 95% CI: 1.25-2.09; Nepal AOR 1.33, 95% CI: 1.11-1.59; Thailand AOR 1.36, 95% CI: 1.06-1.74), feeling lonely most of the time or always (Bangladesh AOR 2.16, 95% CI: 1.19-3.93; Bhutan AOR 1.99, 95% CI: 1.49-2.65; Indonesia AOR 3.33, 95% CI: 2.40-4.61; Maldives AOR 1.60, 95% CI: 1.10 -2.32; Nepal 2.42; 1.78-3.29; Sri Lanka AOR 1.93, 95% CI: 1.18-3.17; Thailand AOR 1.75, 95% CI: 1.21-2.51), feeling anxious most of the time or always (Bhutan AOR 2.95; 1.74-5.02; Maldives AOR 2.85, 95% CI: ; 1.44-5.63, Nepal AOR 2.55; 1.37-4.76), parental never understanding of problems (Bhutan AOR 1.57; 95% CI: 1.24-1.98, Indonesia 1.49; 1.14-1.95, Nepal 1.66; 1.10-2.51, Thailand 1.42; 1.05-1.94), never checking homework by parents (Bangladesh AOR

2.06, 95% CI: 1.14-3.70; Indonesia AOR 1.42, 95% CI: 1.08-1.86; Nepal AOR 1.37, 95% CI: 1.06-1.76), never understanding problems by parents (Nepal AOR 1.63, 95% CI: 1.08-2.45), no monitoring of free times by parents (Maldives AOR 3.24, 95% CI: 1.68-6.25; Thailand AOR 2.08, 95% CI: 1.14-3.79), having no close friends (Bangladesh AOR 2.45, 95% CI: 1.39-4.32; Indonesia AOR 2.49, 95% CI: 1.63-3.81; Maldives AOR 2.73, 95% CI: 1.87-4.00; Nepal AOR 2.21, 95% CI: 1.57-3.13; Thailand AOR 3.15, 95% CI: 2.17-4.56) and only having 1-2 friends (Indonesia AOR 1.85, 95% CI: 1.45-2.35; Nepal AOR 1.33, 95% CI: 1.10-1.60; Thailand AOR 1.52, 95% CI: 1.18-1.96) increased the odds for SP after adjusting all other variables.

In case of SA, being female (Bhutan AOR 1.37, 95% CI: 1.14-1.64; Indonesia 1.36, 95% CI: 1.04-1.79; Thailand AOR 1.32, 95% CI: 1.02-1.70), physically attacked (Bhutan AOR 1.57, 95% CI: 1.29-1.90; Indonesia AOR 1.38, 95% CI: 1.02-1.88; Maldives AOR 1.48; 1.07-2.06; Thailand AOR 1.53, 1.15-2.05), engaging in physical fighting (Bhutan AOR 1.50, 95% CI: 1.23-1.82; Indonesia AOR 1.45, 95% CI: 1.05-1.99; Maldives AOR 1.70, 95% CI: 1.23-2.35; Thailand AOR 1.36, 95% CI: 1.03-1.81), being seriously injured (Bhutan AOR 1.90, 95% CI: 1.57-2.28; Indonesia AOR 2.05, 95% CI: 1.54-2.72; Maldives AOR 1.72, 95% CI: 1.27-2.33;), being bullied (Bangladesh AOR 1.66, 95% CI: 1.03-2.69; Bhutan AOR 1.48, 95% CI: 1.23-1.79; Indonesia AOR 1.83, 95% CI: 1.37-2.44; Maldives AOR 1.69, 95% CI: 1.24-2.29; Nepal AOR 2.11, 95% CI: 1.68-2.64; Thailand AOR 1.66, 95% CI: 1.27-2.17) increased odds along with feeling lonely most of the time or always (Bangladesh AOR 2.91, 95% CI: 1.45-5.83; Bhutan AOR 2.24, 95% CI: 1.62-3.11; Nepal AOR 2.82, 95% CI: 2.01-3.95; Thailand AOR 2.59, 95% CI: 1.77-3.79), feeling anxious most of the time or always (Bhutan AOR 3.32, 95% CI: 1.75-6.30; Indonesia AOR 2.95, 95% CI: 1.18-7.33; Nepal AOR 8.38, 95% CI: 4.45-15.79), never understanding of problems by parents (Bhutan AOR 2.53, 95% CI: 1.39-4.60; Nepal AOR 1.89, 95% CI: 1.14-3.13), having no close friends (Bangladesh AOR 2.24, 95% CI: 1.19-4.23; Indonesia AOR 3.81, 95% CI: 9.40-20.30; Maldives AOR 3.44, 95% CI: 2.22-5.32; Nepal AOR 3.00, 95% CI: 2.04-4.40; Thailand AOR 5.50, 95% CI: 3.79-7.98) after controlling all other variables.

4. Discussion

The prevalence of SI, SP and SA in adolescents as reported during the past 12 months in the included eight South-East Asian countries were 9.10%, 10.42% and 8.54% respectively. Differences are observable across countries with Maldives being highest in prevalence of SI (14.13%), SP (19.02%) & SA (13.38%), and Myanmar being lowest in SI (1.07%) & SP (0.18%) and Indonesia being lowest in SA (3.79%). Being female, involvement in physical fighting, being seriously injured, being bullied, feeling lonely most of the time, or always, high levels of sedentary behavior were associated with suicidal behavior. Among the protective factors lack of parental support, not having close friends were associated with suicidal behavior. This information is important to understand the potential magnitude of the public health challenge, and to inform policy.

Prevalence reports of suicidal behavior are similar to another study of 32 middle and low income countries where overall prevalence of suicidal behavior in South-East Asian & Western Pacific countries was 10% (McKinnon, Gariépy, Sentenac and Frank J. Elgar, 2016). Another cross sectional study done in six ASEAN countries conducted among 18-30 years showed SI prevalence of 11.7% (Peltzer, Yi and Pengpid, 2017). However, a study including 40 LMICs has revealed overall SA to be higher at 17.2 % ranging from 6.7% in Malaysia to 61.2% in Samoa (Liu, Huang and Liu, 2018).

Low prevalence of SI in Myanmar (1.1%) & Indonesia (4.2%) was also evidenced by another study among students aged 13–15 years in seven ASEAN member states (Peltzer and Pengpid, 2017). However, the overall prevalence of SI, SP & SA in South-East Asia is lower compared with Africa (SI 20.4%, SP 23.7%, SA 19.98%), Western Pacific (SI 17.9%, SP 17.7% & SA 20.5%), the America's (SI 17.6%, SP 16.1% & SA 15.7%), and Eastern Mediterranean (SI 17.4%, SP 15.0% & SA 17.0%) regions (Uddin *et al.*, 2019).

This study has found females are at higher risk of SI and SP than their male counterparts. For SA, females were not at greater risk than males. These findings are in line with previous studies except for SA which have shown females to be at higher risk or have higher prevalence of SI, SP &/or SA. (McKinnon, Gariépy, Sentenac and Frank J Elgar, 2016; Uddin *et al.*, 2019; Biswas *et al.*, 2020b; Li *et al.*, 2020). There was consistent sex difference in SA rates (females>male) in a direction opposite the

sex differences in suicide completion rates (males>females). This finding that females have higher rates of nonfatal suicidal behavior, while fatal suicide rates are higher for males has been termed the “gender paradox” (Schrijvers, Bollen and Sabbe, 2012).

Consistent with previous findings, this study found that sedentary behavior for 3-4 hours and > 4 hours per day, is associated with an increased risk of suicidal behavior in both male and female adolescents (Carli *et al.*, 2014; Vancampfort *et al.*, 2019; Jiang *et al.*, 2020). Admittedly, there are many explanations for the association between physical activity and emotional distress. For example, engagement in more challenging physical activities could help to build a person’s confidence and subsequently, to decrease their depressive symptoms (Paluska, S.A., Schwenk, 2012). Besides, social relationships developed from regular participation in physical activity may positively impact their mental health (Monshouwer *et al.*, 2013).

Participating in physical fighting, being physically attacked & being seriously injured increases the risk of suicidal behavior. Similar findings were shown in a study across seven ASEAN countries (Pengpid and Peltzer, 2020) as well as another study done on adolescent suicidal behaviors in 32 low and middle-income countries (McKinnon, Gariépy, Sentenac and Frank J Elgar, 2016). Other studies confirm that adolescents who engage in violence are more likely to struggle with suicidal thoughts and behaviors than their nonviolent peers (Lubell and Vetter, 2006). Being bullied is significantly associated with suicidal behavior, which was confirmed in a study on bullying victimization and adverse health behaviors among school-going adolescents in South Asia (Rahman *et al.*, 2020). The findings are consistent where associations between victimization and suicidality were identified through analysis of interactions with additional risk and protective factors (Rahman *et al.*, 2020). Among mental health issues, feeling lonely most of the time or always was significantly associated with suicidal behavior. This validates the findings in several other studies where loneliness and hopelessness is significantly related to youth suicidal behaviors (Borowsky, Ireland and Resnick, 2001; Thompson *et al.*, 2005; Page *et al.*, 2006).

Parental homework checking on a regular basis is a protective factor for adolescent suicide. The family environments of youth with SI were more troubled compared with those of non-suicides (Pelkonen and Marttunen, 2003). Perceived parental support has been found to have a strong association with suicidal thoughts in young adults (Miller, Esposito-Smythers and Leichtweis, 2015; Macalli *et al.*, 2018; Wang *et al.*, 2021). Parental monitoring of free time and parental understanding of problems are associated

with lower odds of mental health problems (Abdirahman *et al.*, 2012). Interaction with friends play an important role in an adolescents' life, influencing them in many ways and it was observed in one study that having a friend attempt or complete suicide significantly predicted SA in that individual. The identifying correlates of SI were the influence of a friend's suicidal behavior, feeling unsupported by family and friends, and experiencing depression (Langhinrichsen-Rohling, Friend and Powell, 2009). In addition, any bullying victimization frequency and physical and psychological bullying victimization was associated with no close friends (Pengpid and Peltzer, 2019). Experts call it multicausality – an interplay of biological, psychological, social, environmental, and cultural factors for adolescent suicide. The communities that people live in and the support available (or lack thereof), as well as stigma, religious, and legal factors are involved in suicide behavior. A person's immediate relationships with family, friends, and significant others as well as psychological and cognitive functions play important roles (WHO, 2018). The findings of a study based on a large national sample of American adolescents indicate that supportive social relations with peers, parents, and school have an interactive relationship in mitigating the risk of SA (Kidd *et al.*, 2006). Life events found to be related to the onset of suicidal behaviors include: a bereavement or the breakdown of a close relationship; interpersonal conflicts with parents, partners or friends; school or work related difficulties; and legal or disciplinary crises (Fergusson, Woodward and Horwood, 2000).

The strength of this study is that it includes a large number of adolescents from eight South-East Asian countries all of which are nationally representative samples. The GSHS uses a standardized scientific sample selection process; common school-based methodology; and questionnaire, which facilitates valid assessments of cross-national or regional differences in the suicide-related phenomenon (WHO, 2020b). Collection of data was standardized and always occurred during a regular class period. The questionnaire did not allow skip patterns in questions enabling consistency and uniformity of comparison across participants. In the absence of standardized methods across surveys, cross-national differences in suicidal behaviors and risk factors are more likely to reflect differences in the type of sample, i.e. community-based and school-based, the wording of questions and data collection procedures.

4.1. Study Limitations

There were several limitations of this study. First, the GSHS data were obtained from a self-report questionnaire which can be subject to recall bias. Some adolescents might have had problems in understanding the questionnaire (e.g., poor reading skills), therefore the answers might deviate from actual picture. Second, participants were adolescents in school aged 11-17 years and there is no data on adolescents aged 18-19 years. Ethics committees may hold the view that asking participants questions about suicidal behavior or suicide bereavement may increase their risk of non-fatal or fatal suicidal behavior, despite evidence to the contrary (Andriessen *et al.*, 2018, 2019; CA *et al.*, 2018). Third, only the adolescents present in school on that particular date completed the survey; therefore, the results are not representative of all adolescents. Fourth, loneliness and anxiety were measured using simple questions rather than a standardized rating scale. Finally, suicidal behaviors are commonly under reported (Mahfoud *et al.*, 2011) and the sensitive nature of suicide, as well as the willingness of the survey participants from diverse sociocultural backgrounds to respond to these items might have affected the results. So, the prevalence reported here might be underestimated.

4.2. Prevention Interventions

Several interventions to reduce the prevalence and risk factors can be the focus of suicide prevention strategies.

First, restrictions on potential harmful activities which can be used as means of suicide has a strong association with suicide prevention (Yip *et al.*, 2012; Betz *et al.*, 2013). These include restricting firearm access by legislation, restricting availability as well as safer storage of poisons, using anti-suicidal shower heads for hanging prevention, converting packaging of toxic analgesics into smaller ones, and erecting barriers at suicide sites etc.

Second, school-based programs are ideal to increase mental health literacy, suicide risk awareness, and skills training which can have significant effects on suicide prevention of adolescents (Zalsman *et al.*, 2016; Arafat and Kabir, 2017).

Third, intervention by primary care physicians in suicide prevention has proved successful. Physician educating & training regarding depression recognition and treatment is considered the most effective

interventions for suicide prevention. Moreover, depression is the most unrecognized and under treated mental illness leading to suicidality. Addressing, screening, treatment, and follow-up of depressed patients is a very important strategy to reduce suicide (Gould *et al.*, 2003; Arafat and Kabir, 2017).

Fourth, screening programs to identify risky individuals and directing them to treatment reduces suicide prevalence. Regular screening for depression, suicidal ideation, suicidal acts, drug abuse, reducing juvenile offenders among the youth can reduce suicide significantly (Gould *et al.*, 2003; Knox *et al.*, 2003).

Finally, the family can play an important role in the prevention of suicide if it is capable of aiding the mental health care services in the early detection and management of family members at risk. In order to attain this goal, the whole family should be aware of how to prevent suicide. The omnipresence of social media may affect the creation or alteration of suicide methods as well as overall suicidality. However, the media can help to reduce suicide by educating family members and peers, by raising awareness and reducing negative attitudes toward mental disorders and suicide.

5. Conclusion

The study findings confirm that SI, SP and SA are a major public health concerns in these eight South-East Asian countries, with Maldives, Bhutan & Thailand having the highest burden. Adolescents in these countries are vulnerable to many predisposing conditions, which compromise their health and wellbeing. The study findings are therefore important to inform strategical decision making, policy implication and related screening and early recognition program strengthening to address suicide prevention across these countries. Raising awareness among every individual about suicide prevention and how it helps providing support to at risk family members specially adolescents is crucial to reduce risk of adolescent suicide. Given the substantial variation across these countries, more targeted and country specific programs are needed to understand the sociocultural context of adolescents' suicidal thoughts and related behaviors and develop interventions accordingly.

6. References

- Abdirahman, H. A. *et al.* (2012) ‘Bullying, mental health, and parental involvement among adolescents in the caribbean’, *West Indian Medical Journal*, 61(5), pp. 504–508. doi: 10.7727/wimj.2012.212.
- Andriessen, K. *et al.* (2018) ‘Harmful or Helpful? A Systematic Review of How Those Bereaved Through Suicide Experience Research Participation’, *Crisis*, 39(5), pp. 364–376. doi: 10.1027/0227-5910/a000515.
- Andriessen, K. *et al.* (2019) ‘Dealing with Ethical Concerns in Suicide Research: A Survey of Australian Researchers’, *International Journal of Environmental Research and Public Health*, 16(7). doi: 10.3390/IJERPH16071094.
- Arafat, S. Y. and Kabir, R. (2017) ‘Suicide prevention strategies: Which one to consider?’, *South East Asia Journal of Public Health*, 7(1), pp. 1–5. doi: 10.3329/seajph.v7i1.34671.
- Betz, M. E. *et al.* (2013) ‘Lethal means restriction for suicide prevention: Beliefs and behaviors of emergency department providers’, *Depression and Anxiety*, 30(10), pp. 1013–1020. doi: 10.1002/da.22075.
- Biswas, T. *et al.* (2020a) ‘Global variation in the prevalence of suicidal ideation, anxiety and their correlates among adolescents: A population based study of 82 countries’, *EClinicalMedicine*, 24(100395), p. 100395. doi: 10.1016/j.eclinm.2020.100395.
- Biswas, T. *et al.* (2020b) ‘Global variation in the prevalence of suicidal ideation, anxiety and their correlates among adolescents: A population based study of 82 countries’, *EClinicalMedicine*, 24(100395), pp. 1–9. doi: 10.1016/j.eclinm.2020.100395.
- Borowsky, I. W., Ireland, M. and Resnick, M. D. (2001) ‘Adolescent suicide attempts: Risks and protectors’, *Pediatrics*, 107(3), pp. 485–493. doi: 10.1542/peds.107.3.485.
- CA, B. *et al.* (2018) ‘The benefits and risks of asking research participants about suicide: A meta-analysis of the impact of exposure to suicide-related content’, *Clinical psychology review*, 64, pp. 1–12. doi: 10.1016/J.CPR.2018.07.001.
- Carli, V. *et al.* (2014) ‘A newly identified group of adolescents at “invisible” risk for psychopathology and suicidal behavior: Findings from the SEYLE study’, *World Psychiatry*, 13(1), pp. 78–86. doi: 10.1002/wps.20088.
- CDC (2020) *Youth Risk Behavior Survey: Data Summary and Trends Report 2009-2019*. GA, USA: Division of Adolescent and School Health, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Available at: <https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBSDataSummaryTrendsReport2019-508.pdf>.
- Cluver, L. *et al.* (2015) ‘Child and adolescent suicide attempts, suicidal behavior, and adverse childhood experiences in South Africa: A prospective study’, *Journal of Adolescent Health*, 57(1), pp. 52–59. doi: 10.1016/j.jadohealth.2015.03.001.
- Fergusson, D. M., Woodward, L. J. and Horwood, L. J. (2000) ‘Risk factors and life processes

associated with the onset of suicidal behaviour during adolescence and early adulthood', *Psychological Medicine*, 30(1), pp. 23–39. doi: 10.1017/S003329179900135X.

Geneva: World Health Organization (2021) *Suicide worldwide in 2019: global health estimates*.

Gould, M. S. *et al.* (2003) 'Youth suicide risk and preventive interventions: A review of the past 10 years', *Journal of the American Academy of Child and Adolescent Psychiatry*, 42(4), pp. 386–405. doi: 10.1097/01.CHI.0000046821.95464.CF.

Hawton, K., Saunders, K. E. E. A. and O'Connor, R. C. (2012) 'Self-harm and suicide in adolescents', *Lancet*, 379(9834), pp. 2373–2382.

Jiang, L. *et al.* (2020) 'Association of Sedentary Behavior With Anxiety, Depression, and Suicide Ideation in College Students', *Frontiers in Psychiatry*, 11(December), pp. 1–9. doi: 10.3389/fpsy.2020.566098.

Joe, S., Canetto, S. S. and Romer, D. (2008) 'Advancing Prevention Research on the Role of Culture in Suicide Prevention', *Suicide and Life-Threatening Behavior*, 38(3), pp. 354–362. doi: 10.1521/suli.2008.38.3.354.

Jordans, M. *et al.* (2018) 'Suicidal ideation and behaviour among community and health care seeking populations in five low- and middle-income countries: A cross-sectional study', *Epidemiology and Psychiatric Sciences*. doi: 10.1017/S2045796017000038.

Juon, H. S. and Ensminger, M. E. (1997) 'Childhood, adolescent, and young adult predictors of suicidal behaviors: A prospective study of African Americans', *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 38(5), pp. 553–563. doi: 10.1111/j.1469-7610.1997.tb01542.x.

Kessler, R. C. *et al.* (2005) 'Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national comorbidity survey replication', *Archives of General Psychiatry*, 62(6), pp. 593–602. doi: 10.1001/archpsyc.62.6.593.

Kidd, S. *et al.* (2006) 'The Social Context of Adolescent Suicide Attempts: Interactive Effects of Parent, Peer, and School Social Relations', *Suicide and Life-Threatening Behavior*, 36(4), pp. 386–395. doi: 10.1521/suli.2006.36.4.386.

Knox, K. L. *et al.* (2003) 'Risk of suicide and related adverse outcomes after exposure to a suicide prevention programme in the US Air Force: Cohort study', *British Medical Journal*, 327(7428), pp. 1376–1378. doi: 10.1136/bmj.327.7428.1376.

Kotila, L. and Lönnqvist, J. (1988) 'Adolescent suicide attempts: Sex differences predicting suicide', *Acta Psychiatrica Scandinavica*, 77(3), pp. 264–270. doi: 10.1111/j.1600-0447.1988.tb05119.x.

Langhinrichsen-Rohling, J., Friend, J. and Powell, A. (2009) 'Adolescent suicide, gender, and culture: A rate and risk factor analysis', *Aggression and Violent Behavior*, 14(5), pp. 402–414. doi: 10.1016/j.avb.2009.06.010.

Lee, S. *et al.* (2019) 'Differences by age and sex in adolescent suicide', *Australian and New Zealand Journal of Public Health*, 43(3), pp. 248–253. doi: 10.1111/1753-6405.12877.

Li, L. *et al.* (2020) 'The prevalence of suicidal behaviors and their mental risk factors among young adolescents in 46 low- and middle-income countries', *Journal of Affective Disorders*. doi:

10.1016/j.jad.2020.11.050.

Liu, X., Huang, Y. and Liu, Y. (2018) 'Prevalence, distribution, and associated factors of suicide attempts in young adolescents: School-based data from 40 low-income and middle-income countries', *PLoS ONE*, 13(12), pp. 1–12. doi: 10.1371/journal.pone.0207823.

Lubell, K. M. and Vetter, J. B. (2006) 'Suicide and youth violence prevention: The promise of an integrated approach', *Aggression and Violent Behavior*, 11(2), pp. 167–175. doi: 10.1016/j.avb.2005.07.006.

Macalli, M. *et al.* (2018) 'Perceived parental support in childhood and adolescence and suicidal ideation in young adults: A cross-sectional analysis of the i-Share study', *BMC Psychiatry*, 18(1), pp. 1–11. doi: 10.1186/s12888-018-1957-7.

Mahfoud, Z. R. *et al.* (2011) 'Prevalence and determinants of suicide ideation among Lebanese adolescents: Results of the GSHS Lebanon 2005', *Journal of Adolescence*, 34(2), pp. 379–384. doi: 10.1016/j.adolescence.2010.03.009.

McKinnon, B., Gariépy, G., Sentenac, M. and Elgar, Frank J (2016) 'Adolescent suicidal behaviours in 32 low- and middle-income countries', *Bulletin of the World Health Organization*, 94(5), pp. 340–350F. doi: 10.2471/blt.15.163295.

McKinnon, B., Gariépy, G., Sentenac, M. and Elgar, Frank J. (2016) 'Adolescent suicidal behaviours in 32 low- and middle-income countries Britt McKinnon,a Geneviève Gar', *Bulletin of the World Health Organization*, 94(5), pp. 340–350F.

McNamee, J. E. and Offord, D. R. (1990) 'Preventing suicide (Reply)', *CMAJ*. Geneva, Switzerland, pp. 609–610. Available at: https://apps.who.int/iris/bitstream/handle/10665/136083/9789275318508_spa.pdf;jsessionid=FF4735A7527A5A91B1657D0C5B7818A0?sequence=1.

Miller, A. B., Esposito-Smythers, C. and Leichtweis, R. N. (2015) 'Role of social support in Adolescent suicidal ideation and suicide attempts', *J Adolesc Health*, 56(3), pp. 286–92. doi: 10.1016/j.jadohealth.2014.10.265.

Monshouwer, K. *et al.* (2013) 'Possible mechanisms explaining the association between physical activity and mental health: Findings from the 2001 Dutch Health Behaviour in School-Aged children survey', *Clinical Psychological Science*, 1(1), pp. 67–74. doi: 10.1177/2167702612450485.

Naghavi, M. (2019) 'Global, regional, and national burden of suicide mortality 1990 to 2016: Systematic analysis for the Global Burden of Disease Study 2016', *BMJ (Clinical research ed.)*, 364(194), pp. 1–11. doi: 10.1136/bmj.194.

Nock, M. K. *et al.* (2008) 'Suicide and suicidal behavior', *Epidemiologic Reviews*, 30(1), pp. 133–154. doi: 10.1093/epirev/mxn002.

Nock, M. K. (2009) 'Suicidal behavior among adolescents: Correlates, confounds, and (the search for) causal mechanisms', *Journal of the American Academy of Child and Adolescent Psychiatry*, 48(3), pp. 237–239. doi: 10.1097/CHI.0b013e318196b944.

Page, R. M. *et al.* (2006) 'Hopelessness and loneliness among suicide attempters in school-based samples of Taiwanese, Philippine and Thai adolescents', *School Psychology International*, 27(5), pp.

583–598. doi: 10.1177/0143034306073415.

Paluska, S.A., Schwenk, T. . (2012) ‘Physical Activity and Mental Health.’, *Sports Med*, 29(3), pp. 167–180. doi: 10.2165/00007256-200029030-00003.

Pelkonen, M. and Marttunen, M. (2003) ‘Child and Adolescent Suicide.’, *Pediatric Drugs*, 5(4), pp. 243–265. doi: 10.2165/00128072-200305040-00004.

Peltzer, K. and Pengpid, S. (2017) ‘Suicidal ideation and associated factors among students aged 13–15 years in Association of Southeast Asian Nations (ASEAN) member states, 2007–2013’, *International Journal of Psychiatry in Clinical Practice*, 21(3), pp. 201–208. doi: 10.1080/13651501.2017.1301486.

Peltzer, K., Yi, S. and Pengpid, S. (2017) ‘Suicidal behaviors and associated factors among university students in six countries in the Association of Southeast Asian Nations (ASEAN)’, *Asian Journal of Psychiatry*, 26, pp. 32–38. doi: 10.1016/j.ajp.2017.01.019.

Pengpid, S. and Peltzer, K. (2019) ‘Bullying victimization and externalizing and internalizing symptoms among in-school adolescents from five ASEAN countries’, *Children and Youth Services Review*, 106(August), p. 104473. doi: 10.1016/j.childyouth.2019.104473.

Pengpid, S. and Peltzer, K. (2020) ‘Suicide Attempt and Associated Factors among Adolescents in Five Southeast Asian Countries in 2015’, *Crisis*, 41(4), pp. 296–303. doi: 10.1027/0227-5910/a000642.

Rahman, Md Mosfequr *et al.* (2020) ‘Bullying victimization and adverse health behaviors among school-going adolescents in South Asia: Findings from the global school-based student health survey’, *Depression and Anxiety*, 37(10), pp. 995–1006. doi: 10.1002/da.23033.

Ribeiro, J. *et al.* (2016) ‘Self-injurious thoughts and behaviors as risk factors for future suicide ideation, attempts, and death: A meta-analysis of longitudinal studies’, *Psychol Med*, 46(2), pp. 225–236. doi: 10.1017/S0033291715001804.Self-injurious.

Rodriguez *et al.* (2018) ‘VIOLENT MORTALITY COMPARATIVE ANALYSIS MEXICO COLOMBIA 200–2015. DIFFERENCES AND SIMILARITIES’, *Injury Prevention*, 24(Suppl 1), p. 2018.

Schrijvers, D. L., Bollen, J. and Sabbe, B. G. C. (2012) ‘The gender paradox in suicidal behavior and its impact on the suicidal process’, *Journal of Affective Disorders*, 138(1–2), pp. 19–26. doi: 10.1016/j.jad.2011.03.050.

Shoval, G. *et al.* (2007) ‘Suicide in Ethiopian immigrants in Israel: A case for study of the genetic-environmental relation in suicide’, *Archives of Suicide Research*, 11(3), pp. 247–253. doi: 10.1080/13811110701402603.

Thompson, E. A. *et al.* (2005) ‘The Mediating Roles of Anxiety, Depression, and Hopelessness on Adolescent Suicidal Behaviors’, *Suicide and Life-Threatening Behavior*, 35(1), pp. 14–34. doi: 10.1521/suli.35.1.14.59266.

Turecki, G. (2014) ‘The molecular bases of the suicidal brain’, *PMC*, 15(12), pp. 802–816. doi: 10.1038/nrn3839.

- Uddin, R. *et al.* (2019) 'Suicidal ideation, suicide planning, and suicide attempts among adolescents in 59 low-income and middle-income countries: a population-based study', *The Lancet Child and Adolescent Health*, 3(4), pp. 223–233. doi: 10.1016/S2352-4642(18)30403-6.
- UN (2015) *Goal 3, Sustainable Development*. Available at: <https://sdgs.un.org/goals/goal3> (Accessed: 18 June 2021).
- Vancampfort, D. *et al.* (2019) 'Leisure-time sedentary behavior and suicide attempt among 126,392 adolescents in 43 countries', *Journal of Affective Disorders*, 250(March), pp. 346–353. doi: 10.1016/j.jad.2019.03.053.
- Vijayakumar, L. *et al.* (2020) 'Suicide Prevention in the Southeast Asia Region', *Crisis*, 41, pp. S21–S29. doi: 10.1027/0227-5910/a000666.
- Wagner, B. M., Silverman, M. A. C. and Martin, C. E. (2003) 'Family factors in youth suicidal behaviors', *American Behavioral Scientist*, 46(9), pp. 1171–1191. doi: 10.1177/0002764202250661.
- Wang, C. *et al.* (2021) 'Do Parental Involvement and Adult Support Matter for Students' Suicidal Thoughts and Behavior in High School?', *School Psychology Review*. doi: 10.1080/2372966X.2021.1873058.
- Wexler, L. *et al.* (2008) 'Correlates of Alaska Native Fatal and Nonfatal Suicidal Behaviors 1990–2001', *Suicide and Life-Threatening Behavior*, 38(3), pp. 311–320. doi: 10.1521/suli.2008.38.3.311.
- WHO (2004) *Body mass index*. World Health Organization. doi: 10.1007/978-3-642-36172-2_200883.
- WHO (2008) *Global Health Estimates: Life expectancy and leading causes of death and disability*, *Www.Who.Int*. Available at: http://www.who.int/healthinfo/global_burden_disease/estimates_country/en/.
- WHO (2017) *Mental Health Status of Adolescents in South-East Asia : Evidence for Action*, *Searo*. Available at: <https://apps.who.int/iris/bitstream/handle/10665/254982/9789290225737-eng.pdf%0Ahttp://apps.who.int/iris/bitstream/10665/254982/1/9789290225737-eng.pdf?ua=1&ua=1&ua=1&ua=1>.
- WHO (2018) *LIVE LIFE : Preventing suicide*, *www.WHO.int*. doi: <https://www.who.int/publications/i/item/live-life-preventing-suicide>.
- WHO (2020a) *GSHS*. Available at: <https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-school-based-student-health-survey> (Accessed: 13 August 2021).
- WHO (2020b) *GSHS Methodology*. Available at: <https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-school-based-student-health-survey/methodology> (Accessed: 13 August 2021).
- WHO (2021) *Suicide, 2021*. Available at: <https://www.who.int/news-room/fact-sheets/detail/suicide> (Accessed: 12 August 2021).
- World Bank (2021) *World Bank Country and Lending Groups – World Bank Data Help Desk*. Available at: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank->

country-and-lending-groups (Accessed: 14 August 2021).

Wyman, P. A. (2014) 'Developmental approach to prevent adolescent suicides: Research pathways to effective upstream preventive interventions', *PMC*, 47. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4143775/> (Accessed: 18 June 2021).

Yip, P. S. F. *et al.* (2012) 'Means restriction for suicide prevention', *The Lancet*, 379(9834), pp. 2393–2399. doi: 10.1016/S0140-6736(12)60521-2.

Zalsman, G. *et al.* (2016) 'Suicide prevention strategies revisited: 10-year systematic review', *The Lancet Psychiatry*, 3(7), pp. 646–659. doi: 10.1016/S2215-0366(16)30030-X.

7. Appendix

7.1. Table 3.1: Association of suicidal behavior and participant's characteristics in Bangladesh

Bangladesh												
	Suicidal ideation				Suicidal plan				Suicidal attempts			
	Unadjusted model		Adjusted model		Unadjusted model		Adjusted model		Unadjusted model		Adjusted model	
	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value
Demographic factors												
Age in years (ref = 11- 12 years)												
13 year	0.93 (0.35 , 2.47)	0.887			0.94 (0.41 , 2.16)	0.881			1.44 (0.50 , 4.15)	0.500		
14 year	0.70 (0.27 , 1.82)	0.465			0.89 (0.40 , 1.99)	0.777			1.26 (0.45 , 3.54)	0.667		
15 year	0.92 (0.36 , 2.38)	0.868			0.74 (0.32 , 1.67)	0.463			1.34 (0.47 , 3.79)	0.584		
16 year	1.27 (0.44 , 3.72)	0.659			0.66 (0.24 , 1.83)	0.424			1.63 (0.51 , 5.19)	0.408		
17 year	na				na				1.04 (0.11 , 9.75)	0.971		
Sex												
Female (ref = Male)	1.50 (1.01 , 2.20)	0.040	1.27 (0.79 , 2.05)	0.312	1.17 (0.85 , 1.62)	0.335			0.75 (0.54 , 1.05)	0.090		
Lifestyle factors												
Adolescent obesity status (ref = normal weight)												
Overweight	1.94 (0.82 , 4.54)	0.129			1.40 (0.60 , 3.28)	0.433			1.60 (0.69 , 3.75)	0.277		
Obese	na				2.08 (0.47 , 9.11)	0.333			2.37 (0.54 , 10.41)	0.253		
Sitting activities per day (ref = <1 hour)												
1-2 hours	0.60 (0.40 , 0.90)	0.013	1.04 (0.62 , 1.74)	0.870	0.49 (0.34 , 0.71)	0.000	0.66 (0.42 , 1.03)	0.073	0.68 (0.46 , 0.99)	0.049	0.81 (0.48 , 1.37)	0.453
3-4 hours	1.37 (0.77 , 2.43)	0.280	1.12 (0.54 , 2.34)	0.750	0.85 (0.48 , 1.50)	0.570	0.72 (0.35 , 1.49)	0.385	1.65 (0.97 , 2.79)	0.064	1.16 (0.57 , 2.36)	0.666
>4 hours	1.19 (0.58 , 2.46)	0.638	1.61 (0.69 , 3.74)	0.265	1.35 (0.76 , 2.40)	0.312	0.89 (0.39 , 2.01)	0.784	1.95 (1.08 , 3.53)	0.028	1.42 (0.60 , 3.34)	0.413
Violence and unintentional injury												
Physically attacked (ref = no)	1.22 (0.85 , 1.76)	0.276			1.63 (1.17 , 2.27)	0.004	0.89 (0.58 , 1.37)	0.608	2.26 (1.56 , 3.29)	0.000	1.65 (0.97 , 2.80)	0.063
Physically fighting (ref = no)	1.55 (1.01 , 2.39)	0.047	0.75 (0.40 , 1.40)	0.375	2.15 (1.51 , 3.06)	0.000	1.18 (0.70 , 1.98)	0.531	2.50 (1.74 , 3.59)	0.000	1.01 (0.58 , 1.74)	0.969
Seriously injured (ref = no)	2.13 (1.45 , 3.12)	0.000	1.35 (0.85 , 2.15)	0.195	2.31 (1.64 , 3.25)	0.000	1.27 (0.83 , 1.96)	0.264	3.22 (2.22 , 4.68)	0.000	1.62 (0.99 , 2.63)	0.051
Victimisation (ref = no)	3.09 (2.15 , 4.45)	0.000	1.84 (1.14 , 2.98)	0.012	2.23 (1.60 , 3.10)	0.000	1.11 (0.70 , 1.78)	0.640	3.13 (2.24 , 4.39)	0.000	1.66 (1.03 , 2.69)	0.036

Psychosocial factors												
Loneliness (ref = never)												
<i>Sometimes or rarely</i>	1.25 (0.82 , 1.90)	0.295	1.30 (0.76 , 2.23)	0.329	0.82 (0.58 , 1.17)	0.281	0.67 (0.42 , 1.07)	0.100	1.64 (1.10 , 2.44)	0.016	1.62 (0.95 , 2.77)	0.076
<i>Most of time or always</i>	3.94 (2.40 , 6.49)	0.000	3.90 (2.01 , 7.59)	0.000	3.08(2.03 , 4.68)	0.000	2.16 (1.19 , 3.93)	0.011	4.71 (2.92 , 7.58)	0.000	2.91 (1.45 , 5.83)	0.003
Anxiety (ref = never)												
<i>Sometimes or rarely</i>	0.84 (0.57 , 1.23)	0.362	0.68 (0.32 , 1.43)	0.314	0.96 (0.68 , 1.34)	0.791	0.82 (0.43 , 1.57)	0.560	1.03 (0.71 , 1.49)	0.879	0.52 (0.22 , 1.24)	0.143
<i>Most of time or always</i>	4.28 (2.46 , 7.46)	0.000	1.12 (0.27 , 4.68)	0.870	3.64 (2.18 , 6.09)	0.000	1.36 (0.34 , 5.36)	0.658	5.90 (3.57 , 9.75)	0.000	0.80 (0.14 , 4.42)	0.802
Protective factors												
Parents check homework (ref = most of time or always)												
<i>Never</i>	1.61 (0.96 , 2.71)	0.072	0.73 (0.36 , 1.48)	0.389	3.27 (2.18 , 4.89)	0.000	2.06 (1.14 , 3.70)	0.015	3.00 (1.94 , 4.65)	0.000	1.64 (0.85 , 3.16)	0.135
<i>Sometimes or rarely</i>	1.86 (1.24 , 2.79)	0.003	0.91 (0.54 , 1.54)	0.749	2.17 (1.49 , 3.15)	0.000	1.70 (1.07 , 2.71)	0.024	2.30 (1.58 , 3.41)	0.000	1.30 (0.77 , 2.21)	0.316
Parent understand problem (ref = most of time or always)												
<i>Never</i>	2.36 (1.43 , 3.91)	0.001	0.41 (0.10 , 1.61)	0.205	2.32 (1.51 , 3.55)	0.000	0.21 (0.04 , 1.00)	0.050	3.51 (2.21 , 5.57)	0.000	1.52 (0.54 , 4.27)	0.425
<i>Sometimes or rarely</i>	1.14 (0.76 , 1.72)	0.534	1.28 (0.59 , 2.73)	0.524	0.88 (0.61 , 1.27)	0.485	0.81 (0.39 , 1.66)	0.575	1.49 (1.01 , 2.21)	0.047	1.32 (0.59 , 2.94)	0.486
Parent monitoring (ref = most of time or always)												
<i>Never</i>	1.74 (1.11 , 2.72)	0.015	1.58 (0.68 , 3.66)	0.286	2.12 (1.43 , 3.16)	0.000	0.73 (0.30 , 1.76)	0.487	2.03 (1.32 , 3.11)	0.001	1.00 (0.40 , 2.46)	1.000
<i>Sometimes or rarely</i>	0.79 (0.51 , 1.23)	0.300	0.72 (0.28 , 1.83)	0.497	1.08 (0.74 , 1.58)	0.691	1.38 (0.64 , 2.94)	0.400	1.14 (0.77 , 1.71)	0.511	1.12 (0.46 , 2.68)	0.793
Peer were supportive (ref = Sometimes or rarely)												
<i>Most of time or always</i>	0.34 (0.22 , 0.51)	0.000	0.41 (0.25 , 0.69)	0.001	0.48 (0.33 , 0.69)	0.000	0.68 (0.43 , 1.07)	0.097	0.34 (0.23 , 0.50)	0.000	0.55 (0.33 , 0.92)	0.024
<i>Never</i>	0.77 (0.46 , 1.31)	0.336	0.70 (0.36 , 1.38)	0.311	1.04 (0.66 , 1.65)	0.854	0.75 (0.40 , 1.41)	0.382	0.85 (0.53 , 1.38)	0.517	0.81 (0.41 , 1.59)	0.549
Number of close friends (ref = ≥ 3 friends)												
<i>None</i>	2.11 (1.20 , 3.73)	0.010	1.39 (0.67 , 2.85)	0.366	2.85 (1.84 , 4.41)	0.000	2.45 (1.39 , 4.32)	0.002	2.17 (1.32 , 3.55)	0.002	2.24 (1.19 , 4.23)	0.012
<i>1-2 friends</i>	1.04 (0.70 , 1.56)	0.836	1.13 (0.70 , 1.83)	0.591	0.76 (0.53 , 1.08)	0.124	0.94 (0.61 , 1.44)	0.783	0.81 (0.56 , 1.17)	0.260	0.86 (0.53 , 1.39)	0.548
Interaction of parental supports and level of anxiety												

Parents understand problem and level of anxiety (ref = most of time or always × level of anxiety-never)												
<i>Never × level of anxiety (sometimes or rarely)</i>	3.87 (2.00 , 7.47)	0.000	12.03 (2.45 , 59.11)	0.002	2.71 (1.48 , 4.98)	0.001	7.03 (1.21 , 40.65)	0.029	3.15 (1.52 , 6.54)	0.002	1.60 (0.36 , 6.98)	0.527
<i>Never × level of anxiety (most of time or always)</i>	4.43 (1.43 , 13.74)	0.010	4.96 (0.32 , 77.02)	0.252	6.74 (2.80 , 16.24)	0.000	22.44 (1.47 , 340.96)	0.025	1.43 (1.27 , 5.47)	0.000	17.96 (1.30 , 246.61)	0.031
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	0.59 (0.32 , 1.11)	0.103	0.70 (0.22 , 2.14)	0.535	0.66 (0.40 , 1.09)	0.106	1.10 (0.41 , 2.93)	0.835	1.34 (0.77 , 2.32)	0.294	2.07 (0.67 , 6.35)	0.200
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	8.87 (3.63 , 21.68)	0.000	5.21 (0.76 , 35.57)	0.092	3.93 (1.53 , 10.12)	0.004	4.17 (0.60 , 28.79)	0.147	6.53 (2.45 , 17.36)	0.000	2.06 (0.23 , 18.12)	0.511
Parents monitoring and level of anxiety (ref = most of time or always × level of anxiety-never)												
<i>Never × level of anxiety (sometimes or rarely)</i>	1.92 (0.96 , 3.87)	0.067	0.68 (0.20 , 2.27)	0.534	2.77 (1.57 , 4.92)	0.000	1.91 (0.59 , 6.15)	0.277	2.78 (1.44 , 5.39)	0.002	1.19 (0.34 , 4.15)	0.783
<i>Never × level of anxiety (most of time or always)</i>	6.16 (2.14 , 17.71)	0.001	0.56 (0.06 , 5.19)	0.613	5.82 (2.19 , 15.46)	0.000	0.42 (0.03 , 4.62)	0.486	5.21 (1.65 , 16.41)	0.005	0.06 (0.01 , 1.18)	0.065
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	0.68 (0.37 , 1.28)	0.232	0.74 (0.21 , 2.59)	0.645	0.82 (0.48 , 1.39)	0.457	0.65 (0.23 , 1.83)	0.423	1.01 (0.56 , 1.83)	0.975	0.60 (0.18 , 1.94)	0.401
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	3.01 (0.99 , 9.17)	0.052	0.24 (0.03 , 1.87)	0.175	3.66 (1.43 , 9.39)	0.007	0.23 (0.03 , 1.55)	0.133	8.42 (3.57 , 19.86)	0.000	0.84 (0.11 , 6.53)	0.875

7.2. Table 3.2: Association of suicidal behavior and participant's characteristics in Bhutan

Bhutan												
	Suicidal ideation				Suicidal plan				Suicidal attempts			
	Unadjusted model		Adjusted model		Unadjusted model		Adjusted model		Unadjusted model		Adjusted mode	
	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value
Demographic factors												
Age in years (ref = 11- 12 years)												
13 year	1.12 (0.72 , 1.74)	0.621			0.90 (0.62 , 1.30)	0.567			0.97 (0.64 , 1.47)	0.874		
14 year	1.00 (0.66 , 1.53)	0.988			0.77 (0.53 , 1.10)	0.145			0.83 (0.56 , 1.25)	0.384		
15 year	1.38 (0.92 , 2.08)	0.118			1.02 (0.73 , 1.45)	0.889			1.05 (0.72 , 1.53)	0.790		
16 year	1.24 (0.83 , 1.86)	0.293			0.92 (0.66 , 1.30)	0.644			1.04 (0.71 , 1.53)	0.832		
17 year	1.26 (0.86 , 1.86)	0.237			0.95 (0.68 , 1.31)	0.743			0.99 (0.68 , 1.42)	0.943		
Sex												
Female (ref = Male)	1.39 (1.20 , 1.61)	0.000	1.47 (1.23 , 1.76)	0.000	1.36 (1.19 , 1.56)	0.000	1.46 (1.24 , 1.72)	0.000	1.20 (1.04 , 1.40)	0.014	1.37 (1.14 , 1.64)	0.001
Lifestyle factors												
Adolescent obesity status (ref = normal weight)												
Overweight	1.00 (0.75 , 1.32)	0.973			0.93 (0.71 , 1.20)	0.566			0.93 (0.70 , 1.25)	0.648		
Obese	0.96 (0.50 , 1.86)	0.904			0.59 (0.28 , 1.23)	0.153			0.46 (0.19 , 1.14)	0.092		
Sitting activities per day (ref = <1 hour)												
1-2 hours	1.11 (0.93 , 1.33)	0.229	1.11 (0.91 , 1.37)	0.288	1.09 (0.93 , 1.29)	0.281	1.04 (0.86 , 1.26)	0.632	0.97 (0.81 , 1.15)	0.700	1.05 (0.85 , 1.29)	0.627
3-4 hours	1.28 (1.04 , 1.58)	0.020	1.21 (0.94 , 1.54)	0.124	1.37 (1.13 , 1.65)	0.001	1.27 (1.02 , 1.59)	0.030	1.14 (0.92 , 1.40)	0.237	1.19 (0.93 , 1.53)	0.151
>4 hours	1.75 (1.41 , 2.18)	0.000	1.55 (1.20 , 2.02)	0.001	1.76 (1.44 , 2.16)	0.000	1.50 (1.18 , 1.91)	0.001	1.38 (1.10 , 1.73)	0.006	1.16 (0.87 , 1.53)	0.293
Violence and unintentional injury												
Physically attacked (ref = no)	1.81 (1.57 , 2.09)	0.000	1.38 (1.14 , 1.66)	0.001	1.78 (1.56 , 2.03)	0.000	1.40 (1.18 , 1.67)	0.000	2.54 (2.20 , 2.95)	0.000	1.57 (1.29 , 1.90)	0.000
Physically fighting (ref = no)	1.89 (1.64 , 2.18)	0.000	1.35 (1.12 , 1.64)	0.002	1.68 (1.47 , 1.92)	0.000	1.21 (1.01 , 1.44)	0.035	2.38 (2.05 , 2.75)	0.000	1.50 (1.23 , 1.82)	0.000
Seriously injured (ref = no)	2.27 (1.95 , 2.64)	0.000	1.64 (1.37 , 1.96)	0.000	2.06 (1.79 , 2.37)	0.000	1.47 (1.25 , 1.73)	0.000	2.88 (2.45 , 3.37)	0.000	1.90 (1.57 , 2.28)	0.000
Victimisation (ref = no)	1.91 (1.64 , 2.22)	0.000	1.17 (0.97 , 1.41)	0.099	1.92 (1.66 , 2.21)	0.000	1.23 (1.03 , 1.46)	0.020	2.70 (2.32 , 3.15)	0.000	1.48 (1.23 , 1.79)	0.000
Psychosocial factors												

Loneliness (ref = never)												
<i>Sometimes or rarely</i>	1.51 (1.20 , 1.89)	0.000	1.10 (0.85 , 1.43)	0.448	1.51 (1.23 , 1.84)	0.000	1.16 (0.92 , 1.47)	0.200	1.64 (1.30 , 2.06)	0.000	1.26 (0.95 , 1.66)	0.097
<i>Most of time or always</i>	4.58 (3.56 , 5.88)	0.000	2.17 (1.59 , 2.95)	0.000	3.83 (3.04 , 4.81)	0.000	1.99 (1.49 , 2.65)	0.000	4.68 (3.62 , 6.06)	0.000	2.24 (1.62 , 3.11)	0.000
Anxiety (ref = never)												
<i>Sometimes or rarely</i>	1.79 (1.48 , 2.17)	0.000	1.34 (0.86 , 2.09)	0.186	1.75 (1.48 , 2.09)	0.000	1.33 (0.91 , 1.95)	0.136	1.82 (1.49 , 2.21)	0.000	1.83 (1.12 , 2.99)	0.014
<i>Most of time or always</i>	4.94 (3.86 , 6.32)	0.000	3.21 (1.79 , 5.75)	0.000	4.56 (3.62 , 5.74)	0.000	2.95 (1.74 , 5.02)	0.000	4.68 (3.64 , 6.02)	0.000	3.32 (1.75 , 6.30)	0.000
Protective factors												
Parents check homework (ref = most of time or always)												
<i>Never</i>	1.28 (1.06 , 1.55)	0.010	1.05 (0.83 , 1.34)	0.640	1.25 (1.05 , 1.49)	0.011	1.06 (0.85 , 1.32)	0.594	1.11 (0.91 , 1.34)	0.303		
<i>Sometimes or rarely</i>	1.21 (1.01 , 1.46)	0.039	1.07 (0.85 , 1.33)	0.546	1.18 (0.99 , 1.39)	0.058	1.13 (0.92 , 1.38)	0.239	1.13 (0.94 , 1.36)	0.189		
Parent understand problem (ref = most of time or always)												
<i>Never</i>	2.03 (1.68 , 2.47)	0.000	1.49 (0.85 , 2.63)	0.161	1.89 (1.58 , 2.26)	0.000	1.61 (0.95 , 2.70)	0.072	2.15 (1.77 , 2.63)	0.000	2.53 (1.39 , 4.60)	0.002
<i>Sometimes or rarely</i>	1.29 (1.09 , 1.51)	0.002	0.82 (0.51 , 1.32)	0.427	1.25 (1.07 , 1.45)	0.004	1.00 (0.65 , 1.53)	0.998	1.40 (1.19 , 1.66)	0.000	1.63 (0.98 , 2.71)	0.055
Parent monitoring (ref = most of time or always)												
<i>Never</i>	1.92 (1.57 , 2.36)	0.000	1.04 (0.53 , 2.04)	0.897	1.71 (1.43 , 2.07)	0.000	1.16 (0.67 , 2.02)	0.580	1.93 (1.57 , 2.36)	0.000	1.18 (0.62 , 2.23)	0.607
<i>Sometimes or rarely</i>	1.57 (1.33 , 1.87)	0.000	1.78 (1.11 , 2.84)	0.016	1.44 (1.24 , 1.68)	0.000	1.09 (0.71 , 1.66)	0.688	1.44 (1.23 , 1.72)	0.000	1.30 (0.79 , 2.48)	0.287
Peer were supportive (ref = Sometimes or rarely)												
<i>Most of time or always</i>												
<i>Never</i>												
Number of close friends (ref = ≥ 3 friends)												
<i>None</i>	1.67 (1.32 , 2.10)	0.000	1.06 (0.80 , 1.42)	0.645	1.61 (1.30 , 1.98)	0.000	1.11 (0.85 , 1.44)	0.419	1.84 (1.46 , 2.32)	0.000	1.32 (0.99 , 1.76)	0.054
<i>1-2 friends</i>	1.25 (1.07 , 1.46)	0.005	1.18 (0.98 , 1.41)	0.064	1.10 (0.96 , 1.27)	0.182	1.03 (0.87 , 1.22)	0.689	1.30 (1.11 , 1.52)	0.001	1.22 (1.01 , 1.47)	0.031
Interaction of parental supports and level of anxiety												
Parents understand problem and level of anxiety (ref = most of time or always \times level of anxiety-never)												

<i>Never × level of anxiety (sometimes or rarely)</i>	3.23 (2.31 , 4.51)	0.000	1.16 (0.61 , 2.23)	0.635	3.05 (2.24 , 4.15)	0.000	1.00 (0.55 , 1.82)	0.997	4.38 (3.02 , 6.36)	0.000	0.61 (0.31 , 1.22)	0.166
<i>Never × level of anxiety (most of time or always)</i>	8.93 (5.77 , 13.80)	0.000	1.05 (0.46 , 2.40)	0.894	8.62 (5.69 , 13.06)	0.000	1.02 (0.47 , 2.22)	0.948	10.83 (6.76 , 17.34)	0.000	0.40 (0.17 , 0.95)	0.038
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	2.14 (1.59 , 2.87)	0.000	1.37 (0.81 , 2.33)	0.236	2.13 (1.63 , 2.80)	0.000	1.06 (0.66 , 1.71)	0.801	3.01 (2.15 , 4.22)	0.000	0.67 (0.38 , 1.17)	0.165
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	5.62 (3.78 , 8.36)	0.000	1.07 (0.53 , 2.17)	0.839	5.19 (3.57 , 7.55)	0.000	0.84 (0.43 , 1.63)	0.620	6.93 (4.48 , 10.72)	0.000	0.43 (0.20 , 0.90)	0.027
Parents monitoring and level of anxiety (ref = most of time or always × level of anxiety-never)												
<i>Never × level of anxiety (sometimes or rarely)</i>	3.68 (2.55 , 5.31)	0.000	1.44 (0.68 , 3.02)	0.334	2.91 (2.10 , 4.02)	0.000	1.08 (0.58 , 2.03)	0.795	3.77 (2.59 , 5.48)	0.000	1.23 (0.60 , 2.53)	0.562
<i>Never × level of anxiety (most of time or always)</i>	8.76 (5.51 , 13.93)	0.000	1.01 (0.40 , 2.56)	0.976	7.40 (4.83 , 11.34)	0.000	0.98 (0.43 , 2.24)	0.969	8.71 (5.43 , 13.97)	0.000	1.57 (0.62 , 3.97)	0.331
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	2.82 (2.01 , 3.95)	0.000	0.77 (0.45 , 1.31)	0.343	2.51 (1.87 , 3.36)	0.000	1.14 (0.71 , 1.85)	0.566	2.71 (1.92 , 3.83)	0.000	0.88 (0.50 , 1.54)	0.658
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	7.71 (5.11 , 11.64)	0.000	0.73 (0.35 , 1.49)	0.390	6.33 (4.36 , 9.17)	0.000	1.09 (0.56 , 2.13)	0.781	7.23 (4.75 , 11.02)	0.000	1.36 (0.64 , 2.88)	0.422

7.3. Table 3.3: Association of suicidal behavior and participant's characteristics in Indonesia

Indonesia												
	Suicidal ideation				Suicidal plan				Suicidal attempts			
	Unadjusted model		Adjusted model		Unadjusted model		Adjusted model		Unadjusted model		Adjusted model	
	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value
Demographic factors												
Age in years (ref = 11- 12 years)												
13 year	1.17 (0.88 , 1.57)	0.274	1.08 (0.75 , 1.57)	0.652	1.10 (0.85 , 1.41)	0.474			1.20 (0.90 , 1.61)	0.221		
14 year	1.33 (1.01 , 1.76)	0.048	1.37 (0.96 , 1.96)	0.076	0.96 (0.74 , 1.24)	0.745			0.84 (0.61 , 1.14)	0.261		
15 year	1.56 (1.17 , 1.08)	0.003	1.55 (1.07 , 2.23)	0.019	1.08 (0.82 , 1.41)	0.576			0.89 (0.64 , 1.24)	0.482		
16 year	1.64 (1.18 , 2.27)	0.003	1.44 (0.95 , 2.18)	0.078	1.09 (0.80 , 1.49)	0.582			0.98 (0.67 , 1.43)	0.900		
17 year	1.97 (1.42 , 2.73)	0.000	1.82 (1.21 , 2.75)	0.004	1.02 (0.73 , 1.42)	0.925			0.87 (0.57 , 1.32)	0.499		
Sex												
Female (ref = Male)	1.51 (1.27 , 1.79)	0.000	2.06 (1.64 , 2.58)	0.000	1.11 (0.94 , 1.30)	0.229			0.82 (0.67 , 0.99)	0.044	1.36 (1.04 , 1.79)	0.025
Lifestyle factors												
Adolescent obesity status (ref = normal weight)												
Overweight	1.72 (1.30 , 2.28)	0.000	1.62 (1.15 , 2.27)	0.005	1.25 (0.92 , 1.70)	0.146			1.02 (0.69 , 1.52)	0.916		
Obese	0.90 (0.51 , 1.58)	0.717	0.93 (0.49 , 1.78)	0.845	0.78 (0.43 , 1.39)	0.394			0.37 (0.14 , 1.01)	0.051		
Sitting activities per day (ref = <1 hour)												
1-2 hours	1.50 (1.20 , 1.86)	0.000	1.72 (1.31 , 2.26)	0.000	0.95 (0.79 , 1.16)	0.637	0.93 (0.74 , 1.18)	0.589	1.11 (0.86 , 1.42)	0.427	1.10 (0.81 , 1.51)	0.511
3-4 hours	2.02 (1.58 , 2.59)	0.000	1.94 (1.42 , 2.65)	0.000	1.06 (0.84 , 1.35)	0.615	0.98 (0.74 , 1.30)	0.925	1.22 (0.90 , 1.65)	0.198	1.12 (0.77 , 1.64)	0.540
>4 hours	3.50 (2.73 , 4.48)	0.000	3.20 (2.34 , 4.37)	0.000	1.46 (1.13 , 1.89)	0.004	1.19 (0.87 , 1.62)	0.260	2.33 (1.74 , 3.11)	0.000	1.29 (0.86 , 1.95)	0.207
Violence and unintentional injury												
Physically attacked (ref = no)	2.07 (1.75 , 2.44)	0.000	1.54 (1.21 , 1.96)	0.000	1.83 (1.55 , 2.15)	0.000	1.35 (1.08 , 1.70)	0.008	2.71 (2.23 , 3.31)	0.000	1.38 (1.02 , 1.88)	0.034
Physically fighting (ref = no)	2.00 (1.68 , 2.38)	0.000	1.19 (0.91 , 1.55)	0.201	1.79 (1.51 , 2.13)	0.000	1.18 (0.92 , 1.51)	0.170	3.03 (2.48 , 3.70)	0.000	1.45 (1.05 , 1.99)	0.020
Seriously injured (ref = no)	2.17 (1.82 , 2.58)	0.000	1.37 (1.09 , 1.72)	0.006	1.83 (1.53 , 2.17)	0.000	1.11 (0.89 , 1.38)	0.343	3.43 (2.78 , 4.24)	0.000	2.05 (1.54 , 2.72)	0.000
Victimisation (ref = no)	3.19 (2.67 , 3.82)	0.000	2.13 (1.70 , 2.67)	0.000	2.28 (1.90 , 2.72)	0.000	1.49 (1.19 , 1.87)	0.000	3.83 (3.11 , 4.73)	0.000	1.83 (1.37 , 2.44)	0.000
Psychosocial factors												
Loneliness (ref = never)												

<i>Sometimes or rarely</i>	2.22 (1.80 , 2.73)	0.000	1.27 (0.97 , 1.66)	0.071	1.38 (1.14 , 1.66)	0.001	1.23 (0.97 , 1.56)	0.074	1.35 (1.08 , 1.70)	0.009	0.79 (0.58 , 1.08)	0.148
<i>Most of time or always</i>	8.16 (6.28 , 10.60)	0.000	2.80 (1.97 , 3.97)	0.000	5.22 (4.08 , 6.68)	0.000	3.33 (2.40 , 4.61)	0.000	4.13 (3.04 , 5.61)	0.000	1.34 (0.87 , 2.08)	0.177
Anxiety (ref = never)												
<i>Sometimes or rarely</i>	2.91 (2.37 , 3.57)	0.000	1.59 (0.96 , 2.65)	0.071	1.41 (1.18 , 1.68)	0.000	0.82 (0.53 , 1.27)	0.392	1.83 (1.45 , 2.30)	0.000	1.36 (0.74 , 2.50)	0.313
<i>Most of time or always</i>	10.20 (7.71 , 13.50)	0.000	3.19 (1.49 , 6.81)	0.003	4.83 (3.70 , 6.32)	0.000	1.59 (0.75 , 3.35)	0.218	8.76 (6.49 , 11.80)	0.000	2.95 (1.18 , 7.33)	0.020
Protective factors												
Parents check homework (ref = most of time or always)												
<i>Never</i>	2.37 (1.89 , 2.97)	0.000	1.44 (1.07 , 1.95)	0.015	2.09 (1.69 , 2.60)	0.000	1.42 (1.08 , 1.86)	0.011	2.11 (1.60 , 2.77)	0.000	1.33 (0.91 , 1.94)	0.132
<i>Sometimes or rarely</i>	1.58 (1.28 , 1.94)	0.000	1.11 (0.86 , 1.44)	0.392	1.30 (1.69 , 2.60)	0.011	1.19 (0.94 , 1.51)	0.141	1.46 (1.14 , 1.88)	0.003	1.39 (1.01 , 1.91)	0.040
Parent understand problem (ref = most of time or always)												
<i>Never</i>	1.60 (1.29 , 2.00)	0.000	1.09 (0.60 , 1.97)	0.768	1.90 (1.54 , 2.34)	0.000	1.07 (0.70 , 1.64)	0.729	1.68 (1.29 , 2.18)	0.000	1.53 (0.82 , 2.83)	0.173
<i>Sometimes or rarely</i>	1.39 (1.14 , 1.69)	0.001	1.10 (0.67 , 1.81)	0.696	1.15 (0.95 , 1.41)	0.156	0.80 (0.54 , 1.19)	0.287	1.24 (0.97 , 1.58)	0.083	0.88 (0.48 , 1.59)	0.680
Parent monitoring (ref = most of time or always)												
<i>Never</i>	1.25 (0.99 , 1.57)	0.059	0.94 (0.49 , 1.80)	0.870	1.65 (1.33 , 2.06)	0.000	1.28 (0.83 , 1.98)	0.252	1.54 (1.17 , 2.02)	0.002	0.88 (0.46 , 1.70)	0.719
<i>Sometimes or rarely</i>	1.39 (1.15 , 1.68)	0.001	1.46 (0.91 , 2.36)	0.113	1.43 (1.19 , 1.74)	0.000	1.10 (0.74 , 1.62)	0.625	1.53 (1.22 , 1.94)	0.000	1.13 (0.65 , 1.96)	0.658
Peer were supportive (ref = Sometimes or rarely)												
<i>Most of time or always</i>												
<i>Never</i>												
Number of close friends (ref = ≥ 3 friends)												
<i>None</i>	3.03 (2.14 , 4.30)	0.000	1.76 (1.04 , 2.95)	0.032	4.29 (3.14 , 5.86)	0.000	2.49 (1.63 , 3.81)	0.000	14.71 (11.04 , 19.60)	0.000	13.81 (9.40 , 20.30)	0.000
<i>1-2 friends</i>	2.04 (1.66 , 2.50)	0.000	1.59 (1.22 , 2.07)	0.000	2.10 (1.72 , 2.58)	0.000	1.85 (1.45 , 2.35)	0.000	3.78 (3.00 , 4.77)	0.000	2.88 (2.14 , 3.88)	0.000
Interaction of parental supports and level of anxiety												
Parents understand problem and level of anxiety (ref = most of time or always \times level of anxiety-never)												

<i>Never × level of anxiety (sometimes or rarely)</i>	2.76 (1.89 , 4.05)	0.000	1.33 (0.66 , 2.67)	0.424	2.66 (1.94 , 3.63)	0.000	1.60 (0.90 , 2.83)	0.103	3.48 (2.20 , 5.50)	0.000	0.82 (0.37 , 1.79)	0.622
<i>Never × level of anxiety (most of time or always)</i>	9.58 (5.67 , 16.17)	0.000	1.73 (0.67 , 4.48)	0.255	8.19 (5.21 , 12.90)	0.000	1.42 (0.59 , 3.40)	0.428	16.27 (9.40 , 28.17)	0.000	1.29 (0.44 , 3.80)	0.639
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	1.31 (0.83 , 2.08)	0.244	1.10 (0.61 , 1.97)	0.747	1.46 (1.09 , 1.95)	0.010	1.44 (0.86 , 2.41)	0.161	2.46 (1.62 , 3.75)	0.000	1.06 (0.51 , 2.18)	0.872
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	4.82 (3.27 , 7.09)	0.000	0.99 (0.42 , 2.34)	0.994	4.27 (2.66 , 6.84)	0.000	1.15 (0.50 , 2.68)	0.729	11.18 (6.52 , 19.16)	0.000	1.41 (0.50 , 3.94)	0.510
Parents monitoring and level of anxiety (ref = most of time or always × level of anxiety-never)												
<i>Never × level of anxiety (sometimes or rarely)</i>	19.80 (12.14 , 32.30)	0.000	1.47 (0.70 , 3.11)	0.302	2.11 (1.49 , 2.99)	0.000	0.84 (0.46 , 1.53)	0.584	3.04 (1.95 , 4.75)	0.000	1.27 (0.55 , 2.94)	0.569
<i>Never × level of anxiety (most of time or always)</i>	1.38 (0.90 , 2.10)	0.139	1.00 (0.34 , 2.92)	0.987	5.79 (3.34 , 10.03)	0.000	0.78 (0.28 , 2.13)	0.633	11.81 (6.57 , 21.21)	0.000	1.06 (0.32 , 3.46)	0.915
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	3.69 (2.59 , 5.27)	0.000	0.74 (0.42 , 1.29)	0.293	1.91 (1.43 , 2.53)	0.000	1.17 (0.72 , 1.92)	0.510	2.40 (1.63 , 3.53)	0.000	1.08 (0.55 , 2.14)	0.806
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	10.28 (6.24 , 16.93)	0.000	1.03 (0.46 , 2.29)	0.937	6.95 (4.63 , 10.43)	0.000	1.54 (0.70 , 3.40)	0.281	12.31 (7.67 , 19.75)	0.000	1.07 (0.41 , 2.79)	0.875

7.4. Table 3.4: Association of suicidal behavior and participant's characteristics in Maldives

Maldives												
	Suicidal ideation				Suicidal plan				Suicidal attempts			
	Unadjusted model		Adjusted model		Unadjusted model		Adjusted model		Unadjusted model		Adjusted model	
	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value
Demographic factors												
Age in years (ref = 11- 12 years)												
13 year	0.13 (0.05 , 0.33)	0.000	0.07 (0.02 , 0.27)	0.000	0.56 (0.20 , 1.55)	0.262			0.18 (0.07 , 0.44)	0.000	0.21 (0.06 , 0.72)	0.013
14 year	0.16 (0.07 , 0.38)	0.000	0.10 (0.03 , 0.30)	0.000	0.61 (0.23 , 1.61)	0.319			0.24 (0.11 , 0.52)	0.000	0.20 (0.07 , 0.61)	0.004

<i>15 year</i>	0.16 (0.07 , 0.39)	0.000	0.11 (0.03 , 0.35)	0.000	0.64 (0.24 , 1.68)	0.362			0.23 (0.10 , 0.50)	0.000	0.24 (0.08 , 0.72)	0.011
<i>16 year</i>	0.14 (0.06 , 0.34)	0.000	0.11 (0.03 , 0.33)	0.000	0.62 (0.24 , 1.62)	0.327			0.23 (0.10 , 0.50)	0.000	0.29 (0.09 , 0.85)	0.025
<i>17 year</i>	0.13 (0.05 , 0.31)	0.000	0.11 (0.03 , 0.34)	0.000	0.50 (0.19 , 1.30)	0.152			0.20 (0.09 , 0.43)	0.000	0.24 (0.08 , 0.73)	0.011
Sex												
<i>Female (ref = Male)</i>	1.20 (0.98 , 1.47)	0.082			1.26 (1.05 , 1.51)	0.012	1.30 (1.01 , 1.67)	0.036	0.67 (0.55 , 0.82)	0.000	0.77 (0.57 , 1.04)	0.091
Lifestyle factors												
Adolescent obesity status (ref = normal weight)												
<i>Overweight</i>	1.25 (0.89 , 1.75)	0.201			1.37 (1.02 , 1.84)	0.034	1.60 (1.09 , 2.35)	0.016	1.29 (0.92 , 1.80)	0.140	1.84 (1.19 , 2.85)	0.006
<i>Obese</i>	0.90 (0.52 , 1.56)	0.706			0.97 (0.61 , 1.56)	0.907	0.84 (0.44 , 1.62)	0.623	0.46 (0.22 , 0.95)	0.035	0.38 (0.13 , 1.09)	0.073
Sitting activities per day (ref = <1 hour)												
<i>1-2 hours</i>												
<i>3-4 hours</i>												
<i>>4 hours</i>												
Violence and unintentional injury												
Physically attacked (ref = no)	2.61 (2.12 , 3.21)	0.000	1.32 (0.97 , 1.81)	0.076	2.55 (2.11 , 3.07)	0.000	1.51 (1.15 , 2.00)	0.003	3.38 (2.74 , 4.17)	0.000	1.48 (1.07 , 2.06)	0.018
Physically fighting (ref = no)	2.37 (1.93 , 2.91)	0.000	1.44 (1.06 , 1.96)	0.017	2.30 (1.91 , 2.76)	0.000	1.64 (1.25 , 2.15)	0.000	2.97 (2.42 , 3.65)	0.000	1.70 (1.23 , 2.35)	0.001
Seriously injured (ref = no)	2.47 (1.98 , 3.08)	0.000	1.55 (1.17 , 2.05)	0.002	1.95 (1.61 , 2.36)	0.000	1.22 (0.96 , 1.55)	0.103	2.86 (2.27 , 3.60)	0.000	1.72 (1.27 , 2.33)	0.000
Victimisation (ref = no)	2.75 (2.22 , 3.40)	0.000	1.67 (1.25 , 2.23)	0.000	2.57 (2.12 , 3.11)	0.000	1.61 (1.25 , 2.09)	0.000	3.30 (2.66 , 4.09)	0.000	1.69 (1.24 , 2.29)	0.001
Psychosocial factors												
Loneliness (ref = never)												
<i>Sometimes or rarely</i>	1.14 (0.88 , 1.48)	0.310	0.88 (0.62 , 1.25)	0.502	1.31 (1.05 , 1.64)	0.016	1.07 (0.79 , 1.45)	0.628	1.07 (0.83 , 1.37)	0.610	0.96 (0.67 , 1.37)	0.845
<i>Most of time or always</i>	4.01 (3.03 , 5.29)	0.000	1.99 (1.32 , 2.99)	0.001	3.39 (2.63 , 4.37)	0.000	1.60 (1.10 , 2.32)	0.013	2.58 (1.95 , 3.42)	0.000	1.32 (0.84 , 2.06)	0.220
Anxiety (ref = never)												
<i>Sometimes or rarely</i>	1.43 (1.10 , 1.85)	0.007	1.02 (0.51 , 2.03)	0.939	1.39 (1.11 , 1.74)	0.004	0.80 (0.46 , 1.40)	0.442	1.10 (0.86 , 1.41)	0.457	0.53 (0.28 , 1.03)	0.063
<i>Most of time or always</i>	4.40 (3.31 , 5.86)	0.000	2.78 (1.24 , 6.24)	0.013	4.26 (3.30 , 5.50)	0.000	2.85 (1.44 , 5.63)	0.002	2.56 (1.93 , 3.41)	0.000	0.69 (0.27 , 1.75)	0.444
Protective factors												
Parents check homework (ref = most of time or always)												
<i>Never</i>	1.72 (1.33 , 2.21)	0.000	1.19 (0.82 , 1.72)	0.354	1.70 (1.36 , 2.13)	0.000	1.11 (0.81 , 1.53)	0.489	1.09 (0.84 , 1.40)	0.520		

<i>Sometimes or rarely</i>	1.03 (0.78 , 1.36)	0.842	1.08 (0.75 , 1.56)	0.659	1.12 (0.88 , 1.43)	0.342	1.11 (0.81 , 1.52)	0.506	0.89 (0.68 , 1.16)	0.382		
Parent understand problem (ref = most of time or always)												
<i>Never</i>	3.44 (2.62 , 4.52)	0.000	1.58 (0.74 , 3.39)	0.233	2.86 (2.26 , 3.61)	0.000	0.66 (0.33 , 1.29)	0.228	1.87 (1.43 , 2.45)	0.000	0.65 (0.30 , 1.41)	0.280
<i>Sometimes or rarely</i>	1.67 (1.26 , 2.20)	0.000	1.08 (0.53 , 2.22)	0.821	1.55 (1.23 , 1.96)	0.000	0.68 (0.37 , 1.23)	0.204	1.50 (1.16 , 1.94)	0.002	0.89 (0.48 , 1.64)	0.710
Parent monitoring (ref = most of time or always)												
<i>Never</i>	2.98 (2.32 , 3.84)	0.000	2.19 (1.05 , 4.56)	0.036	2.99 (2.39 , 3.75)	0.000	3.24 (1.68 , 6.25)	0.000	2.34 (1.79 , 3.05)	0.000	1.43 (0.67 , 3.07)	0.348
<i>Sometimes or rarely</i>	1.56 (1.23 , 1.99)	0.000	1.03 (0.50 , 2.12)	0.922	1.61 (1.30 , 2.00)	0.000	1.64 (0.90 , 2.99)	0.101	1.76 (1.38 , 2.25)	0.000	1.41 (0.76 , 2.63)	0.268
Peer were supportive (ref = Sometimes or rarely)												
<i>Most of time or always</i>												
<i>Never</i>												
Number of close friends (ref = ≥ 3 friends)												
<i>None</i>	2.93 (2.17 , 3.94)	0.000	2.08 (1.36 , 3.16)	0.001	3.04 (2.32 , 3.96)	0.000	2.73 (1.87 , 4.00)	0.000	3.60 (2.65 , 4.90)	0.000	3.44 (2.22 , 5.32)	0.000
<i>1-2 friends</i>	1.40 (1.12 , 1.75)	0.003	1.00 (0.74 , 1.34)	0.995	1.40 (1.14 , 1.70)	0.001	1.17 (0.90 , 1.51)	0.219	2.09 (1.67 , 2.63)	0.000	1.98 (1.45 , 2.69)	0.000
Interaction of parental supports and level of anxiety												
Parents understand problem and level of anxiety (ref = most of time or always \times level of anxiety-never)												
<i>Never \times level of anxiety (sometimes or rarely)</i>	3.35 (2.14 , 5.25)	0.000	1.21 (0.47 , 3.12)	0.687	2.51 (1.73 , 3.62)	0.000	2.82 (1.23 , 6.44)	0.014	1.70 (1.11 , 2.60)	0.014	2.79 (1.04 , 7.51)	0.042
<i>Never \times level of anxiety (most of time or always)</i>	9.02 (5.66 , 14.38)	0.000	1.00 (0.35 , 2.84)	0.995	7.24 (4.86 , 10.79)	0.000	1.86 (0.72 , 4.78)	0.194	3.27 (2.08 , 5.16)	0.000	2.28 (0.69 , 7.48)	0.174
<i>Sometimes or rarely \times level of anxiety (sometimes or rarely)</i>	1.92 (1.24 , 2.97)	0.003	1.65 (0.68 , 3.99)	0.259	1.64 (1.16 , 2.33)	0.006	2.44 (1.18 , 5.07)	0.016	1.34 (0.90 , 2.00)	0.151	1.90 (0.83 , 4.34)	0.123
<i>Sometimes or rarely \times level of anxiety (most of time or always)</i>	4.00 (2.38 , 6.70)	0.000	0.69 (0.24 , 1.94)	0.489	3.65 (2.37 , 5.62)	0.000	1.39 (0.58 , 3.34)	0.458	2.71 (1.66 , 4.41)	0.000	1.44 (0.48 , 4.31)	0.504
Parents monitoring and level of anxiety (ref = most of time or always \times level of anxiety-never)												

<i>Never × level of anxiety (sometimes or rarely)</i>	4.28 (2.68 , 6.85)	0.000	0.72 (0.29 , 1.76)	0.479	3.96 (2.64 , 5.94)	0.000	0.55 (0.24 , 1.22)	0.145	2.46 (1.55 , 3.90)	0.000	1.06 (0.40 , 2.77)	0.980
<i>Never × level of anxiety (most of time or always)</i>	9.20 (5.66 , 14.95)	0.000	0.50 (0.18 , 1.34)	0.170	9.15 (5.94 , 14.10)	0.000	0.42 (0.17 , 1.02)	0.056	4.26 (2.62 , 6.92)	0.000	1.26 (0.42 , 3.74)	0.681
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	2.46 (1.59 , 3.80)	0.000	1.05 (0.45 , 2.44)	0.896	2.44 (1.69 , 3.52)	0.000	0.79 (0.39 , 1.60)	0.526	1.81 (1.21 , 2.73)	0.004	0.80 (0.36 , 1.75)	0.561
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	7.19 (4.38 , 11.98)	0.000	1.26 (0.48 , 3.29)	0.632	6.51 (4.14 , 10.26)	0.000	0.71 (0.31 , 1.64)	0.433	4.36 (2.65 , 7.16)	0.000	1.26 (0.47 , 3.35)	0.622

7.5. Table 3.5: Association of suicidal behavior and participant's characteristics in Myanmar

Myanmar								
	Suicidal ideation				Suicidal plan			
	Unadjusted model		Adjusted model		Unadjusted model		Adjusted	
	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value
Demographic factors								
Age in years (ref = 11- 12 years)								
13 year	0.37 (0.12 , 1.10)	0.074	0.32 (0.07 , 1.47)	0.143	1 (empty)			
14 year	0.23 (0.07 , 0.78)	0.019	0.27 (0.04 , 1.56)	0.145	1 (empty)			
15 year	0.18 (0.05 , 0.64)	0.008	0.32 (0.07 , 1.34)	0.120	1 (empty)			
16 year	0.52 (0.19 , 1.46)	0.214	0.54 (0.13 , 2.20)	0.398	0.18 (0.02 , 1.60)	0.123		
17 year	na		na		1 (empty)			
Sex								
Female (ref = Male)	1.30 (0.63 , 2.69)	0.480			0.66 (0.11 , 3.96)	0.651		
Lifestyle factors								
Adolescent obesity status (ref = normal weight)								
Overweight								
Obese								
Sitting activities per day (ref = <1 hour)								
1-2 hours	1.20 (0.54 , 2.65)	0.657			0.76 (0.07 , 8.39)	0.822	0.58 (0.05 , 6.50)	0.664

<i>3-4 hours</i>	2.60 (0.85 , 7.98)	0.096			1 (empty)		1 (empty)	
<i>>4 hours</i>	0.72 (0.09 , 5.52)	0.752			10.23 (1.43 , 73.13)	0.021	6.48 (0.88 , 47.50)	0.066
Violence and unintentional injury								
Physically attacked (ref = no)	4.41 (2.14 , 9.09)	0.000	2.35 (0.71 , 7.81)	0.161	0.95 (0.11 , 8.48)	0.960		
Physically fighting (ref = no)	3.19 (1.47 , 6.92)	0.003	0.54 (0.15 , 1.99)	0.363	1 (empty)			
Seriously injured (ref = no)	2.51 (1.08 , 5.83)	0.032	1.46 (0.50 , 4.21)	0.480	2.50 (0.35 , 17.76)	0.360		
Victimisation (ref = no)	1.93 (0.78 , 4.81)	0.158			2.56 (0.43 , 15.38)	0.303		
Psychosocial factors								
Loneliness (ref = never)								
<i>Sometimes or rarely</i>	2.89 (1.23 , 6.77)	0.015	1.96 (0.61 , 6.29)	0.255	0.17 (0.03 , 0.10)	0.050	0.18 (0.02 , 1.11)	0.065
<i>Most of time or always</i>	8.37 (2.69 , 25.97)	0.000	2.09 (0.07 , 60.63))	0.659	1 (omitted)		1 (omitted)	
Anxiety (ref = never)								
<i>Sometimes or rarely</i>	0.16 (0.08 , 0.33)	0.000	0.23 (0.04 , 1.24)	0.089	1 (empty)			
<i>Most of time or always</i>	na		na					
Protective factors								
Parents check homework (ref = most of time or always)								
<i>Never</i>	1.96 (0.63 , 6.13)	0.246			2.92 (0.26 , 32.32)	0.382		
<i>Sometimes or rarely</i>	2.14 (0.99 , 4.65)	0.054			1.87 (0.26 , 12.99)	0.547		
Parent understand problem (ref = most of time or always)								
<i>Never</i>	3.70 (1.55 , 8.82)	0.003	1.57 (0.20 , 12.33)	0.667	6.83 (0.96 , 48.69)	0.055		
<i>Sometimes or rarely</i>	0.99 (0.40 , 2.43)	0.978	0.58 (0.11 , 3.02)	0.521	1.06 (0.10 , 11.70)	0.962		
Parent monitoring (ref = most of time or always)								
<i>Never</i>	4.11 (1.57 , 10.70)	0.004	3.89 (0.35 , 42.82)	0.267	5.03 (0.45 , 55.73)	0.188		
<i>Sometimes or rarely</i>	1.88 (0.82 , 4.33)	0.135	2.56 (0.53 , 12.29)	0.239	3.12 (0.44 , 22.22)	0.255		
Peer were supportive (ref = Sometimes or rarely)								
<i>Most of time or always</i>	0.60 (0.27 , 1.37)	0.225			4.31 (0.48 , 38.58)	0.192		
<i>Never</i>	1.61 (0.58 , 4.44)	0.356			1 (empty)			
Number of close friends (ref = ≥ 3 friends)								
<i>None</i>	5.21 (1.44 , 18.76)	0.012	8.32 (1.30 , 53.09)	0.025	1.83 (0.20 , 16.53)	0.591		

<i>1-2 friends</i>	3.58 (1.67 , 7.68)	0.001	5.56 (1.89 , 16.31)	0.002	1 (omitted)			
Interaction of parental supports and level of anxiety								
Parents understand problem and level of anxiety (ref = most of time or always × level of anxiety-never)								
<i>Never × level of anxiety (sometimes or rarely)</i>	0.55 (0.14 , 2.15)	0.389	3.96 (0.26 , 60.36)	0.321	1 (empty)			
<i>Never × level of anxiety (most of time or always)</i>								
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	0.11 (0.02 , 0.53)	0.006	2.33 (0.20 , 27.14)	0.498	1 (empty)			
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>								
Parents monitoring and level of anxiety (ref = most of time or always × level of anxiety-never)								
<i>Never × level of anxiety (sometimes or rarely)</i>	0.61 (0.12 , 3.04)	0.542	0.17 (0.01 , 5.49)	0.322	1 (empty)			
<i>Never × level of anxiety (most of time or always)</i>								
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	0.19 (0.04 , 0.93)	0.041	0.34 (0.03 , 3.50)	0.366	1 (empty)			
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>								

7.6. Table 3.6: Association of suicidal behavior and participant's characteristics in Nepal

Nepal												
	Suicidal ideation				Suicidal plan				Suicidal attempts			
	Unadjusted model		Adjusted model		Unadjusted model		Adjusted model		Unadjusted model		Adjusted model	
	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value
Demographic factors												
Age in years (ref = 11-12 years)												
13 year	0.75 (0.56 , 1.01)	0.055			0.89 (0.66 , 1.18)	0.410			0.74 (0.53 , 1.03)	0.073		
14 year	0.82 (0.62 , 1.09)	0.173			0.86 (0.65 , 1.13)	0.279			0.80 (0.59 , 1.09)	0.162		
15 year	0.93 (0.71 , 1.23)	0.620			0.95 (0.72 , 1.25)	0.701			0.75 (0.54 , 1.02)	0.070		
16 year	0.88 (0.66 , 1.18)	0.411			0.74 (0.55 , 1.01)	0.051			0.74 (0.53 , 1.03)	0.071		
17 year	1.01 (0.73 , 1.39)	0.962			1.26 (0.92 , 1.71)	0.151			1.15 (0.81 , 1.62)	0.437		
Sex												
Female (ref = Male)	1.15 (0.99 , 1.34)	0.068			1.20 (1.04 , 1.39)	0.015	1.23 (1.03 , 1.46)	0.017	1.18 (0.99 , 1.40)	0.065		
Lifestyle factors												
Adolescent obesity status (ref = normal weight)												
Overweight	0.71 (0.40 , 1.27)	0.248	0.39 (0.17 , 0.92)	0.032	0.44 (0.22 , 0.87)	0.018	0.37 (0.16 , 0.87)	0.023	1.25 (0.74 , 2.12)	0.401		
Obese	2.82 (1.17 , 6.82)	0.021	3.96 (1.48 , 10.54)	0.006	1.22 (0.42 , 3.58)	0.711	1.53 (0.48 , 4.79)	0.464	2.26 (0.85 , 5.99)	0.101		
Sitting activities per day (ref = <1 hour)												
1-2 hours	1.08 (0.90 , 1.29)	0.421	0.90 (0.73 , 1.11)	0.338	0.99 (0.83 , 1.18)	0.938	0.89 (0.72 , 1.09)	0.271	1.11 (0.90 , 1.36)	0.342	0.94 (0.74 , 1.21)	0.678
3-4 hours	1.61 (1.22 , 2.12)	0.001	1.48 (1.09 , 2.03)	0.012	1.59 (1.23 , 2.08)	0.001	1.49 (1.09 , 2.03)	0.011	2.16 (1.62 , 2.89)	0.000	1.66 (1.17 , 2.36)	0.004
>4 hours	2.23 (1.65 , 2.99)	0.000	1.79 (1.25 , 2.56)	0.001	1.90 (1.40 , 2.58)	0.000	1.55 (1.07 , 2.25)	0.020	2.39 (1.72 , 3.34)	0.000	1.67 (1.10 , 2.54)	0.015
Violence and unintentional injury												
Physically attacked (ref = no)												
Physically fighting (ref = no)												
Seriously injured (ref = no)												
Victimisation (ref = no)	1.79 (1.53 , 2.09)	0.000	1.38 (1.15 , 1.65)	0.000	1.64 (1.41 , 1.91)	0.000	1.33 (1.11 , 1.59)	0.001	3.01 (2.47 , 3.65)	0.000	2.11 (1.68 , 2.64)	0.000
Psychosocial factors												

Loneliness (ref = never)												
<i>Sometimes or rarely</i>	1.58 (1.35 , 1.87)	0.000	1.22 (1.01 , 1.49)	0.042	1.31 (1.12 , 1.53)	0.001	1.16 (0.96 , 1.40)	0.124	2.01 (1.65 , 2.44)	0.000	1.37 (1.08 , 1.74)	0.008
<i>Most of time or always</i>	4.57 (3.56 , 5.85)	0.000	2.99 (2.22 , 4.03)	0.000	3.27 (2.55 , 4.21)	0.000	2.42 (1.78 , 3.29)	0.000	6.03 (4.60 , 7.89)	0.000	2.82 (2.01 , 3.95)	0.000
Anxiety (ref = never)												
<i>Sometimes or rarely</i>	1.58 (1.35 , 1.85)	0.000	1.40 (1.03 , 1.91)	0.031	1.37 (1.17 , 1.59)	0.000	1.11 (0.83 , 1.49)	0.469	1.95 (1.61 , 2.36)	0.000	1.59 (1.05 , 2.42)	0.028
<i>Most of time or always</i>	5.64 (4.29 , 7.43)	0.000	3.38 (1.85 , 6.17)	0.000	3.45 (2.60 , 4.59)	0.000	2.55 (1.37 , 4.76)	0.003	7.44 (5.54 , 9.99)	0.000	8.38 (4.45 , 15.79)	0.000
Protective factors												
Parents check homework (ref = most of time or always)												
<i>Never</i>	2.09 (1.72 , 2.55)	0.000	1.53 (1.18 , 1.97)	0.001	2.03 (1.67 , 2.46)	0.000	1.37 (1.06 , 1.76)	0.014	2.32 (1.85 , 2.92)	0.000	1.52 (1.13 , 2.05)	0.006
<i>Sometimes or rarely</i>	1.34 (1.13 , 1.58)	0.001	1.14 (0.92 , 1.40)	0.212	1.32 (1.12 , 1.56)	0.001	1.03 (0.83 , 1.26)	0.774	1.60 (1.31 , 1.94)	0.000	1.10 (0.86 , 1.42)	0.424
Parent understand problem (ref = most of time or always)												
<i>Never</i>	2.42 (1.96 , 2.96)	0.000	1.20 (0.78 , 1.85)	0.399	2.38 (1.94 , 2.93)	0.000	1.63 (1.08 , 2.45)	0.019	2.83 (2.24 , 3.57)	0.000	1.89 (1.14 , 3.13)	0.013
<i>Sometimes or rarely</i>	1.64 (1.38 , 1.94)	0.000	1.15 (0.82 , 1.63)	0.403	1.56 (1.33 , 1.84)	0.000	1.27 (0.92 , 1.76)	0.142	1.77 (1.46 , 2.16)	0.000	0.96 (0.61 , 1.50)	0.863
Parent monitoring (ref = most of time or always)												
<i>Never</i>	2.20 (1.81 , 2.66)	0.000	1.82 (1.23 , 2.70)	0.002	2.21 (1.82 , 2.67)	0.000	1.24 (0.84 , 1.82)	0.261	2.28 (1.81 , 2.87)	0.000	1.60 (0.94 , 2.71)	0.081
<i>Sometimes or rarely</i>	1.52 (1.28 , 1.81)	0.000	1.31 (0.92 , 1.87)	0.132	1.50 (1.27 , 1.77)	0.000	1.25 (0.90 , 1.73)	0.182	2.00 (1.64 , 2.43)	0.000	2.40 (1.54 , 3.74)	0.000
Peer were supportive (ref = Sometimes or rarely)												
<i>Most of time or always</i>												
<i>Never</i>												
Number of close friends (ref = ≥ 3 friends)												
<i>None</i>	2.90 (2.15 , 3.92)	0.000	1.80 (1.25 , 2.60)	0.002	3.03 (2.26 , 4.05)	0.000	2.21 (1.57 , 3.13)	0.000	4.37 (3..20 , 5.96)	0.000	3.00 (2.04 , 4.40)	0.000
<i>1-2 friends</i>	1.69 (1.44 , 1.99)	0.000	1.53 (1.27 , 1.84)	0.000	1.52 (1.29 , 1.78)	0.000	1.33 (1.10 , 1.60)	0.002	2.15 (1.79 , 2.59)	0.000	1.98 (1.60 , 2.46)	0.000
Interaction of parental supports and level of anxiety												
Parents understand problem and level of anxiety (ref = most of time or always \times level of anxiety-never)												

<i>Never × level of anxiety (sometimes or rarely)</i>	3.96 (2.87 , 5.45)	0.000	1.63 (0.92 , 2.90)	0.092	3.02 (2.21 , 4.14)	0.000	1.06 (0.60 , 1.86)	0.827	5.14 (3.54 , 7.46)	0.000	1.01 (0.51 , 1.95)	0.984
<i>Never × level of anxiety (most of time or always)</i>	10.69 (5.75 , 19.86)	0.000	1.90 (0.70 , 5.14)	0.202	7.48 (3.99 , 14.01)	0.000	1.14 (0.41 , 3.16)	0.795	16.40 (8.60 , 31.25)	0.000	1.92 (0.64 , 5.69)	0.238
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	2.34 (1.83 , 3.00)	0.000	1.18 (0.76 , 1.82)	0.442	2.06 (1.63 , 2.59)	0.000	1.04 (0.68 , 1.58)	0.843	3.33 (2.48 , 4.49)	0.000	1.47 (0.85 , 2.53)	0.163
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	8.48 (5.50 , 13.08)	0.000	1.57 (0.75 , 3.30)	0.226	4.07 (2.57 , 6.44)	0.000	1.06 (0.48 , 2.33)	0.876	9.97 (6.20 , 16.03)	0.000	1.15 (0.50 , 2.64)	0.724
Parents monitoring and level of anxiety (ref = most of time or always × level of anxiety-never)												
<i>Never × level of anxiety (sometimes or rarely)</i>	3.70 (2.72 , 5.03)	0.000	0.68 (0.40 , 1.16)	0.164	3.26 (2.44 , 4.35)	0.000	1.21 (0.71 , 2.05)	0.476	5.92 (4.09 , 8.57)	0.000	0.90 (0.46 , 1.77)	0.775
<i>Never × level of anxiety (most of time or always)</i>	9.51 (5.52 , 16.38)	0.000	0.44 (0.18 , 1.11)	0.084	8.08 (4.77 , 13.68)	0.000	0.98 (0.39 , 2.46)	0.968	12.06 (6.64 , 21.89)	0.000	0.17 (0.05 , 0.51)	0.001
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	2.39 (1.85 , 3.09)	0.000	0.79 (0.51 , 1.25)	0.33	2.03 (1.60 , 2.58)	0.000	0.97 (0.63 , 1.49)	0.901	4.10 (2.97 , 5.67)	0.000	0.53 (0.30 , 0.92)	0.024
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	8.12 (5.14 , 12.85)	0.000	0.67 (0.31 , 1.45)	0.318	3.14 (1.88 , 5.26)	0.000	0.55 (0.24 , 1.25)	0.158	11.26 (6.72 , 18.88)	0.000	0.22 (0.09 , 0.52)	0.001

7.7. Table 3.7: Association of suicidal behavior and participant's characteristics in Sri Lanka

Sri Lanka								
	Suicidal ideation				Suicidal plan			
	Unadjusted model		Adjusted model		Unadjusted model		Adjusted model	
	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value
Demographic factors								
Age in years (ref = 11- 12 years)								
13 year	0.77 (0.49 , 1.20)	0.243			0.88 (0.59 , 1.32)	0.547	0.94 (0.56 , 1.58)	0.833
14 year	0.77 (0.49 , 1.20)	0.248			0.75 (0.49 , 1.13)	0.167	0.82 (0.48 , 1.40)	0.484
15 year	0.91 (0.57 , 1.46)	0.691			1.12 (0.73 , 1.72)	0.595	1.13 (0.65 , 1.96)	0.648

<i>16 year</i>	1.73 (0.88 , 3.41)	0.115			2.42 (1.33 , 4.41)	0.004	1.83 (0.82 , 4.07)	0.136
<i>17 year</i>					na		na	
Sex								
<i>Female (ref = Male)</i>	0.82 (0.63 , 1.06)	0.122			0.89 (0.71 , 1.12)	0.317		
Lifestyle factors								
Adolescent obesity status (ref = normal weight)								
<i>Overweight</i>	0.99 (0.35 , 2.82)	0.992	1.02 (0.31 , 3.34)	0.973	0.73 (0.25 , 2.07)	0.553		
<i>Obese</i>	0.000 (0.10 , 0.13)	0.000	1 (empty)		0.91 (0.11 , 7.48)	0.932		
Sitting activities per day (ref = <1 hour)								
<i>1-2 hours</i>	0.65 (0.47 , 0.91)	0.011	1.04 (0.67 , 1.61)	0.850	0.56 (0.42 , 0.74)	0.000	0.62 (0.44 , 0.89)	0.010
<i>3-4 hours</i>	0.75 (0.51 , 1.09)	0.132	0.85 (0.50 , 1.42)	0.543	0.57 (0.40 , 0.80)	0.001	0.55 (0.35 , 0.85)	0.008
<i>>4 hours</i>	1.24 (0.83 , 1.86)	0.299	1.35 (0.77 , 2.35)	0.287	1.07 (0.75 , 1.52)	0.727	0.92 (0.58 , 1.47)	0.750
Violence and unintentional injury								
Physically attacked (ref = no)	2.16 (1.65 , 2.82)	0.000	1.08 (0.74 , 1.58)	0.670	1.78 (1.41 , 2.24)	0.000	1.23 (0.89 , 1.69)	0.194
Physically fighting (ref = no)	1.71 (1.32 , 2.22)	0.000	1.02 (0.71 , 1.47)	0.882	1.32 (1.05 , 1.65)	0.018	0.95 (0.69 , 1.31)	0.784
Seriously injured (ref = no)	2.20 (1.67 , 2.89)	0.000	1.48 (1.04 , 2.11)	0.028	2.22 (1.73 , 2.84)	0.000	1.41 (1.04 , 1.91)	0.024
Victimisation (ref = no)	2.35 (1.78 , 3.10)	0.000	1.46 (1.02 , 2.10)	0.037	1.53 (1.19 , 1.96)	0.001	1.08 (0.78 , 1.49)	0.617
Psychosocial factors								
Loneliness (ref = never)								
<i>Sometimes or rarely</i>	1.75 (1.28 , 2.39)	0.000	1.78 (1.17 , 2.69)	0.006	0.10 (0.78 , 1.28)	0.978	0.80 (0.58 , 1.11)	0.192
<i>Most of time or always</i>	5.76 (3.79 , 8.76)	0.000	3.03 (1.72 , 5.36)	0.000	2.97 (2.04 , 4.32)	0.000	1.93 (1.18 , 3.17)	0.008
Anxiety (ref = never)								
<i>Sometimes or rarely</i>	0.20 (0.15 , 0.26)	0.000	0.18 (0.09 , 0.35)	0.000	0.48 (0.38 , 0.61)	0.000	0.47 (0.27 , 0.80)	0.014
<i>Most of time or always</i>	na		na		na		na	
Protective factors								
Parents check homework (ref = most of time or always)								
<i>Never</i>	4.08 (2.81 , 5.92)	0.000	2.79 (1.60 , 4.88)	0.000	2.01 (1.37 , 2.93)	0.000	1.06 (0.61 , 1.82)	0.827
<i>Sometimes or rarely</i>	2.18 (1.63 , 2.90)	0.000	1.61 (1.09 , 2.39)	0.016	1.97 (1.54 , 2.53)	0.000	1.37 (0.98 , 1.91)	0.063
Parent understand problem (ref = most of time or always)								
<i>Never</i>	3.17 (2.21 , 4.53)	0.000	1.55 (0.82 , 2.93)	0.176	1.44 (1.02 , 2.03)	0.036	1.25 (0.66 , 2.39)	0.481

<i>Sometimes or rarely</i>	2.46 (1.82 , 3.33)	0.000	1.59 (0.97 , 2.60)	0.065	1.84 (1.43 , 2.36)	0.000	1.04 (0.63 , 1.73)	0.855
Parent monitoring (ref = most of time or always)								
<i>Never</i>	2.28 (1.56 , 3.33)	0.000	1.08 (0.55 , 2.11)	0.804	2.24 (1.58 , 3.19)	0.000	1.42 (0.70 , 2.85)	0.322
<i>Sometimes or rarely</i>	1.60 (1.21 , 2.13)	0.001	0.68 (0.41 , 1.10)	0.119	2.21 (1.72 , 2.85)	0.000	1.34 (0.82 , 2.20)	0.232
Peer were supportive (ref = Sometimes or rarely)								
<i>Most of time or always</i>	0.69 (0.52 , 0.92)	0.011	1.30 (0.89 , 1.90)	0.164	0.70 (0.55 , 0.90)	0.006	1.05 (0.76 , 1.45)	0.725
<i>Never</i>	2.01 (1.24 , 3.28)	0.005	1.83 (0.90 , 3.71)	0.092	1.50 (0.94 , 2.41)	0.090	1.17 (0.60 , 2.26)	0.637
Number of close friends (ref = ≥ 3 friends)								
<i>None</i>	3.45 (2.25 , 5.29)	0.000	2.20 (1.23 , 3.94)	0.008	1.53 (0.97 , 2.40)	0.065		
<i>1-2 friends</i>	1.35 (1.02 , 1.78)	0.035	1.07 (0.74 , 1.53)	0.702	1.12 (0.88 , 1.43)	0.344		
Interaction of parental supports and level of anxiety								
Parents understand problem and level of anxiety (ref = most of time or always \times level of anxiety-never)								
<i>Never \times level of anxiety (sometimes or rarely)</i>	0.61 (0.35 , 1.07)	0.084	1.76 (0.65 , 4.75)	0.261	0.53 (0.32 , 0.90)	0.018	0.70 (0.29 , 1.70)	0.443
<i>Never \times level of anxiety (most of time or always)</i>								
<i>Sometimes or rarely \times level of anxiety (sometimes or rarely)</i>	0.46 (0.29 , 0.73)	0.001	1.08 (0.48 , 2.45)	0.839	0.84 (0.58 , 1.21)	0.342	1.26 (0.65 , 2.44)	0.481
<i>Sometimes or rarely \times level of anxiety (most of time or always)</i>								
Parents monitoring and level of anxiety (ref = most of time or always \times level of anxiety-never)								
<i>Never \times level of anxiety (sometimes or rarely)</i>	0.34 (0.18 , 0.67)	0.002	0.57 (0.17 , 1.86)	0.357	0.99 (0.59 , 1.66)	0.967	1.57 (0.61 , 4.01)	0.341
<i>Never \times level of anxiety (most of time or always)</i>								
<i>Sometimes or rarely \times level of anxiety (sometimes or rarely)</i>	0.33 (0.21 , 0.50)	0.000	1.63 (0.75 , 3.51)	0.211	1.05 (0.73 , 1.51)	0.806	1.74 (0.91 , 3.31)	0.088
<i>Sometimes or rarely \times level of anxiety (most of time or always)</i>								

7.8.Table 3.8: Association of suicidal behavior and participant's characteristics in Thailand

Thailand												
	Suicidal ideation				Suicidal plan				Suicidal attempts			
	Unadjusted model		Adjusted		Unadjusted model		Adjusted		Unadjusted model		Adjusted	
	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value	OR (95% CI)	p-value	AOR (95% CI)	p-value
Demographic factors												
Age in years (ref = 11- 12 years)												
13 year	0.98 (0.73 , 1.32)	0.886			1.21 (0.90 , 1.62)	0.201			1.19 (0.91 , 1.57)	0.201	1.12 (0.74 , 1.70)	0.564
14 year	1.07 (0.79 , 1.43)	0.675			1.25 (0.94 , 1.69)	0.125			1.06 (0.80 , 1.40)	0.695	1.27 (0.83 , 1.94)	0.258
15 year	0.92 (0.68 , 1.26)	0.625			1.10 (0.81 , 1.49)	0.550			0.82 (0.61 , 1.11)	0.202	0.90 (0.57 , 1.42)	0.664
16 year	0.98 (0.70 , 1.36)	0.881			1.10 (0.80 , 1.53)	0.552			0.75 (0.54 , 1.04)	0.083	0.78 (0.48 , 1.27)	0.328
17 year	1.05 (0.77 , 1.44)	0.739			1.09 (0.80 , 1.49)	0.587			0.73 (0.53 , 0.99)	0.042	0.80 (0.50 , 1.30)	0.386
Sex												
Female (ref = Male)	0.89 (0.76 , 1.05)	0.175			0.89 (0.76 , 1.04)	0.157			0.69 (0.59 , 0.80)	0.000	1.32 (1.02 , 1.70)	0.031
Lifestyle factors												
Adolescent obesity status (ref = normal weight)												
Overweight	0.88 (0.64 , 1.20)	0.415			0.97 (0.72 , 1.30)	0.832			0.93 (0.69 , 1.25)	0.636		
Obese	1.21 (0.80 , 1.83)	0.374			1.30 (0.87 , 1.92)	0.196			0.89 (0.57 , 1.39)	0.621		
Sitting activities per day (ref = <1 hour)												
1-2 hours	1.23 (0.94 , 1.61)	0.137	1.13 (0.79 , 1.61)	0.490	0.97 (0.76 , 1.24)	0.811	1.16 (0.83 , 1.62)	0.372	0.89 (0.70 , 1.14)	0.359		
3-4 hours	1.36 (1.04 , 1.77)	0.026	1.21 (0.84 , 1.73)	0.292	1.02 (0.80 , 1.31)	0.876	1.24 (0.88 , 1.75)	0.204	0.90 (0.71 , 1.15)	0.394		
>4 hours	1.84 (1.43 , 2.36)	0.000	1.55 (1.11 , 2.16)	0.009	1.47 (1.17 , 1.85)	0.001	1.70 (1.24 , 2.33)	0.001	1.23 (0.98 , 1.53)	0.071		
Violence and unintentional injury												
Physically attacked (ref = no)	2.26 (1.91 , 2.68)	0.000	1.42 (1.07 , 1.87)	0.013	2.04 (1.73 , 2.41)	0.000	1.20 (0.92 , 1.58)	0.166	3.44 (2.93 , 4.04)	0.000	1.53 (1.15 , 2.05)	0.003
Physically fighting (ref = no)	2.28 (1.93 , 2.70)	0.000	1.14 (0.87 , 1.50)	0.332	1.20 (1.69 , 2.34)	0.000	1.21 (0.93 , 1.58)	0.140	3.28 (2.79 , 3.84)	0.000	1.36 (1.03 , 1.81)	0.028
Seriously injured (ref = no)	2.17 (1.81 , 2.60)	0.000	1.28 (1.00 , 1.63)	0.042	1.94 (1.63 , 2.31)	0.000	1.34 (1.07 , 1.68)	0.011	3.67 (3.06 , 4.41)	0.000	1.55 (1.20 , 2.01)	0.001
Victimisation (ref = no)	2.45 (2.05 , 2.93)	0.000	1.41 (1.09 , 1.82)	0.008	2.22 (1.88 , 2.64)	0.000	1.36 (1.06 , 1.74)	0.013	4.19 (3.52 , 4.98)	0.000	1.66 (1.27 , 2.17)	0.000
Psychosocial factors												
Loneliness (ref = never)												

<i>Sometimes or rarely</i>	1.72 (1.40 , 2.12)	0.000	1.31 (0.99 , 1.73)	0.053	1.52 (1.26 , 1.85)	0.000	1.24 (0.96 , 1.61)	0.089	1.98 (1.61 , 2.44)	0.000	1.27 (0.95 , 1.71)	0.103
<i>Most of time or always</i>	6.05 (4.69 , 7.80)	0.000	2.88 (1.99 , 4.16)	0.000	3.98 (3.10 , 5.09)	0.000	1.75 (1.21 , 2.51)	0.002	6.59 (5.13 , 8.48)	0.000	2.59 (1.77 , 3.79)	0.000
Anxiety (ref = never)												
<i>Sometimes or rarely</i>	1.45 (1.18 , 1.77)	0.000	0.73 (0.42 , 1.27)	0.272	1.23 (1.02 , 1.48)	0.031	0.89 (0.54 , 1.48)	0.679	1.80 (1.46 , 2.22)	0.000	1.03 (0.56 , 1.87)	0.922
<i>Most of time or always</i>	5.46 (4.21 , 7.08)	0.000	1.60 (0.69 , 3.69)	0.265	4.21 (3.29 , 5.40)	0.000	1.97 (0.90 , 4.31)	0.088	7.49 (5.80 , 9.68)	0.000	1.66 (0.67 , 4.09)	0.265
Protective factors												
Parents check homework (ref = most of time or always)												
<i>Never</i>	1.54 (1.24 , 1.91)	0.000	1.26 (0.92 , 1.71)	0.138	1.42 (1.15 , 1.74)	0.001	1.12 (0.84 , 1.50)	0.430	1.26 (1.02 , 1.55)	0.033	0.79 (0.56 , 1.10)	0.165
<i>Sometimes or rarely</i>	0.99 (0.80 , 1.23)	0.955	0.90 (0.66 , 1.21)	0.489	0.10 (0.82 , 1.23)	0.975	0.85 (0.64 , 1.12)	0.252	1.03 (0.84 , 1.26)	0.777	0.78 (0.58 , 1.06)	0.117
Parent understand problem (ref = most of time or always)												
<i>Never</i>	1.93 (1.53 , 2.42)	0.000	0.58 (0.31 , 1.10)	0.097	1.92 (1.55 , 2.38)	0.000	1.04 (0.59 , 1.83)	0.877	2.20 (1.76 , 2.74)	0.000	1.23 (0.59 , 2.52)	0.572
<i>Sometimes or rarely</i>	1.50 (1.21 , 1.86)	0.000	0.79 (0.46 , 1.37)	0.417	1.39 (1.14 , 1.71)	0.001	1.07 (0.64 , 1.80)	0.783	1.54 (1.24 , 1.90)	0.000	1.15 (0.59 , 2.25)	0.674
Parent monitoring (ref = most of time or always)												
<i>Never</i>	1.93 (1.54 , 2.43)	0.000	2.23 (1.12 , 4.44)	0.021	1.99 (1.60 , 2.46)	0.000	2.08 (1.14 , 3.79)	0.016	2.25 (1.81 , 2.80)	0.000	1.40 (0.64 , 3.06)	0.389
<i>Sometimes or rarely</i>	1.65 (1.37 , 1.99)	0.000	2.13 (1.26 , 3.57)	0.004	1.46 (1.22 , 1.75)	0.000	1.63 (1.01 , 2.62)	0.043	1.81 (1.51 , 2.17)	0.000	1.46 (0.80 , 2.66)	0.213
Peer were supportive (ref = Sometimes or rarely)												
<i>Most of time or always</i>	0.89 (0.74 , 1.07)	0.207	1.17 (0.92 , 1.50)	0.186	1.03 (0.86 , 1.22)	0.767	1.31 (1.04 , 1.65)	0.021	0.88 (0.74 , 1.05)	0.155	1.30 (1.00 , 1.69)	0.045
<i>Never</i>	1.39 (1.08 , 1.78)	0.010	1.24 (0.87 , 1.76)	0.227	1.61 (1.28 , 2.04)	0.000	1.34 (0.96 , 1.87)	0.084	1.43 (1.13 , 1.81)	0.003	1.03 (0.71 , 1.49)	0.860
Number of close friends (ref = ≥ 3 friends)												
<i>None</i>	3.76 (2.91 , 4.87)	0.000	2.56 (1.75 , 3.74)	0.000	4.03 (3.12 , 5.21)	0.000	3.15 (2.17 , 4.56)	0.000	7.81 (6.13 , 9.95)	0.000	5.50 (3.79 , 7.98)	0.000
<i>1-2 friends</i>	1.24 (1.00 , 1.53)	0.050	1.18 (0.89 , 1.57)	0.231	1.46 (1.20 , 1.77)	0.000	1.52 (1.18 , 1.96)	0.001	2.89 (2.40 , 3.49)	0.000	2.77 (2.13 , 3.59)	0.000
Interaction of parental supports and level of anxiety												
Parents understand problem and level of anxiety (ref = most of time or always \times level of anxiety-never)												
<i>Never \times level of anxiety (sometimes or rarely)</i>	2.43 (1.65 , 3.59)	0.000	2.91 (1.34 , 6.29)	0.007	2.28 (1.58 , 3.28)	0.000	1.63 (0.81 , 3.31)	0.169	3.56 (2.37 , 5.35)	0.000	1.71 (0.73 , 3.97)	0.212

<i>Never × level of anxiety (most of time or always)</i>	9.85 (6.21 , 15.63)	0.000	3.78 (1.32 , 10.81)	0.013	8.18 (5.26 , 12.72)	0.000	1.82 (0.69 , 4.84)	0.224	12.12 (7.56 , 19.42)	0.000	2.10 (0.68 , 6.40)	0.191
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	1.76 (1.23 , 2.55)	0.003	1.75 (0.90 , 3.43)	0.098	1.56 (1.10 , 2.20)	0.012	1.20 (0.63 , 2.26)	0.565	2.20 (1.48 , 3.27)	0.000	1.07 (0.49 , 2.32)	0.862
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	5.92 (3.76 , 9.34)	0.000	1.40 (0.52 , 3.74)	0.500	4.87 (3.15 , 7.54)	0.000	1.10 (0.44 , 2.78)	0.827	9.63 (6.10 , 15.21)	0.000	2.16 (0.75 , 6.20)	0.150
Parents monitoring and level of anxiety (ref = most of time or always × level of anxiety-never)												
<i>Never × level of anxiety (sometimes or rarely)</i>	3.04 (2.08 , 4.45)	0.000	0.73 (0.32 , 1.64)	0.449	2.70 (1.90 , 3.85)	0.000	0.68 (0.33 , 1.41)	0.305	4.29 (2.92 , 6.31)	0.000	1.25 (0.52 , 3.04)	0.609
<i>Never × level of anxiety (most of time or always)</i>	6.68 (3.98 , 11.19)	0.000	0.30 (0.10 , 0.88)	0.029	5.62 (3.41 , 9.24)	0.000	0.53 (0.20 , 1.41)	0.208	8.63 (5.21 , 14.27)	0.000	0.65 (0.21 , 1.95)	0.447
<i>Sometimes or rarely × level of anxiety (sometimes or rarely)</i>	2.23 (1.58 , 3.11)	0.000	0.73 (0.39 , 1.35)	0.318	1.88 (1.38 , 2.57)	0.000	0.80 (0.45 , 1.43)	0.467	2.97 (2.09 , 4.21)	0.000	1.04 (0.52 , 2.08)	0.897
<i>Sometimes or rarely × level of anxiety (most of time or always)</i>	9.79 (6.41 , 14.96)	0.000	0.85 (0.36 , 1.99)	0.717	6.95 (4.62 , 10.47)	0.000	0.94 (0.42 , 2.09)	0.882	13.91 (9.11 , 21.25)	0.000	1.32 (0.54 , 3.20)	0.533