

# Sources of Perceived Social Support and Associated Factors for Depression amongst Malay Primary School Adolescents in Kelantan, Malaysia

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## ABSTRACT

**INTRODUCTION:** Adolescent depression is a substantial health concern nowadays, and perceived social support determines the outcome. Lack of research on depression amongst Malaysian younger group of adolescents, puts them at risk of being under diagnosed and under treated. Furthermore, the function of various social supports for depression in early adolescents is less explored. The primary objective of this study was to determine the level of support for adolescent depression from five different sources: i) parents, ii) teachers, iii) close friends, iv) classmates, and v) others in school. The secondary objective is to study the prevalence of depression amongst primary school adolescents and establish their association and the other factors that influence depression.

**MATERIALS AND METHODS:** A cross-sectional study involving 576 adolescents between the ages of 10-11 year olds were conducted from August 2020 till September 2020 using the Malay Children Depression Inventory (M-CDI) and Malay Child and Adolescent Social Support Scale (M-CASSS). **RESULTS:** The respondents reported that teachers were the most supportive. Approximately 131 (22.7%) of them had depressive symptoms. Only parental support significantly reduced their risk of developing depression. Having a single parent household, being bullied, emotional abuse, and performing poorly in school increased the likelihood of developing depression. **CONCLUSION:** Findings from this study, demonstrated the necessity for early depression screening amongst primary school adolescents and the need for stakeholders to continue supporting parents in their efforts to deal with adolescent concerns.

### Keywords

Primary school, adolescent, depressive, perceived social support

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## INTRODUCTION

Adolescent depression has increased from 24% to 37% globally in the past ten years.<sup>1</sup> The COVID-19 pandemic made matters worse following lockdown, social withdrawal, school shutdown, and online learning which unintentionally upset teenage norms and increased stress in their already stressful lives.<sup>2</sup> Adolescent social interactions can both cause stress and provide social support system too.<sup>3</sup> Therefore, it is crucial to evaluate how adolescents perceive their social network in terms of depression. Teachers, classmates, and parents are important sources of support for adolescents and teenagers and have a big impact on their wellbeing.<sup>4,5</sup> In Malaysia, prevalence of adolescent depression reported in local studies ranges from 10.3% to 50.3%.<sup>6-10</sup> Depression amongst Malaysian adults and children have dramatically increased since COVID-19 first appeared.<sup>11,12</sup> In Kelantan, the prevalence of mental health problems among adolescents has increased from 4.6% in 2012 to 16.0% in 2017.<sup>13,14</sup> Adolescence is the phase of life between childhood and adulthood, from ages of 10 -19 years old.<sup>15</sup> The onset of depression peaks in adolescence and younger teens have the highest chance of getting depression.<sup>16</sup> The majority of adolescent depression research in Malaysia focused on secondary school students (older adolescents).<sup>7,9</sup> The purpose of this study was to identify the support for adolescent from five different sources and the prevalence of depression amongst adolescents in primary schools, as well as their relationship and other risk factors for depression.

## MATERIALS AND METHODS

### Participants, Sample Size, Sampling Method and Study Design

This cross-sectional study, carried out during the emerging of COVID-19 pandemic, used multistage cluster sampling. The Malaysian government issued a nationwide movement control order (MCO) or lockdown from the mid-March 2020 to early June 2020, which led to temporary school closures. Data collection was from August 2020 till September 2020, more than two weeks after the MCO was abolished and primary school resumed. 10-11 -year-olds from six government primary schools in three districts of Kelantan were chosen at random. Kelantan, a state with a large Malay population is situated in northeast of Peninsular Malaysia.

From each school, students from four different classes were randomly selected. Only Malay students who were able to read, write, and understand Malay, as well as have parental or guardian consent were included in the study. The study excluded students who were absent from class on the day of data collection and those who were diagnosed as having mental health problems. A single proportion formula was used to obtain the greatest sample size for the prevalence of depression based on prior research.<sup>17</sup> The projected sample size required was 671 when considering the cluster sampling, 5% type 1 error, and a 20% dropout rate.

### Assessment Tool

The Malay Children's Depression Inventory (M-CDI), a 27-item variant, is a validated tool to screen and assess child and adolescent depression.<sup>18</sup> For every item, the students were asked to select one sentence that best sums up their past two weeks experiences. Negatively phrased items received a reversal score. Higher scores indicated a higher risk of depression. The total depression score was calculated by adding the item scores. Scores on the CDI range from 0 to 54 overall. It has a satisfactory reliability (Cronbach's alpha 0.83). The validated M-CDI is 90% sensitive, and 98% specific for the diagnosis of depression at a cut-off score of 18.<sup>18</sup> Perceptions of social support from various sources were assessed using the Malay

version of the Child and Adolescent Social Support Scale (M-CASSS) adapted from the original English version. The original English version was tested among 1110 students in grades 3 through 12 from schools in Massachusetts, Wisconsin, Minnesota, Illinois, and Nebraska.<sup>19</sup> The multidimensional measure of child and adolescent social support called the CASSS has many language translations and good psychometric qualities. Its 60-items are broken down into five sub-scales that categorized social support according to the people who provided it: i) parents, ii) teachers, iii) close friends, iv) classmates, and v) others at school. Based on the sources, it assigned a frequency and importance rating to each single expression of supporting behaviour.

Prior to this study, CASSS was translated into Malay and culturally adjusted in accordance with the suggested standards.<sup>20</sup> Two independent bilingual Malay and English experts performed the forward and backward translations. Professionals with extensive knowledge in the relevant domains evaluated, compared, and harmonised the M-CASSS. Then it was tested on 382 school going adolescents between the ages of 10-16 years-old. The results showed that the 60-items and five factors in M-CASSS had good psychometric qualities. Excellent content and face validity were demonstrated by S-CVI/Ave values of 0.94 and 0.99, respectively.

Acceptable fit indices were produced by the Confirmatory Factor Analysis (CFA) (2/df=1.58, SRMR=0.05, RMSEA=0.04, CFI and TLI close to 0.90). The factor loadings ranged from 0.419 to 0.764, and Raykov's dependability was 0.961. Just frequency rating was used in M-CASSS for this study. The frequency ratings were given on a 6-point scale, with 1 denoting 'never', and 6 denoting 'always'. The sum of the frequency ratings for each domain results in a total frequency score for each of the five domains that ranges from 12 to 72. Better support is indicated by a higher score.

### STATISTICAL ANALYSIS

IBM statistical software version 26 was used to conduct the statistical analysis. To investigate the relationship between the measured covariates and depression as binary

outcomes, simple logistic regression (SLR) and multiple logistic regressions (MLR) were utilised. Statistical significance was defined as a p-value < 0.05.

## RESULTS

A total of 672 students were randomly chosen for the study, but only 591 students responded to the questionnaire (88% response rate). Of 591 respondents, dataset from 576 respondents were analysed as the remaining were incomplete.

### Sociodemographic Characteristics

Only Malay students were included in this study, with the mean (SD) age of 10.53 (0.50) years-old. Students from both urban and rural areas were evenly represented, with 55.4% being female. Most of them shared a home with their parents who were still married (84.4%) and lived together. For both the mothers (60.1%) and the fathers (63.2%) of the participants, secondary education was the predominant level. 5.7% of students hailed from homes with an average of four siblings and a household monthly income of less than RM500.

No student confessed to abusing drugs or alcohol, and only a small percentage of students acknowledged to having a chronic disease (5.0%) and being smokers (1.9%). Some of the respondents reported having experienced emotional abuse (11.5%), physical abuse (3.8%), and bullying (13.2%). Interestingly, 34.7% of the respondents reported being top 10 in their respective classes. Table 1 summarizes the sociodemographic characteristics of the respondents.

### Multi-Sources Perceived Social Support and The Prevalence of Depression

Using the Malay Child and Adolescent Social Support Scale (M-CASSS) assessment tool, respondents ranked teachers the highest perceived social support [52.02 (11.22)], followed by close friends, parents, and classmates. With a mean (SD) of 44.53(14.41), they believed that they received the least support from others at school. This is shown in Table 2.

**Table 1:** Sociodemographic characteristic of study population (n=576)

Variables	n (%)
Age*	10.53 (0.50)*
Sex	
Female	319 (55.4)
Male	257 (44.6)
Race	
Malay	576 (100)
Indian	0(0)
Chinese	0(0)
School locality	
Rural	281 (48.8)
Urban	295 (51.2)
Living status	
Both mother and father	490 (85.1)
Mother only	37 (6.4)
Father only	10 (1.7)
Grandparent/s	28 (4.9)
Other relatives	9 (1.6)
Adopted family	2 (0.3)
Parent's marital status	
Married and live together	486 (84.4)
Divorced	36 (6.3)
Married but living separately	28 (4.9)
Father or mother died	26 (4.5)
Father's education level	
Never had formal education	4 (0.7)
Primary education	48 (8.3)
Secondary education	364 (63.2)
Tertiary education	160 (27.8)
Mother's education level	
Never had formal education	5 (0.9)
Primary education	44 (7.6)
Secondary education	346 (60.1)
Tertiary education	181 (31.4)
Household income	
<RM500	33 (5.7)
RM500-1000	209 (36.3)
RM1001-2000	125 (21.7)
RM>2000	209 (36.3)
Number of siblings	4.32 (2.05)*
Chronic medical illness	
No	547 (95.0)
Yes	29 (5.0)
Smoking	
No	565 (98.1)
Yes	11 (1.9)
Alcohol drinking	
No	576 (100)
Yes	0 (0)
Substance abuse	
No	576 (100)
Yes	0 (0)
Being bullied	
No	510 (88.5)
Yes	66 (11.5)
Physical abuse	
No	554 (96.2)
Yes	22 (3.8)
Emotional abuse	
No	500 (86.8)
Yes	76 (13.2)
Academic performance	
Top 10 ranking	200 (34.7)
Middle ranking	276 (47.9)
Last 10 ranking	100 (17.4)

\*Mean (SD)

**Table 2:** Mean score of perceived social support from different sources among study population (n=576)

Source of perceived social support	Mean (SD)	95% CI
Parents	51.36 (10.97)	50.47,52.26
Teachers	52.02 (11.22)	51.11,52.94
Classmates	47.59 (12.45)	46.57,48.61
Close friends	51.57 (12.38)	50.55,52.58
Other people in school	44.53 (14.41)	43.35,45.71

Using the Malay Children Depression Inventory (M-CDI) screening tool to assess depression, 131 (22.7%) respondents were found to be depressed (CDI score >18).

### Sources of Social Support and Other Factors Associated with Depression among Adolescents in Primary Schools

All sources of social support (parents, teachers, classmates, close friends, and other students) were significantly associated with depression in simple binary logistic regression ( $p$ -value<0.05) (Table 3). Only parental support was a significant predictor for perceived social support when other variables were adjusted, according to the results of multiple binary logistic regression (Table 4). The incidence of depression could be reduced by 4% in students who felt their parents were supportive (Adj. OR 0.96, 95%CI; 0.94,0.98).

No significant association was seen between students experiencing depression and support from teachers, classmates, close friends, and others in school when other variables were controlled. Academic performance, being bullied, emotional abuse, and parent's marital status were additional significant factors in the multivariable analysis. The likelihood that a student would experience depression increased threefold if their parents were divorced (Adj. OR 2.92, 95% CI: 1.61, 5.30). Adolescents were more likely to experience depression if they reported being bullied (Adj. OR 1.92, 95% CI; 1.06,3.47), emotionally abused (Adj. OR 2.25, 95% CI; 1.27,3.99), or performed poorly in school (Adj. OR 2.08, 95% CI; 1.27,3.41).

**Table 3:** Sources of social support and other factors associated with depression amongst adolescents in primary schools by simple binary logistic regression (n=576)

Variables	Crude Odds Ratio	(95% CI)	p-value
Parents social support	0.95	(0.93,0.96)	<0.001
Teachers social support	0.96	(0.94,0.98)	<0.001
Classmates social support	0.96	(0.96,0.95)	<0.001
Close friends social support	0.96	(0.96,0.99)	0.001
Other people in school social	0.99	(0.97,0.99)	0.034
Age (years)	0.84	(0.57,1.24)	0.385
Sex			
Female	1		
Male	1.52	(1.03,2.25)	0.036
School locality			
Rural	1		
Urban	1.32	(0.89,1.95)	0.170
Living status			
With own parents	1		
Other than own parents	2.27	(1.15,4.46)	0.018
Parent's marital status			
Still married	1		
Single parent	3.55	(2.06,6.12)	<0.001
Father's education level			
Secondary and below	1		
Tertiary education	0.58	(0.36,0.92)	0.022
Mother's education level			
Secondary and below	1		
Tertiary education	0.68	(0.44,1.05)	0.082
Household income			
RM1000 and below	1		
Above RM1000	0.55	(0.37,0.81)	0.003
Number of siblings			
Less than 5	1		
5 and more	1.05	(0.71,1.56)	0.816
Chronic medical illness			
No	1		
Yes	1.85	(0.84,4.09)	0.127
Smoking			
No	1		
Yes	1.28	(0.34,4.90)	0.718
Being bullied			
No	1		
Yes	2.7	(1.58,4.62)	<0.001
Physical abuse			
No	1		
Yes	4.39	(1.85,10.40)	0.001
Emotional abuse			
No	1		
Yes	2.58	(1.55,4.29)	<0.001
Academic performance			
Good	1		
Poor	2.32	(1.46,3.67)	<0.001

**Table 4:** Sources of social support and other factors associated with depression amongst adolescents in primary schools analysed by multiple binary logistic regression (n=576)

Variables	Adjusted OR	(95% CI)	p-value
Parents social support	0.96	0.94,0.98	<0.001
Parent's marital status			
Still married	1		
Single parent	2.92	1.61,5.30	<0.001
Being bullied			
No	1		
Yes	1.92	1.06,3.47	0.032
Emotional abuse			
No	1		
Yes	2.25	1.27,3.99	0.006
Academic performance			
Good	1		
Poor	2.08	1.27,3.41	0.004

## DISCUSSIONS

### Sources of Perceived Social Support among Primary School Adolescents

In this study, primary school adolescents appeared to regard their teachers as being more supportive than their parents or close friends, which contradicts previous studies.<sup>21,22</sup> The majority of these adolescents lived with both parents. It is in line with earlier research that found Chinese students valued their teachers' social support more than that of their parents'.<sup>23,24</sup> Similar to this, older Singaporean adolescents said in a recent study that their teachers supported them more than their parents or friends.<sup>25</sup> Our results thus confirmed past research suggesting that teenagers view of social support are influenced by cultural and social values.<sup>24</sup>

They emphasized how teachers are valued more highly in Asian communities than in Western ones. The 2018 Global Teacher Status Index revealed that of the 35 countries polled, Malaysian teachers were ranked second only to Chinese teachers in terms of regard. Since our data collection took place during the COVID-19 epidemic, our findings may possibly be explained by the fact that teachers were more concerned about their students' welfare and were better able to support them when they returned to class following the lockdown. According to qualitative research conducted amongst primary and secondary school teachers in England, teachers who were concerned about how the pandemic

affected their students, brought gifts and words of encouragement to lift their students' spirits.<sup>26</sup> In contrast to our findings, a different study discovered that during the pandemic, teenagers valued family support more than school or friend.<sup>27</sup> They talked about how some teenagers might be able to spend more time with their families during lockdown. However, another study found that teenagers highly valued their best friends' support, regardless of how much time they spend pre-COVID 19.<sup>28</sup> These variations could result from differences in the methods used to measure social support, which must be considered when comparing.

### Prevalence of Depression amongst Primary School Adolescents

The prevalence of depression amongst primary school adolescents in our study was 22.7%, similar to earlier research in western China (23.9%).<sup>29</sup> It is lower than studies in the United States (30%) and Turkey (34.5%) yet being greater than those in Cyprus (10.3%) and Brazil (20.3%). Although the CDI scale was the same in all these research, various cut-off points of 19 and 20 were used.<sup>30-32</sup> In contrast, a local study which used the CES-D instrument amongst 10-12 year-olds in a primary school in Kuala Lumpur, found a substantially lower prevalence of depression of 10.5%.<sup>10</sup> With 8.3% of adolescents aged 10-15 years-old reporting emotional issues, our findings were higher than the NHMS 2019 national survey.<sup>33</sup>

The disparities however, might be explained by the various instruments used for the survey, sample size, age of respondents, and other demographic factors. Our results appeared to be comparable internationally when examining the prevalence of depression amongst secondary school teenagers using the same tool. For instance, the prevalence was 25% in India and 21% in Uganda.<sup>34,35</sup> On the other hand, a local survey in Selangor discovered that up to 50.3% of students were depressed.<sup>9</sup> The author justified the findings were due to small sample size, which only included "Form Four" pupils (16 year olds) from urban areas. On the other hand, research in Sarawak found that among older teenagers, the prevalence of depression was 26.2%.<sup>7</sup> Comparisons are difficult due to the paucity of studies on depression amongst Malaysian primary school adolescents following the COVID-19



pandemic. A local study found a higher prevalence of depression, with 31.4% of children aged 8-13 years old being depressed, using a different tool to detect depression in their online survey.<sup>12</sup> The prevalence of depression amongst primary school adolescents in Kelantan is rather high, almost equivalent to that of secondary school students, notwithstanding the wide variation of prevalence in these surveys.

### **Sources of Social Support and Other Factors Associated with Depression among Adolescents in Primary Schools**

We found that supportive parents significantly lower the chance of depression amongst study participants. Our findings are supported by earlier studies.<sup>23,36,37</sup> Higher teenage coping abilities are associated with parents who are supportive because parents may encourage their children's self-expression, which reduces their risk of depression.<sup>38,39</sup> Since many adolescents were probably with their families during the lockdown, parental effects on adolescents' mental health is not surprising. Lockdown strengthened their ties with their parents.<sup>2</sup> Remarkably, we discovered no evidence of a significant relationship between depression and assistance from teachers, classmates, close friends, or the school, despite the respondents' high appreciation for this support in the study.

Our findings diverge slightly from those of research among Australian teenagers.<sup>37</sup> Yet, when looked at concurrently, depression was predicted by both teacher and family support. One of the reasons why teachers' support was less of an influence in Malaysia is the country's educational system, which places a strong emphasis on raising students' academic achievement and other aspects of school performance.<sup>40</sup> The primary duty of a teacher is to instruct, and not to offer psychological support. Hence there may be little impact on the students' mental health and self-esteem. Another explanation could be that children are interacting less with teachers and classmates due to the national lockdown effect. After the lockdown, students reported that they felt uncomfortable mingling since they had lost contact with their peers and teachers.<sup>2</sup> Hence, when teenagers seek to express their distress and worries, teachers might not be the best place

to turn to first. Nonetheless, several other research have demonstrated how supportive relationships with teachers, classmates, close friends, and the school can reduce adolescent depression risk.<sup>41,42</sup> Similarly, it was noted that early adolescent with more peer connections appeared to have higher mental and overall well-being than those with fewer during the UK's first COVID-19 lockdown.<sup>27</sup> When we looked at additional factors affecting depression in teenagers, we found that having a single parent, whether they were divorced or passed away, increased the likelihood of developing depressive symptoms by three folds. Our results are in line with earlier studies.<sup>7,43</sup>

Losing a parent, or even being separated from family, is viewed as a traumatic life experience that may impair teenagers' emotional stability and social development, leaving them more susceptible to depression.<sup>8</sup> Research has shown that single-headed households struggle financially, which has an impact on raising children.<sup>43,44</sup> Kelantan, being the poorest state in Malaysia and having the third-highest divorce rate in 2019 made it worrying.<sup>45</sup> In our study, 42% of participants were from low-income families earning less than RM1,000 monthly, which is lower than the monthly RM1,200 current minimum wage in Malaysia. Although household wealth was not a major factor in this study, there were more teenagers with depression in lower-income families, especially during the COVID-19 pandemic.<sup>46</sup>

Furthermore, this research supports earlier results that adolescent depression is significantly influenced by recent bullying, emotional abuse, and poor academic achievement.<sup>47-49</sup> In our study, 11.4% respondents reported recent verbal or physical bullying from peers although there was less interaction and school bullying during the COVID-19 pandemic. Yet, as adolescents spend more time interacting and socializing online, they were more susceptible to cyberbullying which is a substantial predictor of serious mental health consequences.<sup>50</sup> The pandemic led to increased levels of parenting stress and loneliness, hence intensify interfamilial conflict, raising mother's psychological agitation, and risk of child abuse. During the lockdown, many students found it difficult to adapt to online learning

and maintain their academic obligations after school resumed. As a result, those who perform poorly, could experience worsen emotional suffering.<sup>2</sup>

## CONCLUSION

In conclusion, this study found that depression is rather common amongst adolescents in primary schools. Though the assistance of the teacher is highly valued by the students, only parental social support significantly reduced the risk of depression. Those who had single parents, were bullied, suffered emotional abuse, or performed poorly in school, ran a much higher risk of depression. These findings made it clear that adolescents in primary school who are at risk for depression should be screened early, and stakeholders should keep supporting parents in dealing with adolescents.

Parents and teachers are recommended to regularly enquire and address adolescent concerns. These findings also contribute to the body of local evidence that may be used to administer early adolescent mental healthcare more effectively. Future studies should include children from private schools, other racial groups, and other regions, consider other crucial factors including the impact of social media, investigate the kind of support and how it relates to depression, and use a variety of data sources, including parents and teachers. A research extension utilizing diagnostic measures is also suggested because the diagnosis of depression was not established in this study.

## LIMITATIONS

This study poses a few limitations. Only Malays from public schools participated in this study, limiting the generalizability of the findings to those from other races and private institutions. The cross-sectional study design precludes drawing conclusions about the causal relationship. This study is prone to reporting bias like social-desirability bias since it uses a single source of self-reported data. To lessen this bias, the study used anonymous self-administered surveys. Other important factor such as adverse childhood experiences (ACE) should be included as well in the future study.

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## INSTITUTIONAL REVIEW BOARD STATEMENT

Ethical approval was obtained from Malaysian National Medical Research Registry (ID number: NMRR-19-3291-51725), Research Ethics Committee (Human), Universiti Sains Malaysia (USM/JEPeM/19110835) and the Malaysian Ministry of Education.

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## CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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