Parents' and teachers' perceptions of emotional and behavioural problems of school-going adolescents

U. Harikrishnan (✉ hariarchal@gmail.com)

Mizoram University <https://orcid.org/0000-0003-4348-0959>

Grace Lalhlupuii Sailo

Mizoram University

Research Article

Keywords: Emotional and behavioural problems, parents' and teachers' perception, school-going adolescents

Posted Date: December 10th, 2021

DOI: <https://doi.org/10.21203/rs.3.rs-1156290/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License. [Read Full License](#)

Abstract

Self-reported studies alone cannot be used to deduce the significance of adolescent problems. Therefore, the current study focuses on parents' and class teachers' perspectives of school-going adolescents' emotional and behavioural problems. The objectives are to apprehend the prevalence of adolescent problems, comparisons on gender, school-area; and its association with socio-demographic details. A cross-sectional questionnaire-based study was conducted among 19 schools from government-private and rural-urban schools across Kollam District, Kerala. Malayalam/English version of the Strength and Difficulties Questionnaire (SDQ) was administered among a sample of 600 parents and 60 class teachers of school-going adolescents. Gender correlation with parents' report found emotional problems ($P < 0.01$), conduct problems ($P < 0.01$), hyperactivity ($P < 0.001$), peer problems ($P < 0.001$) whereas in teachers' report found relationship with emotional problems ($P < 0.05$) and hyperactivity ($P < 0.001$). Multivariate test results reveal that there is a statistically significant difference in emotional and behavioural problems of school-going adolescents based on school area (government-urban, government-rural, private-urban and private-rural). Multiple linear regression analysis on parents reports is significantly predicted with gender ($P < 0.01$), urban-rural settings ($P < 0.001$) and socioeconomic status ($P < 0.01$). Teachers' report has significantly been predicted with urban-rural settings ($P < 0.01$) and socioeconomic status ($P < 0.001$). Parents' reports revealed a less overall prevalence of emotional and behavioural problems than teachers' reports. Female adolescents tend to have more emotional problems and males were found to be more hyperactive. A significant difference was found with the school-area settings and significant association with socio-demographic details of adolescents. More attention is needed for the protection of adolescents' mental health and fills mental health gaps in services.

Introduction

Adolescence is a period of rapid physical, psychological growth and age from 10 to 19 years (WHO, n.d.-a). It is a transition between childhood to adulthood and major development changes take place during this period (WHO, n.d.-b). Adolescents constitute 1.2 billion across the world, 350 million in the South-East Asian Region and account for 21% of the Indian population (Sivagurunathan, Umadevi, Rama, & Gopalakrishnan, 2015; WHO, n.d.-b). Major health risk- behaviours among adolescents include substance use, lack of physical activity, overweight, lack of food intake, emotional and behavioural problems. The intersectoral and multicomponent approach helps to determine the social, environmental and psychological factors of adolescents (Reavley, Patton, Sawyer, Kennedy, & Azzopardi, 2017; Srivastava, 2016).

Health integrates the physical, mental and social aspects of every individual. Mental health is an ability to cope with stress, work productively and it is an essential component of health (WHO, 2017). A meta-analysis of epidemiological studies on child and adolescent psychiatric disorders in India found that the prevalence rate in the community was 6.46% whereas 23.33% in school (Malhotra & Patra, 2014). A wide variety of mental health problems prevails among adolescents such as conduct problems, psychological distress, substance use, anti-social behaviour, and all of these problems depend on socio-demographic factors (Magai, Malik, & Koot, 2018).

Emotional and behavioural problems are most commonly seen among school-going adolescents. Emotional problems like anxiety, depressed mood and behaviour problems like conduct problems, hyperactivity and peer-related problems may lead to disturbance in personal, family, school and social activities (Meilstrup et al., 2015). Several epidemiological studies found emotional and behaviour problems among adolescents in India. A cross-sectional school-based study found that less than one-tenth of school-going adolescents have some mental health issues (Harikrishnan, Arif, & Sobhana, 2017). Another study revealed that 15% of adolescent school children had mental health problems (Nair, Ganjiwale, Kharod, Varma, & Nimbalkar, 2017). In both studies, the self-reported strengths and difficulties questionnaire was administered among adolescents. This indicates that most of the studies were self-reported the mental health status of school-going adolescents.

Emotional and behavioural problems cannot be understood from adolescents' self-reported status alone therefore it becomes imperative to take into account the perspective of parents and teachers on emotional and behavioural problems of school-going adolescents. Accordingly, the current study focuses on parents' and teachers' perceptions of emotional and behavioural problems of school-going adolescents. The objectives of the study are: 1) to determine the parents' and teachers' perception of emotional and behavioural problems of adolescents; 2) to assess parents' and teachers' perception of emotional and behavioural problems across gender; 3) to evaluate the association between parents and teachers perception on emotional and behavioural problems of school-going adolescents with school-area; 4) to assess parents' and teachers' perception on emotional and behavioural problems of school-going adolescents with socio-demographic details.

Materials And Methods

This study was is a cross-sectional descriptive study on parents' and teachers' perception of adolescents' emotional and behavioural problems. The study was conducted in 19 schools from government-private and rural-urban schools across Kollam District, Kerala. The sample size was 600 parents of school-going adolescents from 60 classes (36 from class VIII to X and 24 from class XI and XII), and 120 responded each from class VIII to class XII. Sixty Class teachers were debriefed regarding 10 school-going adolescents from their respective classes. The sample size formula was calculated at 600 based on a cross-sectional descriptive study (Jayasinghe, 2010).

The procedure began by taking written permission from each school authority followed by written consent from parents and teachers during the period, July to October 2019. The questionnaire consists of the gender of school-going adolescents, school settings, area, parents and teachers age, gender and education, parents response on the socio-economic status by modified Kuppuswamy scale (Saleem, 2018). Strength and Difficulties Questionnaire (SDQ) for age 4 to 17 or 18 plus to understand emotional & behavioural problems, and three versions of SDQ are self-reported, parents and teachers reports. The current study used only the Malayalam/English version of the parents and teachers SDQ report (Goodman, 1997). There were 25 items comprised of 5 scales of 5 items each and the scales consisted of emotional problems, conduct problems, hyperactivity, peer problems and pro-social behaviour. The item score is zero = "not true", one = "somewhat true" and two = "certainly true" and there were items like 7, 11, 14 and 25 which had the reverse scoring pattern. The current study scoring was based on the original three-band categorization (normal, borderline & abnormal). The total score is the sum of the first 4 scales and score range between zero to forty; and the parent report total, score ranges are normal (≤ 13), borderline (14 to 16) and abnormal (17 to 40) whereas in teacher report total, score range is normal (≤ 11), borderline (12 to 15) and abnormal (16 to 40).

The study was undertaken with the approval of the Academic Council of Mizoram University. The descriptive and inferential statistics were done through Statistical Package for Social Sciences (SPSS). The descriptive statistics consisted of the percentage of SDQ scores of both parents' and teachers' reports. The inferential statistical analysis was an independent t-test for comparing SDQ total score of each scale and overall of parent and teacher report; MANOVA analysis for parents and teachers SDQ total score with school-area. The school-area in the current study are government-urban (n=150), government-rural (n=150), private-urban (n=150) and private-rural (n=150). Multiple linear regression analysis was done for the predictors on total SDQ sore of parents and teachers report with the gender of school-going adolescents, rural-urban settings and socio-economic status.

Results

A little more than half (53%) of school-going adolescents were female and 600 school going adolescents' parents participated in the study. The mean age of parents was 42.86 (SD=5.89) wherein 63% are mothers and 41% completed higher education. The 60 class teachers mean age was 42.30 (SD=6.42), most teachers are female (75%) and the majority of them (83%) completed Post Graduate with B. Ed/ M. Ed/NET/SET. Overall SDQ score on parents' report found that 12.5% of school-going adolescents had an abnormality. Peer problems (15.7%) were higher and the lowest abnormality found was

hyperactivity (10%). The conduct problems (12.7%) revealed that high abnormality and low abnormality in hyperactivity (5.3%), and the overall SDQ score shows that 14.3% are abnormal as per the teachers' report (table-1).

Table 1: Emotional and behavioural problems of school-going adolescents

SDQ Domains		Normal (%)	Borderline (%)	Abnormal (%)
Parents report	<i>Emotional problems</i>	464 (77.3)	45 (7.5)	91 (15.2)
	<i>Conduct problems</i>	479 (79.3)	45 (7.5)	79 (13.2)
	<i>Hyperactivity</i>	491 (81.8)	49 (8.2)	60 (10)
	<i>Peer problems</i>	443 (73.8)	63 (10.5)	94 (15.7)
	<i>Overall</i>	451 (75.2)	74 (12.3)	75 (12.5)
Teachers perception	<i>Emotional problems</i>	504 (84)	41 (6.8)	55 (9.2)
	<i>Conduct problems</i>	470 (78.3)	54 (9)	76 (12.7)
	<i>Hyperactivity</i>	528 (88)	41 (6.8)	31 (5.3)
	<i>Peer problems</i>	482 (80.3)	52 (8.7)	66 (11)
	<i>Overall</i>	417 (69.5)	97 (16.2)	86 (14.3)

Table - 2: Parents and teachers perceptions on emotional and behavioural problems compared with gender.

SD Domains		Gender		Df	t	P-value
		Male	Female			
		Mean (SD)	Mean (SD)			
Parental report	<i>Emotional problems</i>	2.20 (2.18)	2.71 (2.28)	598	-2.77	.006**
	<i>Conduct problems</i>	2.12 (1.67)	1.80 (1.36)	598	2.56	.01**
	<i>Hyperactivity</i>	4.05 (2.30)	3.11 (2.02)	598	5.31	.000***
	<i>Peer problems</i>	2.45 (1.63)	2.04 (1.48)	598	3.20	.001***
	<i>Overall</i>	10.82 (5.57)	9.66 (4.98)	598	2.69	.007**
Teachers report	<i>Emotional problems</i>	2.13 (1.86)	2.50 (2.19)	598	-2.17	.03*
	<i>Conduct problems</i>	1.81 (1.85)	1.67 (1.71)	598	.91	.35
	<i>Hyperactivity</i>	3.22 (2.39)	2.25 (2.01)	598	5.40	.000***
	<i>Peer problems</i>	2.06 (1.85)	2.10 (1.86)	598	-.26	.79
	<i>Overall</i>	9.12 (5.58)	8.47 (5.84)	598	1.38	.65

SD=Standard Deviation; df=Degree of Freedom; $p<0.05^$, $p<0.01^{**}$, $p<0.001^{***}$*

Gender comparison on parental report of SDQ total score showed highly significant contribution in each scale- emotional problems ($t=-2.77$; $P<0.01$), conduct problems ($t=2.56$; $P<0.01$), hyperactivity ($t=5.31$; $P<0.001$), peer problems ($t=3.20$; $P<0.001$) and overall ($t=2.69$; $P<0.01$). The teacher report revealed significant comparison with emotional problems ($t=-2.17$; $P<0.05$) and highly significant with hyperactivity ($t=5.40$; $P<0.001$) while the rest of the scales has no significant comparison (table-2).

Table-3: One-way MANOVA analysis on emotional and behavioural problems of school-going adolescents with school-area.

Multivariate test					
	Effect	Value	F	P-value	Partial η^2
school-area	Wiks' Lambda	.874	13.85	.000	.07
Tests of Between-Subjects Effects					
Source	Dependent variable	df	F	P-value	Partial η^2
school-area	Parental perception - SDQ total score	3	14.57	.000	.07
	Teachers perception - SDQ total score	3	14.14	.000	.07

P-value of .000 means $p < .0005$

Table – 3 depicts multivariate test result of one-way MANOVA which shows statistically significant differences in emotional and behavioural problems (SDQ total score) of school-going adolescents based on school area (government-urban, government-rural, private-urban and private-rural), $F=13.85$, $p<.0005$; Wilk's $\Lambda= .874$, partial $\eta^2=.07$. The tests of between-subject effects found that school-area has a statistically significant effect on both parental perceptions on SDQ total score ($F=14.57$; $p<.0005$; partial $\eta^2=.07$) and teachers' perception on SDQ total score ($F=14.14$; $p<.0005$; partial $\eta^2=.07$).

Table – 4: Multiple linear regression analysis – total SDQ score of Parental and Teachers report.

Dependent Variable	Independent Variable	B	P-value	95.0% CI	Model Summary
Parental report – Total score of SDQ	Gender	-1.24	.003**	(-2.07, -.41)	R=.23 R ² =.05 F=11.17
	Urban-rural settings	-1.67	.000***	(-2.51, -.82)	
	Socio-economic status	.57	.01**	(.13, 1.02)	
Teachers report – Total score of SDQ	Gender	-.71	.12	(-1.61, .18)	R=.22 R ² =.05 F=10.50
	Urban-rural settings	-1.31	.005**	(-2.23, -.40)	
	Socio-economic status	.99	.000***	(.51, 1.47)	

$p<0.05^*$, $p<0.01^{**}$, $p<0.001^{***}$

Multiple linear regression analysis was made for the association of parental and teacher SDQ total scores with gender, urban-rural settings, and socio-economic status. The results show parents' report of overall difficulties in SDQ ($F=11.17$, R square=.05, $P<0.001$) is significantly predicted with gender ($B=-1.24$, $P<0.01$), urban-rural settings ($B=-1.67$, $P<0.001$) and socioeconomic status ($B=.57$, $P<0.01$). Teachers report of overall difficulties in SDQ ($F=10.50$, R square=.05, $P<0.001$) is significantly predicted with urban-rural settings ($B=-1.31$, $P<0.01$) and socioeconomic status ($B=.99$, $P<0.001$) whereas gender has no significant prediction (table-4).

Discussion

Parents' and teachers' reports on emotional and behavioural problems of school adolescents found prevalence rate was higher than one-tenth of the total sample in the study. The parents report found prevalence among 12.5% of school-going adolescents while teachers' report revealed that 14.3% of them had emotional and behavioural problems. Epidemiological studies on mental health disorders of children and adolescents in Asia found the general prevalence to be in the range of 10 to 20 percentage (Srinath, Kandasamy, & Golhar, 2010). The self-reported Indian studies had similar findings on emotional and behavioural problems (Harikrishnan et al., 2017; Nair et al., 2017). A clinical study found mental health disorders with reports from parents and youth (Aebi et al., 2017). Teachers' report in another study found that adolescents had emotional and behavioural disorders due to less monitoring and poor interactions (Green et al., 2017). A longitudinal population-based study measured the 6 months stability from teachers' and parents' reports found that less than a tenth of school children aged 13 to 14 years had emotional and behavioural problems (Idris, Barlow, & Dolan, 2019). The current study also found prevalence rate below one fifth of total samples by parents' and teachers' report.

Emotional problems influence the development of every individual especially adolescents. The current study found more than a tenth of school-going adolescents with emotional problems illustrated from parental reports while it was less than a tenth according to teachers' reports. Parents of emotionally disturbed children were more involved and provided less autonomy. Parents' over-involvement may also lead to emotional problems (Hudson, Comer, & Kendall, 2008). Parents have considered that emotions are problematic for children who are hiding numerous acts (Dunsmore, Her, Halberstadt, & Perez-Rivera, 2009). Parents' reports depict a higher prevalence of conduct, hyperactivity and peer problems than teachers' reports. Difficulties in school may become conduct problems resulting in characteristics such as stealing, physical violence,

rebellion, and bullying behaviours (Minkkinen, Hotulainen, Kinnunen, & Rimpela, 2018). Parents and teachers report has shown that adolescents with Attention Deficit Hyperactivity Disorder often have an academic impairment (Sibley, Altszuler, Morrow, & Merrill, 2014). Lack of peer support increases negative mental health among school-going adolescents (Moore et al., 2018).

According to the Parents' report, significant gender association was found with all SDQ domains whereas teachers' report in the current study shows significant gender association only with emotional problems and hyperactivity. Psychological distress like depression and anxiety are seen more among girls than boys (Wiklund, Malmgren-Olsson, Ohman, Bergström, & Fjellman-Wiklund, 2012). Conduct problems are mostly seen among boys and increase in middle adolescence (Erskine et al., 2013). A study found that the ADHD prevalence rate is higher among female than male adolescents (Ramtekkar, Reiersen, Todorov, & Todd, 2010). Another study found that boys increase friends but this is not so among girls (Rose & Rudolph, 2006). The rural and urban difference is closely connected with adolescents stress and behavioural problems (Elgar, Arlett, & Groves, 2003). The current multivariate analysis found a significant difference between emotional and behavioural problems in school-area. School type in rural-urban settings also had a difference in a school going adolescent's emotional and behavioural problems. In developed countries, emotional and behavioural problems are increasing among adolescents. The increasing of urban growth influence adolescents' emotional and behavioural problems in urban and rural settings (Idris et al., 2019). Study analysis through multiple linear regression found an association between socio demography and mental health among children (Chen et al., 2019). The current study also revealed the same on parental and teacher SDQ total scores which are associated with gender, urban-rural settings, and socio-economic status.

The limitation of the study is that it is cross-sectional, results were based on a single scale, and does not incorporate socio-demographic details of parents and teachers with emotional and behavioural problems of adolescents. The class teacher's period of relationship with students was not taken into account which may help in understanding the emotional and behavioural problems of adolescents. The lack of assessment among parents is also one of the drawbacks of the current study. The strength of the current study is the large sample size, it covers rural/urban, government/private schools, and understands the parents' and teachers' perspectives. This study provides direction to promote insight into new strategies for prevention and intervention for mental health problems of school-going adolescents.

Conclusion

There are some differences between teachers and parents perspectives on the status of adolescents. Parents reported that a little less than a quarter of school-going adolescents has borderline-abnormal emotional and behavioural problems whereas teachers reported that 30.5% have borderline-abnormal problems. The gender and school type difference also shows the significant difference in emotional and behavioural problems. Adolescents need proper concern and psychosocial care and support for their present and future development. However, the role of the mental health professional is crucial for adolescent development in the contemporary world.

References

1. Aebi, M., Kuhn, C., Banaschewski, T., Grimmer, Y., Poustka, L., Steinhausen, H. C., & Goodman, R. (2017). The contribution of parent and youth information to identify mental health disorders or problems in adolescents. *Child and Adolescent Psychiatry and Mental Health*, 11, 23. <https://doi.org/10.1186/s13034-017-0160-9>
2. Chen, N., Pei, Y., Lin, X., Wang, J., Bu, X., & Liu, K. (2019). Mental health status compared among rural-to-urban migrant, urban and rural school-age children in Guangdong Province, China. *BMC Psychiatry*, 19, 383. <https://doi.org/10.1186/s12888-019-2356-4>
3. Dunsmore, J. C., Her, P., Halberstadt, A. G., & Perez-Rivera, M. B. (2009). Parents' Beliefs about Emotions and Children's Recognition of Parents' Emotions. *Journal of Nonverbal Behavior*, 33(2), 121–140.

<https://doi.org/https://doi.org/10.1007/s10919-008-0066-6>

4. Elgar, F. J., Arlett, C., & Groves, R. (2003). Stress, coping, and behavioural problems among rural and urban adolescents. *J Adolesc*, 26(5), 577–588. [https://doi.org/10.1016/s0140-1971\(03\)00057-5](https://doi.org/10.1016/s0140-1971(03)00057-5)
5. Erskine, H. E., Ferrari, A. J., Nelson, P., Polanczyk, G. V., Flaxman, A. D., Vos, T., ... Scott, J. G. (2013). Research Review: Epidemiological modelling of attention-deficit/hyperactivity disorder and conduct disorder for the Global Burden of Disease Study 2010. *The Journal of Child Psychology and Psychiatry*, 54(12), 1263–1274. <https://doi.org/10.1111/jcpp.12144>
6. Goodman, R. (1997). The strengths and difficulties questionnaire: a research note. *J. Child Psychol. Psychiatry*, 38(5), 581–586.
7. Green, J. G., Keenan, J. K., Guzmán, J., Vinnest, S., Holt, M., & Comer, J. S. (2017). Teacher perspectives on indicators of adolescent social and emotional problems. *Evidence-Based Practice in Child and Adolescent Mental Health*, 2(2), 96–110. <https://doi.org/10.1080/23794925.2017.1313099>
8. Harikrishnan, U., Arif, A., & Sobhana, H. (2017). Assessment of mental health status among school going adolescents in North East India: A cross sectional school based survey. *Asian Journal of Psychiatry*, 30. <https://doi.org/10.1016/j.ajp.2017.08.021>
9. Hudson, J. L., Comer, J. S., & Kendall, P. C. (2008). Parental responses to positive and negative emotions in anxious and nonanxious children. *Journal of Clinical Child and Adolescent Psychology*, 37(2), 303–313. <https://doi.org/https://doi.org/10.1080/15374410801955839>
10. Idris, I. B., Barlow, J., & Dolan, A. (2019). A Longitudinal Study of Emotional and Behavioral Problems among Malaysian School Children. *Annals of Global Health*, 85(1), 30. <https://doi.org/10.5334/aogh.2336>
11. Jayasinghe, A. (2010). *Child Mental Health Problems in Hambantota District Sri Lanka*. Sri Lanka. Retrieved from https://docplayer.net/23026702-Child-mental-health-problems-in-hambantota-district-sri-lanka.html#show_full_text
12. Magai, D. N., Malik, J. A., & Koot, H. M. (2018). Emotional and Behavioral Problems in Children and Adolescents in Central Kenya. *Child Psychiatry and Human Development*, 49(4), 659–671. <https://doi.org/https://doi.org/10.1007/s10578-018-0783-y>
13. Malhotra, S., & Patra, B. N. (2014, July 21). Prevalence of child and adolescent psychiatric disorders in India: A systematic review and meta-analysis. *Child and Adolescent Psychiatry and Mental Health*. BioMed Central Ltd. <https://doi.org/10.1186/1753-2000-8-22>
14. Meilstrup, C., Ersbøll, A. K., Nielsen, L., Koushede, V., Bendtsen, P., Due, P., & Holstein, B. E. (2015). Emotional symptoms among adolescents: epidemiological analysis of individual-, classroom- and school-level factors. *European Journal of Public Health*, 25(4), 644–649. <https://doi.org/https://doi.org/10.1093/eurpub/ckv046>
15. Minkinen, J., Hotulainen, R., Kinnunen, J. M., & Rimpela, A. (2018). Conduct problems, schoolwork difficulties, and being bullied: A follow-up among Finnish adolescents. *International Journal of School & Educational Psychology*. <https://doi.org/https://www.tandfonline.com/action/showCitFormats?doi=10.1080/21683603.2018.1551819>
16. Moore, G., Cox, R., Evans, R. E., Hallingberg, B., Hawkins, J., Littlecott, H. J., ... Murphy, S. (2018). School, Peer and Family Relationships and Adolescent Substance Use, Subjective Wellbeing and Mental Health Symptoms in Wales: a Cross Sectional Study. *Child Ind Res*, 11(1951–1965). <https://doi.org/https://doi.org/10.1007/s12187-017-9524-1>
17. Nair, S., Ganjiwale, J., Kharod, N., Varma, J., & Nimbalkar, S. (2017). Epidemiological survey of mental health in adolescent school children of Gujarat, India. *BMJ Paediatrics Open*, 1, 1–7. <https://doi.org/10.1136/bmjpo-2017-000139>
18. Plass-Christl, A., Haller, A. C., Otto, C., Barkmann, C., Wiegand-Grefe, S., Hölling, H., ... Klasen, F. (2017). Parents with mental health problems and their children in a German population based sample: Results of the BELLA study. *PLoS One*, 12(7), e0180410. <https://doi.org/https://doi.org/10.1371/journal.pone.0180410>

19. Ramtekkar, U. P., Reiersen, A. M., Todorov, A. A., & Todd, R. D. (2010). Sex and age differences in attention-deficit/hyperactivity disorder symptoms and diagnoses: implications for DSM-V and ICD-11. *Journal of the American Academy of Child and Adolescent Psychiatry*, 49(3), 217–228.
20. Reavley, N., Patton, G. C., Sawyer, S. M., Kennedy, E., & Azzopardi, P. (2017). Health and Disease in Adolescence. In et al. DAP, Silva Nd, Horton S (Ed.), *Health and Disease in Adolescence. In: Bundy* (3rd editio). Washington (DC): The International Bank for Reconstruction and Development / The World Bank. https://doi.org/10.1596/978-1-4648-0423-6_ch18
21. Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin*, 132(1), 98–131. <https://doi.org/10.1037/0033-2909.132.1.98>
22. Saleem, S. (2018). Modified Kuppusswamy scale updated for 2018. *Paripex - Indian Journal of Research*, 7(3), 435–436. Retrieved from https://www.researchgate.net/publication/323846030_MODIFIED_KUPPUSWAMY_SCALE_UPDATED_FOR_YEAR_2018
23. Sibley, M. H., Altszuler, A. R., Morrow, A. S., & Merrill, B. M. (2014). Mapping the academic problem behaviors of adolescents with ADHD. *School Psychology Quarterly*, 29(4), 422–437. <https://doi.org/https://doi.org/10.1037/spq0000071>
24. Sivagurunathan, C., Umadevi, R., Rama, R., & Gopalakrishnan, S. (2015). Adolescent health: present status and its related programmes in India. Are we in the right direction? *Journal of Clinical and Diagnostic Research: JCDR*, 9(3), LE01–LE6. <https://doi.org/https://doi.org/10.7860/JCDR/2015/111199.5649>
25. Srinath, S., Kandasamy, P., & Golhar, T. S. (2010). Epidemiology of child and adolescent mental health disorders in Asia. *Current Opinion in Psychiatry*, 23(4), 330–336. <https://doi.org/10.1097/YCO.0b013e32833aa0c1>
26. Srivastava, N. M. (2016). Adolescent health in India: Need for more interventional research. *Clinical Epidemiology and Global Health*, 101–102. [https://doi.org/https://doi.org/10.1016/S2213-3984\(16\)30048-3](https://doi.org/https://doi.org/10.1016/S2213-3984(16)30048-3)
27. WHO. (n.d.-a). Adolescent health. Retrieved August 21, 2020, from https://www.who.int/health-topics/adolescent-health/#tab=tab_1
28. WHO. (n.d.-b). Adolescent health in the South-East Asia Region. Retrieved August 21, 2020, from <https://www.who.int/southeastasia/health-topics/adolescent-health#:~:text=WHO defines “Adolescents” as individuals,age range 10-24 years.>
29. WHO. (2017). Mental health: strengthening our response. Retrieved August 22, 2020, from <https://www.who.int/en/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
30. Wiklund, M., Malmgren-Olsson, E. B., Ohman, A., Bergström, E., & Fjellman-Wiklund, A. (2012). Subjective health complaints in older adolescents are related to perceived stress, anxiety and gender - a cross-sectional school study in Northern Sweden. *BMC Public Health*, 12, 993. <https://doi.org/10.1186/1471-2458-12-993>

Declarations

Conflicting Interest: Nil