**EDITORIAL:**

**PARENTS AND CHILDREN TOGETHER (PACT) FOR A HEALTHY MIND**

**Syed M. Shah**

**Institute of Public Health, College of Medicine and Health Sciences, United Arab Emirates University, Al Ain, UAE**

**ABSTRACT**

Non-communicable diseases (NCDs) and poor mental health are key causes of morbidity and mortality around the world. Since the majority of NCD risk factors emerge during childhood and adolescence, this time period is critical for promoting a healthy future. Suicide is a leading cause of death among adolescents, emphasising the importance of collaboration between parents and children. Depression is a common mental health problem in adolescence, with serious consequences for overall well-being. Boys are more likely than girls to develop depression before puberty, but this trend reverses during adolescence, with females experiencing depression at nearly twice the rate of males. Depression in adolescents is linked to academic difficulties, substance abuse, and other negative outcomes. It also has a negative impact on social functioning and can have long-term consequences.

Previously, depression was thought to be an adult disorder. However, new research has shed light on its development across the lifespan. The prevalence of depression varies by gender, with female depression increasing significantly during adolescence. Substance use, dieting, coping strategies, and sleep are all risk factors for depression that adolescents can change. Depressive symptoms in children and adolescents are predicted by parental mental health problems, while self-efficacy, a positive family climate, and social support act as protective factors. Family functioning is also linked to the onset of various adolescent difficulties. Maladaptive psychological profiles and disordered eating behaviours are two manifestations of depressive experiences in adolescents. Child maltreatment is a major public health issue that has been linked to negative mental health outcomes in children and adolescents, such as depression and suicide attempts.

**KEYWORDS**  
Adaptation, Psychological; Adolescent; Child; Depression; Non-communicable Diseases; Parents; Prevalence; Puberty; Suicide, Attempted.

Non-communicable diseases (NCDs) and poor mental health are the leading cause of premature mortality and morbidity globally. According to global estimates, 70% risk factors for NCDs develop during childhood and adolescence. Suicide is the leading cause of death among adolescents. Both parents and children need to work together for a healthy future.

Childhood and adolescence are crucial periods of human development, beginning with the appearance of sexual maturation and ending with the unfolding of adult roles and duties, influencing both health and well-being that could last for the lifespan [1]. Childhood and adolescence are a critical time with implications for depression. According to a theory, prepubertal boys are more likely than girls to become depressed. This trend reverses during adolescence, and by the age of 15, females are nearly twice as likely as males to have suffered an episode of depression. This gender gap persists until the ages of 35 to 40. [2]. This variation is caused by social and hormonal mechanisms that induce female affiliative needs.

Depression is a common mental health problem among adolescents all over the world [3]. It is a notable risk factor for suicide [4]. Depression also causes educational difficulties, substance abuse, and cigarette smoking [5, 6, 7]. Adolescent depression is also linked to poor self-perceived general health, increased health-care utilisation, and a negative work experience [8]. Depression raises the probability of poor social functioning in children, especially in peer relationships [9, 10].

Depression was initially thought to be an adult disorder, and occurrence was based on the manifestation of core symptoms such as constant and pervasive sadness with loss of interest or pleasure in activities, low self-esteem, excessive guilt, suicidal thoughts, and changes in sleep and appetite (DSM-5) with little regard for age-related changes [11]. Recent advances in neuroimaging and behavioural genetics provide a scientific foundation for understanding the development of mental disorders and their causes from childhood to adulthood [12,13]. These studies found that the phenotypic and genetic structure of internalising the mode and anxiety disorder differ throughout development, with depression and anxiety becoming more associated after adolescence. Depression increases dramatically from childhood to adolescence, with an estimated prevalence ranging from 5% in preadolescence to 20% in young adulthood [14, 15].

Depression prevalence differs by gender, and levels of depression begin to rise more sharply in girls than in boys in early adolescence [16]. Patterns of female depressive symptoms shift dramatically at the onset of adolescence, and the prevalence of depression more than doubles in females during the mid-teens compared to males, and the early adolescent rise in female depression largely accounts for the persistently higher rates of depression in women than in men [17]. According to follow-up studies in US and Australian youth aged 10 to 15 years, increasing pubertal stage was associated with an increased risk of depressive symptoms in females [18]. The persistence of depressive symptoms was predicted by social adversity around puberty, but it did not account for a pubertal rise in female depression.

According to a systematic and meta-analysis of longitudinal studies [19], the major risk and protective factors for depression that adolescents can modify included substance use such as alcohol, tobacco, cannabis and other illicit drugs, dieting, negative coping strategies, healthy diet, and sleep. According to the BELLA study [20], parental reports of mental health problems foretold depressive symptoms in children and adolescents. Self-efficacy, a positive family climate, and social support reported by children were linked to the development of fewer depressive symptoms over time. Not only does family functioning play an important role in depression and anxiety, but it is also a risk factor for the onset of a wide range of difficulties in adolescence, including eating disorders and substance use [21, 22, 23].

There are different ways adolescents can show adolescents can show depressive experience. Adolescents involved in frequent motor vehicle accidents show a maladaptive psychological profile that can be considered as a form of acting-out caused by their psychological difficulties [24]. Similarly disordered or binge eating behaviors in adolescents has been associated with their difficulties in emotion regulation from motor vehicle accidents [25].

The burden and consequences of child maltreatment continue to be a major public health issue in both high-income and developing countries, with serious consequences for mental health, suicide attempts, and mortality in children and adolescents [26, 27]. Studies show that children and adolescents who have experienced emotional, neglect, or other forms of maltreatment are more likely to develop depression [28, 29]. Childhood maltreatment was significantly associated with depression relapse during the follow-up in the most recent follow-up study, and both child maltreatment and depression relapse were associated with reduced cortical surface area in the brain [30]. Data from the global school-based students health survey, which included 59 low- and middle-income countries from six WHO regions, revealed a higher prevalence of suicidal ideation (16.9%), suicide planning (17.0%), and suicide attempts (17%) among children aged 13-17 years in the previous year [31].

Parents can be instrumental in minimising negative exposure during early childhood and boosting their children's self-esteem. Individuals with high self-esteem have greater resilience, internal power, and the ability to cope effectually when confronted with difficulties. Parents can be crucial in preventing various forms of child abuse (emotional, physical, and sexual). Bullying is a phenomenon in which being a victim predisposes one to later development of internalising problems such as depression, anxiety, and even suicidal ideation.

**Conflict of interest:** Authors report no conflict of interest with respect to the study.

**Acknowledgements:** The authors would like to acknowledge the contribution of the following individuals Fatima Al Dhaheri, Ammar Albanna, Najla Al Jaberi, Shaikha Al Eisaei, Shamma A. Al Shamisi, Maryam M. Al Hamez, Nouf Al Shehhi, and Said Y. Abdelrazeq who contributed to data collection.

**Figure Legend:** Prevalence of Depressive Symptoms among Adolescents by Ethnicity

**REFERENCES**

1. Dahl RE. Adolescent brain development: a period of vulnerabilities and opportunities. Ann NY Acad Sci 2004; 1021:1-22.

2. Cyranowski JM, Frank E, Young E. Shear MK. Adolescent onset of the gender difference in lifetime rates of major depression: a theoretical model. Arch Gen Psychiatry. 500;57(1): 21-27.

3. Patel V, Flisher AJ, AJ, Hetrick S, McGorry P. Mental health of young people: a global public-health Challenge. Lancet. 2007; 369:1302-13.

4. Hawton K, van Heeringen K. Sucide. Lancet. 2009; 373:1372-81.

5. Hankin BL, Abramson LY, Moffitt TE, McGee R, Silva PA, Angell KE, et al. Depression in childhood and adolescence. J Can Acad Child Adolesc Psychiatry 2013;22(1):35-40.

6. Meredith LS, Tanielian T, Hickey S, Burnam MA, Jaycox LH, Stein BD, Paddock S, Miles JNV, Chandra A. Impact of teen depression on academic, social, and physical functioning. Pediatrics. 2009;124: e596

7. Ralston TE, Palfai TP. Effect of depressed mood on drinking refusal self-efficacy: examining the specificity of drinking contexts. Cogn Behav Ther. 2010; 39(4): 262-9.

8. CHAITON MO, Cohen JE, O’Loughlin JE, Rehm J. A systematic review of longitudinal studies on the association between depression and smoking in adolescents. BMC Public Health. 2009; 9:356. Doi:10.1186/1471-2458-9-356.

9. Keenan-Miller D, Hammen CL, Brennan PA. Health outcomes related to early adolescent depression. J Adolesc Health. 2007; 41:256-62.

10. Fuchs S, Klein AM, Otto Y, von Klitzing K. Prevalence of emotional and behavioral symptoms and their impact on daily life activities in a community samples of 3 to 5 years old children. Child Psychiatry Hum dev. 2013;44: 493-503.

11. Maughan B, Collishaw S, Stringaris A, Depression in childhood and adolescence. J Can Acad Child Adolesc Psychiatry. 2013; 22:35-40.

12. Keshavan MS, Giedd J, Lau JYF, Lewis DA, Paus T. Changes in the adolescent brain and the pathophysiology of psychotic disorders. Lancet Psychiatry 2014; 1:549-58.

13. Waszczuk MA, Zavos HM, Gregory AM. Eley TC. The phenotypic and genetic structure of depression and anxiety disorder symptoms in childhood, adolescence, and young adulthood. JAMA Psychiatry. 2014; 71(8):905-16.

14. Lewinsohn PM, Rohde P, Klein DN, Seeley JR. Natural course of adolescent major depressive disorder: continuity into young adulthood. J Am Acad Child Adolesc Psychiatry. 1999; 38:56-63.

15. Hankin BL, Abramson LY, Moffitt TE. Silva PA, McGee R. Angell KE. Development of depression from preadolescence to young adulthood: Emerging gender differences in a 10-year longitudinal study. JAbnorm Psychol. 1998; 107: 128-140.

16. Wade TJ, Carirney J, Pevalin DJ. Emergence of gender differences in depression during adolescence: National panel results from three countries. J Am Acad Child Adoles Psychiatry. 2002; 41:190-198.

17. Patton G, Viner R. Pubertal transitions in health. Lancet 2007; 369:1130-39.

18. Predicting female depression across puberty: a two-national longitudinal study. J Am Acad Child Adoles Psychiatry 2008;47(12): 1424-1432.

19. Cairns KE, Yap MBH, Pilkington PD, Jorm AF. Risk and protective factors for depression that adolescents canmodify: a systematic review and meta-analysis of longitudinal studies. J Affective Disord. 2014; 169:61-75.

20. Klasen F, Otto C, Kriston L, Patalay P, Schlack R, Ravens-Sieberer U. the BELLA study group. Risk and protective factors for the development of depressive symptoms in children and adolescents: results of the longitudinal BELLA study. Eur Child Adolesc Psychiatry 2015;24: 695-703.

21. Guberman C, Manassis K. Symptomatology and family functioning in children and adolescents with comorbid anxiety and depression. J Can Acad Child Adolesc Psychiatry 2011; 203:186-195.

22. Hummel A, Shelton KH, Heron J, Moore L. A systematic review of the relationships between family functioning, pubertal timing, and adolescent substance use. Addiction. 2012; 108:487-496.

23. Cerniglia L, Cimino S, Tafa M, Marzilli E, Ballarotto G, Bracaglia F. Family profiles in eating disorders: family functioning and psychopathology. Pschol Res Behav Manag. 2017; 10:305-312.

24. Cerniglia L, Cimino S, Ballarotto G, Casini E. Motor vehicle accidents and adolescents: an empirical study on their emotional and behavioral profiles, defense strategies and parental support. Transp Res Part F Traffic Psychol and Behav. 2015;35: 28-36.

25. Cimino S, Simonelli A, Parolin M, Ballarotto G, Carbone P. A theoretical and empirical linkage between road accidents and binge eating behaviors in adolescence. Int. J. Environ Res. Public Health. 2018; 15:355; doi:10.3390/ijerph150020355.

26. Gilbert R, Widom CS, Browne K, Fergusson D, Webb E, Janson S. Burden, and consequences of child maltreatment in high income countries. Lancet. 2009; 373:68-81

27. Koyanagi A, Carvalho AF, Smith L, Haro JM, Vancampfort D, Stubbs B, et al. Bullying victimization, and suicide attempt among adolescents aged 12-15 years from 48 countries. J Am Acad Child Adolesc Psychiatry. 2019; 58(9):907-918

28. Gallo EA, DeMola CL, Wehrmeister F, Goncalves H, Kieling C, Murray J. Childhood maltreatment preceding depressive disorder at age 18 years: A prospective Brazilian cohort study. J Affect Disord. 2017; 217:218-224.

29. Norman RE, Byambaa M, De R, Butchart A, Scott J, Vos T. The long-term health consequencs of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. PLoS Med. 2012;9(11): e1001349.doi: 10.1351/journal.pmed.10001349.

30. Opel N, Redlich R, Dohm K, Zaremba D, Giltermann J, Repple J, Kaehler C, et al. Mediation of the influence of the childhood maltreatment on depression relapse by cortical structure: a 2-year longitudinal observational study. Lancet Psychiatry 2019;6: 318-26.

31. Uddin R, Burton W, Maple M, Khan SR, Khan A. Suicidal ideation, Suicide Planning, and suicide attempts among adolescents in 59 low-income and middle-income countries: a population-based study. The Lancet Child & adolescent health. 2019;3(4):223-233.