

Theme: Adolescent Pediatrics

 **Adolescents' daily worry, morning cortisol and health symptoms** (*J Adolesc Health. 2017;60:667-73*)

Adolescents routinely encounter many biopsychosocial stressors. Poor stress management adversely affects health. This longitudinal study on 99 mid- and late-adolescents assessed the short- and long-term impact of daily worries by measuring salivary cortisol awakening response (CAR) and self-reported health symptoms. On analysis by standard multilevel models, there was positive association between worries and next-day CAR for females (SE = 0.14, $P=0.03$) but not for males (SE =0.05, $P=0.30$). Worries showed a significant inverse relationship with health symptoms. Long-term health impact was assessed after 3 years; in adolescents with high CAR, more worry was associated with more health symptoms (SE=10.20, $P=0.04$). CAR is a marker of hypothalamic-pituitary-adrenal axis function, and probably modulates the effect of stress on health. Girls have an acute stress response compared to boys. Health outcomes of stress differ amongst adolescents; only those with high CAR suffer adverse effects while others do well as coping with stresses and worries improve resilience and overall health.

 **Emulsified omega-3 fatty-acids and the symptoms of depressive disorder in children and adolescents** (*Child Adolesc Psychiatry Ment Health. 2017;11:30-40*)

Selective serotonin reuptake inhibitors (SSRI) and cognitive behavior therapy are integral to management of depression and anxiety in adolescents. Impaired psychosocial functioning is distressing to the patient and family, and they seek quick relief. This randomized, double-blind controlled study compared the efficacy of an omega-3 fatty acid fish oil emulsion with a control oil emulsion along with standard treatment for 38 adolescents aged 11-17 years with depressive disorder (DD) and mixed anxiety depressive disorder (MADD). Child depression inventory (CDI) was used for assessment. Significant reductions were observed in CDI scores post-intervention only in the omega-3 group ($P=0.034$). DD subgroup showed greater improvement (score reduction "9.1 CDI, $P<0.001$) compared to the MADD (score reduction "4.24 CDI, $P = 0.271$). Omega-3 fatty acids may be useful adjunct therapy for depressed adolescents. Depressed adolescents can be advised a diet rich in omega-3 fatty acids to improve neural functioning, but this has to be confirmed by large multicentric randomized controlled trials.

 **Effect of early menarche on sexual and reproductive health in low- and middle-income countries** (*PLoS One. 2017;12:e0178884*)

According to research from high-income countries, early bloomers or girls with early menarche are prone to high-risk behavior such as substance use, delinquency, promiscuity and poor health outcomes. Recent secular trends point to an earlier age of menarche in low- and middle-income countries (LMIC) due to improved nutritional status. In this systematic review of studies from LMIC including India, 24 peer-reviewed studies fulfilling the inclusion criteria were analyzed but many had methodological weaknesses. Analysis of this limited research revealed that early menarche is associated with early sexual debut, early pregnancy, sexually transmitted infections and school dropout. It is also associated with early marriage as attainment of menarche is considered as readiness for marriage.

As pregnancy-related complications are major causes of death in young women, girls with early menarche should necessarily be imparted sexuality education with measures to prevent child marriage. Results of quality research from LMIC will help in proper planning and allocation of resources to improve health in this group.

 **Social media substance use prevention program** (*JMIR Ment Health. 2017;4:e24*)

Increase in media usage by adolescents is associated with violence, drug use, obesity and high risk sexual behavior. Health professionals should use media platforms that are frequently accessed by adolescents for behaviour change communication. In this school-based study, 192 ninth grade students were enrolled to evaluate the impact of peer created social media messages as a part of Living the Example (LTE) campaign to prevent substance use. Pre- and post-intervention questionnaires were analyzed using multi variable logistic regression models. Youth who reported exposure and receptivity to LTE reported a significant decrease in intentions to use marijuana (OR 0.24, $P=.008$), sedatives (OR 0.21, $P=.02$) and use of any drug (OR 0.11, $P=.004$). As more evidence gathers with large scale research studies, popular social media may prove to be the most effective strategy for peer education based community programs in the future.

PREETI M GALAGALI
drpgalagali@gmail.com