REVIEW OF LITERATURE

I. REVIEWS RELATED TO ADOLESCENT MODERN LIFESTYLE AND HEALTH BEHAVIORS:

1. **Steptoe A, et al. (2002)**, in their article titled, *Trends in smoking, diet, physical exercise, and attitudes toward health in European university students from 13 countries*, concluded that, the differences in health behaviors, beliefs, and risk awareness between the two surveys were disappointing in this educated sector of young adult Europeans. The association between changes in beliefs and prevalence of behavior emphasizes the importance of enhancing positive attitudes to healthier lifestyles.

2. **Waris Qidwai, et al. (2010)**, in their article titled, *Adolescent Lifestyle and Behaviour: A Survey from a Developing Country*, has attempted to highlight various areas of concern with respect to adolescent lifestyle and behaviorist is suggested that the only method of meeting their needs and at the same time aiming to reduce morbidity in this age group is to foster an atmosphere of patient centredness in dealings with adolescent patients and for further research in this important health gain area.


4. **Marta Lima-Serrano, et al. (2013)**, in their article titled, *Adolescent quality of life and health behaviors: a comparative study between adolescents from the south of Portugal and Spain*, suggests that alcohol and substance abuse during adolescence is related with lower health-related QoL and a higher report of psychopathological symptoms in the adolescents. Furthermore, most participants from both countries tend to perceive their health-related behaviors and QoL fulfilling and gratifying, as pointed out by several epidemiological studies with adolescents from western countries.

5. **Singh Sunitha & GopalkrishnaGururaj (2014)**, in their article titled, *Health behaviours & problems among young people in India: Cause for concern & call for action*, tells that, Some
of the major health impacting behaviours and problems among the young people include undernutrition and overnutrition, common mental disorders including stress and anxiety, suicidal tendencies and increased suicidal death rates, increased consumption of tobacco, alcohol and other substance use, NCDs, high risk sexual behaviours including STIs and importantly, injuries mainly RTIs and violence. There is a strong need for public health community to identify, prepare, integrate and implement activities that help to promote health and healthy lifestyles of young people and establish mechanisms for delivery of population-based interventions along with measuring its impact.

6. Walther J, et al, (2014), in their article titled, *Nutrition, lifestyle factors, and mental health in adolescents and young adults living in Austria* reveals that, unhealthy eating habits, suboptimal physical activity, and smoking are still prominent in a sample of Austrian adolescents and young people. In addition, stress and tiredness are also relevant problems in this collective.

7. Wasserman D, (2016), in their article titled, *Review of health and risk-behaviours, mental health problems and suicidal behaviours in young Europeans on the basis of the results from the EU-funded Saving and Empowering Young Lives in Europe (SEYLE) study*. Results denotes the following prevalences: alcohol use (13.4%), smoking (30.9%), physical inactivity (32.8%), pathological Internet use (4.4%) and sleeping on average 7.7 hours per night. The intervention empowering pupils, called the Youth Aware of Mental Health (YAM) showed significant results in preventing new cases of suicide attempts, severe suicidal ideation with plans and depression. More than a 50% reduction of incident cases of suicide attempts (OR: 0.45 [0.24 - 0.85]; p=0.014), and of incident cases of severe suicidal ideation and plans (OR: 0.50 [0.27 - 0.92]; p=0.025), as well as a significant reduction by 30% of incident cases with moderate to severe depression (OR: 0.71 [0.52- 0.97]; p=0.031) was observed.

8. I. García-Moya, et al (2017), in their article titled, *School-level factors associated with teacher connectedness: a multilevel analysis of the structural and relational school determinants of young people’s health* that health promotion strategies targeting student–teacher relationships need to consider how TC changes by age and SES and give attention to school-level factors, in particular the student–teacher ratio.

that cyberbullying victimization, perpetration and bystanding were associated with higher suicidal ideation, but that the association with cyberbullying perpetration disappeared when corrected for other cyberbullying involvement forms. More physical activity, sleeping longer, more often taking a healthy diet and lower levels of smoking were associated with lower suicidal ideation. Some associations of healthy lifestyles with suicidal ideation disappeared at higher levels of cyberbullying involvement.

10. **Lund I**, & **Scheffels J** (2018), in their article titled, *15-year-old tobacco and alcohol abstainers in a drier generation: Characteristics and lifestyle factors in a Norwegian cross-sectional sample*, results denotes that Abstainers (neither alcohol nor tobacco use) tended to have less unorganized and more hobby-related leisure time activities, higher risk perceptions for smoking, and monitoring or emotionally supportive parents. They more rarely reported close relationships with their best friend and were more likely to report lower occurrences of drinking and smoking among friends or siblings. Results also recommends for promoting hobby-based activities might be a useful strategy for preventing alcohol and tobacco use in young people.

11. **Tee JYH**, et al (2018), in their article titled, *Obesity and unhealthy lifestyle associated with poor executive function among Malaysian adolescents*, shows that, an increased trend of obesity and unhealthy lifestyles among adolescents were found to be associated with poorer executive function. Regular dinner intakes, higher physical activity levels and better sleep quality predicted better executive function despite the inverse relationship between obesity and executive function. Study recommended to explore how lifestyle modifications can optimize the development of executive function in adolescents as well as relieve the burden of obesity.

12. **Kexin Wang**, et al (2018), in their article titled, *Active public Facebook use and adolescents’ feelings of loneliness: Evidence for a curvilinear relationship*, results showed a U-shaped relationship between (1) active Facebook use and social/emotional loneliness and (2) emotional loneliness and active Facebook use. Specifically, active Facebook use predicted decreased social/emotional loneliness among low to moderate users, while among heavy users, increased levels of social/emotional loneliness were predicted by active Facebook use. Emotional loneliness predicted higher active Facebook use among lonely adolescents.

13. **D Lew H Xian Z Qian et al** (2018), in their article titled, *Examining the relationships between life satisfaction and alcohol, tobacco and marijuana use among school-aged children*, shows that, low LS were significantly more likely to ever use tobacco (OR = 1.34,
95% CI = [1.01, 1.78]), alcohol (OR = 1.45, 95% CI = [1.10, 1.92]) and marijuana (OR = 1.98, 95% CI = [1.39, 2.82]). Additionally, students with low LS were significantly more likely to use two substances (OR = 1.90, 95% CI = [1.15, 3.14]) and three substances concurrently (OR = 2.00, 95% CI = [1.27, 3.16]). The present study identified strong associations between LS and individual, as well as concurrent, substance use among adolescents. This study also recommended for health education in school level.

14. Sharma B, et al,(2018), in their article titled, *Prevalence and correlates of insufficient physical activity in school adolescents in Peru*\(^{(47)}\) tells that, Sex, work after school, perceived body weight, physical education class, parental support, and healthy dietary behaviors were associated with insufficient physical activity. Attempts to improve physical activity should look for ways to enhance leisure-time physical activity, parental support, physical education classes, healthy dietary behaviors, and normal body weight maintenance in adolescents with integrated efforts from the family and school.

15. Ekblom-Bak E, et al, (2018), in their article titled, *Physical Education and Leisure-Time Physical Activity in Youth Are Both Important for Adulthood Activity, Physical Performance, and Health*, tells that,\(^{14}\)Increased PA outside school hours revealed even stronger beneficial associations. In joint analyses, both youth and current PA were important for lower OR of poor health and being obese in adulthood. Physical education class participation and additional PA after school hours were both important for perceived health, PA, VO\(_{2}\)max, and metabolic health in adulthood up to 70 years.

16. Jia H, et al (2018) , in their article titled, *Associations of Smoking, Physical Inactivity, Heavy Drinking, and Obesity with Quality-Adjusted Life Expectancy among US Adults with Depression*,\(^{21}\) shows that, among depressed adults, physical inactivity and smoking were strongly associated with lower EQ-5D scores, lifeexpectancy, and QALE, whereas obesity and heavy drinking were only weakly associated with these indices. These results suggest that reducing physical inactivity and smoking would improve health more among depressed adults.

17. Järbrink-Sehgal ME, et al , (2018), in their article titled, *Lifestyle Factors in Late Adolescence Associate With Later Development of Diverticular Disease Requiring Hospitalization*\(^{(51)}\)shows that, smoking, use of recreational drugs, alcohol consumption, and risky
use of alcohol, at time of conscription are independent risk factors for development of diverticular disease.

18. Ssewanyana D¹ et al (2018), in their article titled, Perspectives on Underlying Factors for Unhealthy Diet and Sedentary Lifestyle of Adolescents at a Kenyan Coastal Setting⁵⁰, tells that, Seasonality and farming practices, school attendance, community-based services, and regulations mitigating adolescents' engagement in gambling were identified as potential protective factors. Our findings provide a unique qualitative insight of the factors underlying adolescents' dietary and sedentary lifestyle and highlight the need for ecological intervention approaches to address these forms of health risk behavior in a rural African setting.

19. Lindström M¹, & Rosvall M².(2018) in their article titled, Addictive behaviors, social and psychosocial factors, and electronic cigarette use among adolescents: a population-based study¹³, concluded with, the prevalence of ever e-cigarette use was high among adolescents attending both grades. E-cigarette use was most strongly associated with health-related lifestyles. It was also associated with psychosocial factors such as study difficulties, school stress, problems talking with parents, and generalized trust.

20. de Lima TR¹, & Silva DAS².(2018), in their article titled, Prevalence of physical activity among adolescents in southern Brazil,⁵⁶ suggested that, Older students and those with lower monthly family income were more likely to have inadequate levels of physical activity. Female adolescents and older students were more likely to be sufficiently active compared to male and younger adolescents. Adolescents who sleep more hours/day were more likely to be insufficiently active.

II. IMPACT OF EDUCATION PROGRAM ON MAINTENANCE OF HOLISTIC HEALTH BY HEALTHY LIFESTYLE PRACTICES:

1. PA Wiegersma A Hofman GA Zielhuis, (2000), in their article titled, Prevention of unhealthy behaviour by youth health care in The Netherlands ⁶¹ tells that the availability of open consultation hours had an adverse effect on use of alcohol (OR = 1.29, 95 per cent CI = 1.11-1.50). The OR for obesity in male conscripts showed an adverse effect of a greater number of well-care visits (OR = 2.46, 95 per cent CI = 1.74-3.46) and the availability of open consultation hours (OR = 1.97, 95 per cent CI = 1.72-2.25). This study suggested that, frequent well-care visits
or offering open consultation hours at secondary schools, have a beneficial effect on prevention of health-comprising behaviour or obesity.

2. **Chen MY**, et al (2007), in their article titled, *Comparison of health-promoting behavior between Taiwanese and American adolescents: a cross-sectional questionnaire survey*, result shows that, Taiwanese adolescents had a higher frequency of health-promoting behavior than Americans in terms of healthy diet behavior, stress management, health responsibility, and social support (p<0.01), but less frequently engaged in exercise and life appreciation (p<0.001). Study recommended that, School and family health promotion counseling should be encouraged for adolescents to improve their lifestyle habits. Based on the findings, school health promotion programs should focus on factors for which there may be significant local ethnic differences.

3. **Ruth G Jepson, et al**,(2010), in their article titled, *The effectiveness of interventions to change six health behaviours: a review of reviews* tells that, interventions that were most effective across a range of health behaviours included physician advice or individual counselling, and workplace- and school-based activities. Mass media campaigns and legislative interventions also showed small to moderate effects in changing healthbehaviours. Further emphasis in both primary studies and secondary analysis (e.g. systematic reviews) should be placed on assessing the differential effectiveness of interventions across different population subgroups to ensure that health inequalities are addressed.

4. **F.M. Brooks J, et al**,(2012), in their article titled, *Adolescent multiple risk behaviour: an asset approach to the role of family, school and community*, tells that, sense of neighbourhood belonging, strong school belonging and parental involvement in decision-making about leisure time were related to lower engagement in health risk behaviours. A weaker sense of family belonging was associated with increased risk behaviours if connectedness with teachers was also low. Factors related to school and community played a greater role in adolescent participation in health-related risk behaviours than family-related factors, including family affluence. Feelings of safety and belonging in the out-of-home settings of adolescents were positively associated with reduced risk behaviours, and indicate the importance of the wider community alongside parents and school as protective assets for health.

5. **Mohsen SAFFARI, et al** (2013), in their article titled, *Educational Intervention on Health Related Lifestyle Changes Among Iranian Adolescents*, tells that, educational programs for the
adolescents must tailored and gender specific. In addition, school based lifestyle programs can be a positive effect on the modification of lifestyle behaviors among high school adolescents but the results of the study should be interpreted with caution. Using an integrated approach with a long-term perspective will be required to support children and adolescents in ultimately meeting lifestyle challenges.

6. Els tin Mary S. & AnjalinD'souza,(2014),in their article titled, EFFECTIVENESS OF A LIFESTYLE MANAGEMENT PROGRAM ON KNOWLEDGE AND LIFESTYLE PRACTICES AMONG ADOLESCENTS,\textsuperscript{15} tells that, Educational interventions are effective in improving the knowledge of adolescents regarding lifestyle practices and lifestyle disorders, as well as modifying their lifestyle practices. Since schools have been identified as an important setting in imparting knowledge on health promoting lifestyle practices and lifestyle disorders, initiatives are to be taken at school level including curriculum modification and conducting lifestyle modification programs so that younger generation are protected from contracting lifestyle disorders in their future life.

7. Singh Sunitha & Gopalkrishna Gururaj, (2014), in their article titled, Health behaviours & problems among young people in India: Cause for concern & call for action,\textsuperscript{52} suggested for, There is a strong need for public health community to identify, prepare, integrate and implement activities that help to promote health and healthy lifestyles of young people and establish mechanisms for delivery of population-based interventions along with measuring its impact. There is a need to generate good quality and robust population data that can drive policies and programmes. Strategic investments in health, nutrition, education, employment and welfare are critical for healthy growth of young people and these programmes need to be monitored and evaluated for their efficacy and effectiveness using public health approaches.

8. Vanise dos Santos et al,(2015),in their article titled,Health education with adolescents: analysis of knowledge acquisition on health topics \textsuperscript{54} results are related to factors that aroused the interest of adolescents, for example, methods which promote dialogue, exchange of experiences, reflect on their own practices and relationships with groups of friends/family.

9. C Sivagurunathan et al (2015), in their article titled, Adolescent Health: Present Status and Its Related Programmes in India. Are We in the Right Direction? \textsuperscript{10} tells that, to achieve wholesome adolescent health, we need to have a multidimensional approach covering all the
adolescent health problems with special emphasis on mental health, behaviour change communication towards healthy lifestyle and positive social environment to acquire life skills.

10. Jai K. Das, (2016), in their article titled, *Interventions for Adolescent Mental Health: An Overview of Systematic Reviews*, tells that, the fact that mental health interventions take a life course perspective and that interventions earlier in life can have impacts in adolescence; however, the focus of our review is to evaluate potential mental health interventions targeted toward adolescents and youth only. With this focus, we aimed to systematically review the effectiveness of interventions to prevent and manage mental health disorders among adolescents and youth.

11. Mary O. Hearst, et al, (2016), in their article titled, *Promoting Parent and Family Education on Healthy Lifestyles for Minnesota Secondary Students*, shows that, there was a positive relationship between schools offering physical activity education for parents and the number of days a student meets physical activity and water consumption recommendations. School providing strategies for parent engagement around student physical activity and nutrition may increase parent engagement overall and improve adolescent and school related outcomes.

12. Maria Muzik, et al (2016), in their article titled, *A Mental Health and Parenting Intervention for Adolescent and Young Adult Mothers and their Infants*, tells that, Mom Power is a short-term attachment-based psycho-educational parenting and self-care skills group for adolescent mothers. Comprehensive models like the MP Program are vital in reaching out to the needs of young mothers and their babies in an effort to decrease mental health symptoms and increase positive parenting skills.

13. Wasserman D, (2016), in their article titled, *Review of health and risk-behaviours, mental health problems and suicidal behaviours in young Europeans on the basis of the results from the EU-funded Saving and Empowering Young Lives in Europe (SEYLE) study*, shows that active SEYLE interventions, based on three specific preventive strategies directed towards teachers and school staff, professionals and pupils will help to reduce suicidal cases.

14. Das JK, et al, (2016), in their article titled, *Interventions for Adolescent Mental Health: An Overview of Systematic Reviews*, suggested for, future trials should also focus on standardized interventions and outcomes for synthesizing the exiting body of knowledge. There is a need to
report differential effects for gender, age groups, socioeconomic status, and geographic settings since the impact of mental health interventions might vary according to various contextual factors.

15. **Clark V¹, & Conrad AM (2017)**, in their article titled, *Addiction Vulnerability: Exploring Relationships Among Cigarette Smoking, Substance Misuse, and Early Psychosis*, tells that, smoking status at service presentation appeared to function as a general proxy for addiction vulnerability among young help seekers and thereby as a potential marker for the development of severe mental illness (including psychosis) and associated health problems. Routine evaluations of presenting problems need to incorporate comprehensive assessments of early substance misuse and tobacco smoking. Adjunctive lifestyle interventions promoting smoking cessation, physical health, and well-being need to be offered in conjunction with conventional mental health interventions tailored to key presenting problems, recovery, and psychological strengthening.

16. **Aditya Narayan Tripathi,(2017)**, in their article titled, *Positive Psychology, Psychotherapy & Cognitive Behavioral Sciences* reveals that, there is a heightened risk with high rates of depression, conduct disorders, suicide, drug and alcohol addiction and anti-social behaviour. Physical and mental health commutates those behaviours, perceptions and feelings that determine a person’s overall level of personal effectiveness, success, happiness and excellence of functioning as a person.

17. **Hezomi H¹, & Nadrian H¹.(2018)** , in their article titled, *What determines psychological well-being among Iranian female adolescents? Perceived stress may overshadow all determinants*, shows that, the various behavioral, mental and social predictors of psychological wellbeing, it seems that perceived stress has overshadowed the influence of a majority of the other factors. Such influence may be due to the specific cultural and context-based rules enforced for female adolescents.

18. **Simonato I¹ & JanoszMet al (2018)**, in their article titled, *Prospective associations between toddler televiewing and subsequent lifestyle habits in adolescence*, tells that, excessive toddlerhood televiewing was prospectively associated with less optimal health and self-invested behavioral dispositions. Lifestyle habits not only affect metabolic risk but may also influence personal success outcomes. These independent relationships, observed more than a decade later,
suggest a need for better parental awareness of the way children invest their limited waking hours could affect their long-term life course trajectories.

19. **Champion KE¹², et al (2018)**, in their article titled, *Clustering of Multiple Risk Behaviors Among a Sample of 18-Year-Old Australians and Associations With Mental Health Outcomes: A Latent Class Analysis*⁸ indicates that risk behaviors are prevalent and clustered in 18-year old Australians. Mental health symptoms were significantly greater among the two classes that were characterized by high probabilities of engaging in multiple risk behaviors (Classes 2 and 3). An examination of the clustering of lifestyle risk behaviors is important to guide the development of preventive interventions. Our findings reinforce the importance of delivering multiple health interventions to reduce disease risk and improve mental well-being.

20. **Watanabe J¹ et al(2018)**, in their article titled, *School-based lifestyle education involving parents for reducing subjective psychosomatic symptoms in Japanese adolescents*:⁵⁶ study protocol for a cluster randomised controlled trial, lifestyle modification interventions for reducing SPS are important topics…this also recommended for college education about healthy lifestyle practices.