

# The Adolescent Health Changes - Exploring New Approaches in a Digital and Post COVID-19 Era.

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## Abstract

**This paper focuses on the adolescent population group. It highlights the complex health challenges confronting this demographic group. It provides contemporary strategies which are useful in improving the health outcomes of this important population group. The non-traditional approaches discussed include the embedment of technologically based activities in teenage health behavior change interventions.**

**Keywords:** Health promotion, Mental health, Poverty, Nutrition, Obesity, Innovative strategies, Social cognitive Theory, Mass media, COVID-19.

*Accepted on July 08, 2021*

## Introduction

Adolescence indicates the period marking the transition from childhood to adulthood [1]. It is a phase of, “rapid and transformative, physical, psychological, sociocultural, and cognitive development” [2]. It is a period of change in both health behaviors and lifestyle options [3]. This population group ranges from the ages of 10 to 19 [4]. They are the largest age group in the world, contributing to, “20% of the 6.5 billion world population” [5]. Their recent slight decrease (16% of the globe's population) has no real change this let alone reducing their disease burden [6]. Youths participate in numerous health risk behaviours, such as lack of physical activities, unhealthy eating, substance abuse, unsafe sex, and drug and alcohol consumption [7]. These negative lifestyle behaviours are frequent and increase with age among teenagers, and may continue into later life, “with consequent morbidity and premature mortality” [8]. This has led to serious public health concern with empirical data revealing the death of over 1.5 million adolescents' deaths in 2019 alone [9]. They have multiple and rising health needs which is causing trepidations among many countries around the world [10]. This health needs have been analysed below and innovative strategies which when implemented would help to ameliorate the highly concerning health problems of this highly promising group.

### *Adolescent health challenges*

The prevalence of mental health disorders amongst children & adolescents is nearly 15% internationally [11]. Child and juvenile mental health have become a worldwide priority [12]. Adolescent mental health is defined as, “the capacity to achieve and maintain optimal psychological functioning and wellbeing.” [13]. Mental health problems within youngsters are common and are linked to functional disability, along with suffering. This could lead to discrimination and stigma, as well as increased risk of early death. Adolescent mental health issues may continue into adulthood, if not treated. This raises the chances of adult mental health disorders. Adolescent mental health challenge

increases the risk of bad physical health, and poor psychological functioning in subsequent years. Poverty has been identified as one of the underlining factors contributing to the health issues of the adolescent population [14]. Poverty has been defined as, the shortage in income, “and productive resources sufficient to ensure sustainable livelihoods; hunger and malnutrition; ill health; limited or lack of access to education and other basic services.” Also, it is a barrier to gaining access to services, as well as communication [15]. As a result of this deprivation, adolescents from low socio-economic backgrounds are prone to be at a higher risk of teenage suicide [16]. Exposure to violence and living in poor communities have been linked with increased anxiety, depressive symptoms, and externalizing issues in the behaviour of youngsters [17]. In fact, criminal activities and early sexual debuts are promoted due to the impacts of impoverishment. Several female adolescents experience period poverty which refers to the lack of access to sanitary goods due to economic constraints [18]. Inadequate menstrual hygiene is a major issue for young girls as it affects both their health and development [19]. A study based in Ethiopia found that some female students' usage of sanitary napkins was low at 37.6% while a significant percentage of 62.4% students were utilising pieces of cloths and rags. The use of sanitary napkins was reduced because of lack of access driven by poverty [20]. Poor nutrition and exercise are another health need facing the adolescent population. Young people develop bad eating habits and tend to consume food deficient in vital nutrients for their health and wellbeing. This unfortunately has long lasting health, growth, and development consequences [21]. Furthermore, they adopt sedentary lifestyles by playing videos games, talking on mobile phones, using computers, and viewing television [22]. This has negative implications on adolescent's health as it encourages obesity and overweight [23]. Obesity is a BMI (Body Mass Index) that is at, or over the 95th percentile for youths of the same gender and age. This adversely impacts teenagers in various ways. For example, obese youngsters are more likely to develop type 2 diabetes, high blood pressure, low self-esteem, high cholesterol, and sleep apnea.

Sexual and reproductive health needs are evident during the stages of adolescence. Many teenagers around the world are sexually active, and this proportion is steadily increasing from mid- to late teenage years [24]. Young people's sexual and reproductive health is a key factor of global burden of sexual ill health. For female adolescents, early childbearing/motherhood can be physically dangerous and can negatively influence their economic prospects and educational attainment [25]. This gender age group faces high risk of exposure to sexually transmitted diseases, HIV, violence, sexual assault, and exploitation. Based on figures from 106 low- and middle-income countries, 18% of girls and women, "aged 15-49 years experienced physical and/or sexual violence from a current or former intimate partner," in 2018 [26]. Early and unpremeditated pregnancies are a common occurrence within adolescent girls [27]. Injuries are another health problem facing the teenagers. In fact, in comparison with other health needs and conditions, injuries accounted, "for four of the top seven causes of death," among teens in 2012 [27]. For instance, 72% of fatalities within adolescents have been caused by injuries via firearms, homicide, motor vehicle crashes, and influences from illicit and alcohol substances [28]. We advocate the exploration of various innovative approaches in dealing with the unsavory health challenges of the adolescent population. A number of these approaches are discussed below.

#### ***Innovative strategies for improved health outcomes***

To tackle period poverty, governments from all local, national, and international settings should implement policies within educational institutions which provides all female students with access to free sanitary pads, and tampons whilst studying. This is beneficial in preventing menstrual poverty and reducing the health inequality amongst young girls, as all female pupils from every socio-economic background will be able to gain the same resources and services, free of charge. Lack of suitable sanitary materials is an issue for female youths as they are unable to attend school in most countries [29,30]. This strategy will in addition to solving the embarrassing sanitary pads need help in driving teenage attendance in schools and colleges up as they are likely to feel more motivated to attend school to retrieve and utilise adequate sanitary products in their institution. To increase physical exercise within 10 to 19-year olds, local authorities should expand green spaces, such as parks in all parts of the world. They should also provide additional outdoor gym equipment in those environments, which can be used by this age group at no cost. This approach may be helpful in reducing overweight and obesity because it will enable youngsters to participate in outdoor activities. Making the gym apparatus free and easy to access is one great way to address the socio-economic divide among the teenage population in bodily exercise. The young people from poor or low-income families will be able to improve their health, without having to increase their expenditure as they attend the free gym sessions in these recreation centres. Physical activities should be expanded by engaging collaboratively with the video games manufacturers. Games and devices which promote physical exercises should be developed and targeted at this demographic group. Leutwyler et al. argue that, active game play enhances physical, mental outcomes, and psychological well-being. It also increases the energy expenditure of individuals [31]. Hence, applying this

strategy towards the adolescent population who are digital natives and great consumers of technology would help them to break away from sedentary behaviours [32,33]. This approach should apply behaviour change models such as the Social Cognitive Theory (SCT). This incredibly useful theory in achieving health behaviour change states that human behaviour is the outcome of dynamic interactions between personal, behavioural, and ecological factors [34]. SCT emphasises the crucial role, "played by the social environment on," self-regulation, learning, and motivation [35]. Using this model in active video games is useful because it fosters self-efficacy, which is the belief that one can successfully execute a behaviour [36]. For example, video games which utilise active play may generate interactive levels and achievements in which youngsters must complete and can attain throughout the game. This is an example of goal setting, which can strengthen and direct motivational results [37-39]. This strategy is good for promoting physical activity because it provides juveniles with incentives, for instance, complete 10 star jumps for a (virtual) bronze trophy. This will motivate them to exercise more, as well as enjoy it. Also, they will be able to track and monitor their movement levels whilst playing these types of games due to the technological advancements of game consoles. Mass media campaigns are also a veritable tool in tackling the health lifestyle challenges of the teenagers. Mass media is a prevalent and cost-effective public health promotion strategy, used internationally, which involves billboards, radio, magazines, television, and newspapers [40-42]. It is essential in distributing public health knowledge, enhancing health information, leveraging mindsets towards healthy behaviour, and achieving modifications in lifestyle [43]. Advertising the negative impacts of alcoholism, smoking, eating of junk foods, sedentary lifestyle, and physically hazardous practices on television and other media outlets, such as 'Instagram,' and 'Snapchat,' would be useful in spreading awareness and may persuade young people to avoid participating in those unhealthy lifestyles. Similarly, the use of these social networking platforms to promote health may have some significant impact on the teenage population. They will thus be able to easily view, receive, and share vital health information with others. This is thought so because millions of adolescents habitually engage with and socialize on the social media platforms globally [44,45]. According to a 2018 Pew Research Center study, 78% of older teenagers utilize Snapchat multiple times a day [46]. Also, this study reported that Instagram is, "used by 71% of older adolescents". To improve the mental health needs of this population group, government, and local authorities from all over the world should collaborate with voluntary organisations by providing free 24/7 mental health services for juveniles via mobile phones and technological apps. These special services should be conducted by health professionals, aged 21-25 years. Employing young professionals to support the mental health needs of the younger generation may be effective as it may enable them to talk more about their mental conditions. Teenagers may feel more comfortable and honest about their feelings when discussing with a younger specialist of the closer age range. They are likely to view professionals from their generation as role models and in this context engage more and thus have better health outcomes. Furthermore, providing

24-hour mental health services for 7 days a week through the uses of apps and calls is effective for young people. They are born and raised with technology and are tech savvy [47,48]. Embedding technology in dealing with mental health challenge of the teenage population this way is innovative and would drive up uptake of mental health interventions. This type of service is also useful in pandemics induced situations such as the current COVID-19 challenge. COVID-19 is a highly infectious virus, produced by SARS-CoV-2 [49]. This pandemic has resulted in multiple worldwide lockdowns, restrictions, and quarantine [50]. Therefore, the proposed intervention is valuable and efficient as it can still be available during lockdown.

## Conclusion

The adolescent population has many health challenges which negative impact both their quality of life and life expectancy. These include mental health, injuries, poverty, lack of physical activities, poor diet, and unhealthy sexual behaviour. To tackle these issues, numerous innovative strategies have been suggested. It is believed that the implementation of these contemporary approaches by governments at various levels and other stakeholders in public health will significantly reduce the current disease burden and improve the health outcomes of the teenage population.

## References

- Jaworska N, MacQueen G. Adolescence as a unique developmental period. *J Psychiatry Neurosci*. 2015; 40(5):291.
- DiClemente RJ, Santelli JS, Crosby RA. Adolescent health: Understanding and preventing risk behaviors. John Wiley & Sons. 2009.
- Hayman LL, Mahon MM, Turner JR. Health and behavior in childhood and adolescence. Springer. 2002.
- MacDonald NE. Adolescent access to healthcare. *Pediatr Child Health*. 2003;8(9):551-552.
- Richter LM. Studying adolescence. *Science*. 2006;312(5782):1902-5.
- <https://data.unicef.org/topic/adolescents/demographics/>
- El-Achhab Y, El-Ammari A, El-Kazdough H, et al. Health risk behaviours amongst school adolescents: protocol for a mixed methods study. *BMC Public Health*. 2016;16(1):1-6.
- Kipping RR, Smith M, Heron J, et al. Multiple risk behaviour in adolescence and socio-economic status: findings from a UK birth cohort. *Eur J Public Health*. 2015;25(1):44-9.
- <https://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions>
- Patton GC, Coffey C, Sawyer SM, et al. Global patterns of mortality in young people: a systematic analysis of population health data. *Lancet*. 2009;374(9693):881-92.
- Polanczyk GV, Salum GA, Sugaya LS, et al. Annual research review: A meta-analysis of the worldwide prevalence of mental disorders in children and adolescents. *J Child Psychol Psychiatry*. 2015;56(3):345-65.
- Bruha L, Spyridou V, Forth G, et al. Global child and adolescent mental health: Challenges and advances. *London J Prim Care (Abingdon)*. 2018;10(4):108-109.
- Cherry, LA, Baltag V, Dillon EM. *International Handbook on Adolescent Health and Development: The Public Health Response*. Switzerland: Springer. 2016.
- Green MJ, Stritzel H, Smith C, et al. Timing of poverty in childhood and adolescent health: evidence from the US and UK. *Soc Sci Med*. 2018;197:136-43.
- <https://www.un.org/development/desa/dspd/world-summit-for-social-development-1995/wssd-1995-agreements/pawssd-chapter-2.html>
- Fergusson DM, Woodward LJ, Horwood LJ. Risk factors and life processes associated with the onset of suicidal behaviour during adolescence and early adulthood. *Psychol Med*. 2000;30(1):23-39.
- Dashiff C, DiMicco W, Myers B, et al. Poverty and adolescent mental health. *J Child Adolesc Psychiatr Nurs*. 2009;22(1):23-32.
- <https://www.rcn.org.uk/clinical-topics/womens-health/promoting-menstrual-wellbeing/period-poverty>
- Kuhlmann AS, Henry K, Wall LL. Menstrual hygiene management in resource-poor countries. *Obstet Gynecol Surv*. 2017;72(6):356.
- Tegegne TK, Sisay MM. Menstrual hygiene management and school absenteeism among female adolescent students in Northeast Ethiopia. *BMC Public Health*. 2014;14(1):1-4.
- Wahl R. Nutrition in the adolescent. *Pediatr Ann*. 1999;28(2):107-11.
- Hall, JW, Rounds K. Adolescent Health. In: *Handbook for Public Health Social Work*. (1st edn), Keefe HR, Jurkowski TE, (eds). New York: Springer Publishing Company, USA. 2012; 59-79.
- Keefe R, Jurkowski ET. *Handbook for public health social work*. Springer.2013.
- Chandra-Mouli V, McCarraher DR, Phillips SJ, et al. Contraception for adolescents in low and middle income countries: needs, barriers, and access. *Reprod Health*. 2014;11(1):1-8.
- Morris JL, Rushwan H. Adolescent sexual and reproductive health: The global challenges. *Int J Gynaecol Obstet*. 2015;131:40-2.
- Liang M, Simelane S, Fillo GF, et al. The state of adolescent sexual and reproductive health. *J Adolesc Health*. 2019;65(6):3-15.
- Salam RA, Faqqah A, Sajjad N, et al. Improving adolescent sexual and reproductive health: A systematic review of potential interventions. *J Adolesc Health*. 2016;59(4):11-28.
- Alderman EM, Breuner CC. Unique needs of the adolescent. *Pediatr*. 2019;144(6).
- Grant M, Lloyd C, Mensch B. Menstruation and school absenteeism: Evidence from rural Malawi. *Comp Educ Rev*. 2013;57(2):260-84.
- Kaur R, Kaur K, Kaur R. Menstrual hygiene, management, and waste disposal: practices and challenges faced by girls/women of developing countries. *J Environ Public Health*. 2018;2018.
- Leutwyler H, Hubbard EM, Vinogradov S, et al. Videogames to promote physical activity in older adults with schizophrenia. *Games Health J*. 2012;1(5):381-3.
- Dahl AJ, D Alessandro AM, Peltier JW, Swan EL. Differential effects of omni-channel touchpoints and digital behaviors on digital natives' social cause engagement. *Journal of Research in Interactive Marketing*. 2018; 12(3): 258-273.
- Keengwe J, Georgina D. Supporting digital natives to learn effectively with technology tools. *Int J Inf Commun Technol Educ*. 2013;9(1):51-9.

34. Bagherniya M, Taghipour A, Sharma M, et al. Obesity intervention programs among adolescents using social cognitive theory: A systematic literature review. *Health Edu Res.* 2018;33(1):26-39.
35. Schunk DH, Usher EL. *Social cognitive theory and motivation.* Oxford University Press. 2019; pp: 11-26.
36. Sherer M, Adams CH. Construct validation of the self-efficacy scale. *Psychol Rep.* 1983;53(3):899-902.
37. Marks DF. *The health psychology reader.* Thousand Oaks. SAGE Publications. 2002.
38. Bandura A, Freeman WH, Lightsey R. Self-efficacy: The exercise of control. *J Cogn Therapy.* 1999;13(2):158-66.
39. Schunk DH, DiBenedetto MK. Motivation and social cognitive theory. *Contemp Educ Psych.* 2020;60:101832.
40. Nutland W, Cragg L. *Health Promotion Practice.* Maidenhead: Open University Press, UK. 2015.
41. Wakefield MA, Loken B, Hornik RC. Use of mass media campaigns to change health behaviour. *Lancet.* 2010;376(9748):1261-71.
42. Zamawe CO, Banda M, Dube AN. The impact of a community driven mass media campaign on the utilisation of maternal health care services in rural Malawi. *BMC Pregnancy Childbirth.* 2016;16(1):1-8.
43. Jeet G, Thakur JS, Prinja S, et al. Protocol for a systematic review of reviews evaluating effectiveness of mass media interventions for prevention and control of non-communicable diseases. *BMJ Mil Health.* 2020;10(6):e032611.
44. McCrae N, Gettings S, Purssell E. Social media and depressive symptoms in childhood and adolescence: A systematic review. *Adolescent Res Rev.* 2017;2(4):315-30.
45. Keffe GS, Clarke-Pearson K. The impact of social media on children, adolescents, and families. *Pediatr.* 2011;127(4):800-4.
46. Guinta MR, John RM. Social media and adolescent health. *Pediatr Nurs.* 2018;44(4):196-201.
47. Fletcher S, Mullett J. Digital stories as a tool for health promotion and youth engagement. *Can J Public Health.* 2016;107(2):183-7.
48. McGloin R, Richards K, Embacher K. Examining the potential gender gap in online health information-seeking behaviors among digital natives. *Commun Res Rep.* 2016;33(4):370-5.
49. Mahalmani VM, Mahendru D, Semwal A, et al. COVID-19 pandemic: A review based on current evidence. *Indian J Pharmacol.* 2020;52(2):117.
50. Atalan A. Is the lockdown important to prevent the COVID-19 pandemic? Effects on psychology, environment and economy-perspective. *Ann Med Surg.* 2020;56:38-42.

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