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Commentary

An alarming non-communicable diseases burden: time for adolescent health investment

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ABSTRACT

In the technology era, noncommunicable diseases are increasing rapidly especially in developing countries which is majorly attributed to behavioural or lifestyle risk factors. These factors are unhealthy diet, physical inactivity, and tobacco and alcohol consumption. These factors stem up in adolescent age due to its constant exposure and lack of monitoring by family and government as this group is believed to be healthy. Investing in adolescent health is prime with combined intervention with focus on multiple vistas like program science, behavioural science, implementation science and policy science in order to reduce the behavioural risk factors, which predispose to the noncommunicable diseases in adult life.

Keywords: Adolescent health, Behavioural factors, Lifestyle factors, Program science, Implementation science, Behavioural science, Policy science

INTRODUCTION

In the emerging technology era, newer innovations are improving positive life expectancy on one side, and at the same time, the global non-communicable diseases (NCD) burden is spiralling on the other side.[1,2] Approximately 74 percent of all global death is estimated due to NCDs and among these, around 80 percent of deaths occur in Low- and middle-income countries.[2] The major NCD types accounting for premature deaths are cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes.[2] These are due to the health-related behaviours which usually sprout up in adolescents, as substantial risk exposure occurs in this formative phase of life.[3] Physical inactivity, unhealthy diet, and substance abuse are such behavioural risk factors that contribute to NCDs development and poor health in later life.[2]

Response to rising NCDs burden

On account of this, there were three High-Level Meetings (HLM) held by the United Nations General Assembly. In September 2011, made a political declaration to strengthen both national and global responses for the prevention and control of NCDs.[4] However, this high-level meeting declaration did not reflect tangible targets and instead recommended to set-up a comprehensive global monitoring framework to prepare voluntary recommendations.[5,6] Later there were 2nd and 3rd high-level meetings in 2014 and 2018 respectively. The progress was checked in 2014 which considers intensifying efforts toward a world free of the avoidable NCD burden and committed to setting national targets by 2015 for the next 3 years. By 2015, WHO considered developing a national multisectoral plan and policy by integrating it with health

planning and development plans. By 2016, implemented 'best buys' for reducing NCD risk factors, enabled health systems to respond, and strengthened national surveillance systems. By 2017, submitted a progress report to convene the next UN meeting by 2018. The progress achieved by both global and national on the prevention and control of NCDs was reviewed comprehensively in the 2018 meeting and the heads committed to the political declaration in following new 13 steps to tackle NCDs.[7] Individual countries agreed to take responsibility for their efforts to tackle NCDs. They also agreed to commitments for evidence-based interventions and to scale up further for prevention and risk factor exposure.[7]

Adolescents and their challenging surrounding factors

Adolescence is a crucial phase in life where NCD risk factors stems up.[8] It is a delicate, rapid development phase of life that if positively invested can yield dividends of holistic health and well-being in future adulthood. It is the phase where there is rapid physical transformation and brain development with the cascading effect of new emotions.[3] As adolescence is a period of risk-taking, at the same time they are affected by the determinants of primary and secondary socialization which greatly impacts their decision-making choices. They easily get influenced positively or negatively by promotional activities towards health enhancing or compromising behaviours due to growing technology depending on the information they obtain.[9] This often translate into adulthood behaviours impacting health and well-being. Since low-and middle-income countries (LMIC) nearly have around 9/10ths of adolescents, affected largely by social determinants and environmental factors, the programs need to have right implementation methods to address these factors involving multiple stakeholders, as discussed in HLM.[3,10] Due to the recent Covid-19 pandemic, adolescents experienced a devastating impact, affecting their education, social life, and increased risk behaviours. Many adolescents faced challenges in interacting with their peers and family members due to infection. This ensued in social isolation which increased their stress due to fear of the consequences. To combat stress, many relied on risky behaviours like increased unmonitored substance use, increased consumption of junk foods, and social media usage.[11] Empowering and creating awareness of NCDs and their risk factor plays an effective role in the prevention, provided it is addressed in those individuals before the onset of the disease. By targeting adolescents effectively through evidence-based interventions with proper implementation strategies, the NCD burden of the future generation can be limited, which is an important cost-effective approach.[8]

In the LMIC context, adolescence is the age of responsibility and getting into jobs to sustain their family livelihood due to poverty is more in rural areas. Due to urbanisation and globalisation, there is changing pattern in the way of living especially regarding lifestyle, culture and traditional practices within the family.[12,13] Adolescents in both urban and rural areas are struggling to manage the conflicts in their daily practices. Due to such conflicts the adolescents are constantly under stress, affecting their mental health and easily leading them to risky behaviours like substance use.[14] Generally, the thinking is that adolescents are a healthier population and need no health services. Thus, not prioritized to attract any investment in health services.[15] There is a dire need for programmers and policymakers to invest in both urban and rural adolescent health to prevent future NCD development, which is a global priority to achieve UN Sustainable Development Goals (SDG).[1,16] Neglecting adolescents' health will have hazardous repercussions on the SDG target as they will be unaware of their need for health services. One modelling study has identified six cost-effectiveness interventions on three risk factors for adolescents and has analyzed a 10 percent reduction in premature death over the next fifty years. This study appears promising to invest in adolescent health immediately.[17] The programs should focus on developing individual coping strategies, interpersonal communication, and life skills to improvise their self-esteem and self-regulation.

Insufficient governmental commitments towards preventive health often have implications among adolescents' health. It will affect the financial commitments and investments as there exists political and regional conflicts (for example, war, terrorism, etc). In conflicts areas, many a time, due to poverty, adolescents are forced to enter anti-social movements, separating away from families and resulting into aggressive behaviours towards violence.[14] This makes them involve in negative behaviours impacting on health and well-being.

New vistas in adolescent health

Approximately 42% of the global population comprises young individuals. Recognizing the need for investments in adolescent health and unveiling new vistas for them is crucial. Adolescent intervention should not only prioritize behavioural risk factors but also consider related factors such as education, nutrition, socioeconomic conditions, evolving lifestyle habits, and resource availability. All these factors warrant further exploration within the context of NCD prevention programs by adopting evidence-based research. Hence investing in adolescent health is vital by using a prevention program with a focus on multiple vistas like program science, behavioural science, implementation science, and policy science.

Program science design with multi-phase interventions

To address these complex factors in adolescent health, there is need for an integrated, comprehensive, and scientifically designed programs focusing on the context and existing inequities.[14,18] The preventive programs are to be planned to address NCD behavioural risk factors in adolescents with a focus on understanding the driving factors behind their behaviours and also the broader social determinants which affect their behaviour choice. For

example, in low socio-economic status communities, adolescents face several challenges like increased poverty, poor nutritional choices, limited or non-existed educational opportunities, and a poor living environment that spurs them toward unhealthy behaviours.[8,15]

Behavioural science

To address the barriers and facilitators related to NCD risk factors, programmers and policymakers need to focus on context specific behaviour change interventions (BCI) which is apt for adolescent age group through school-based programs as behaviour modifications are better amended in the formative phase.[19,20]

Certain theory based BCIs have proved to be helpful in addressing the cognitive and surrounding factors to improvise the decision-making and self-regulation skills related to lifestyle interventions. Depending on the comprehensive needs assessment, school-based programs are important to address future NCD prevention in both rural and urban areas.[16,21] Schools are the ideal place for such programs as more than 70% of adolescents are present in schools.[16,21,22] There are two crucial steps involved in designing the school program.

First is planning a program that should be tailor-made with culturally acceptable and context-specific suitable to the needs of the adolescents. Second is the implementation of the program in a scientific manner to bring behaviour change in adolescents. Involving adolescents, themselves as stakeholders in designing will be an ideal approach as they are not just passive learners. Implementing it in an integrated manner as part of school activities will be better accepted rather than running separately.

Implementation science and implementation research

To address the methods involved in utilising the research findings into real-world scenario of practice/service with focus on its quality and effectiveness in prevention programs of NCD is very important.[23] The focus is to guide the change, its positive and negative effects and evaluate its sustainability of preventive outcomes. The scientific study to investigate the factors involved in program, policy and interventions with focus on contextual factors on real-world health outcomes is dire need in research.[23,24] If such an approach is involved in adolescent health programs, then sustainable outcomes can be expected.

Policy science

To address the policy related challenges, certain factors need to be focused. The scientific framework related to policy formulation, implementation, policy content establishment and policy effect related to health are to be examined for its proper functioning in the society.[25] Along with policy science, certain regulatory approaches need to be emphasized on modifiable risk factors. Focusing on a healthy school environment, warning labels on the products, and certain fiscal measures are some of the action areas which need to be strengthened. Along with this, the action areas of health-promoting schools could be integrated to develop a comprehensive package for adolescents.[21]

CONCLUSION

Investing in adolescents by preventing the risk factors for NCDs is an opportunity which will greatly reduce the future burden and will have a progressive healthy life. Failing to address adolescents now at present situation is like a hidden fire below the ash especially in LMIC which will have devasting repercussions at a later stage where not much help can be rendered. Without further delay, programmers and policymakers need to act practically with scientific evidence interventions involving multisector and transdisciplinary collaborations at both health system and individual levels simultaneously applicable to both urban and rural areas.

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