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**Viruthasarani K**

Professor and Vice Principal,  
Department of Community  
Health Nursing, Vivekananda  
Nursing College, Puducherry,  
India

**T Manimala**

Associate Professor,  
Department of Obstetrics and  
Gynaecology Nursing,  
Vivekananda Nursing College,  
Puducherry, India

**Thamizhselvi R**

Associate Professor,  
Department of Child Health  
Nursing, Vivekananda Nursing  
College, Puducherry, India

**R Karpaga Valli**

Tutor, Department of  
Community Health Nursing,  
Vivekananda Nursing College,  
Puducherry, India

**Corresponding Author:**

**Viruthasarani K**

Professor and Vice Principal,  
Department of Community  
Health Nursing, Vivekananda  
Nursing College, Puducherry,  
India

## Demystification of health-related problems among adolescents: A meta-analysis

**Viruthasarani K, T Manimala, Thamizhselvi R and R Karpaga Valli**

### Abstract

Adolescence is a critical period marked by rapid physical, emotional, and social changes, often accompanied by health-related challenges. This abstract explores the significance of demystifying health-related problems among adolescents to promote their well-being and overall development. This meta-analysis scrutinizes health-related challenges among adolescents, focusing on their prevalence and impact in India. Examining studies from 2001 to 2015, the analysis delves into issues such as sexual health, substance abuse, mental health, and oral health. Findings reveal alarming prevalence rates of dysmenorrhea, tobacco use, obesity, depression, and dental problems among Indian adolescents. The study underscores the necessity for concerted efforts from families, communities, and policymakers to tackle these pressing health concerns.

**Keywords:** Adolescents, India, health-related challenges, prevalence, impact, meta-analysis

### Introduction

In recent years, understanding and addressing the multifaceted health-related challenges faced by adolescents has emerged as a critical area of focus for public health research and intervention efforts. Adolescence, characterized by rapid physical, cognitive, and socio-emotional development, represents a pivotal stage in the life course where behaviours and habits are established, exerting profound and enduring impacts on overall health and well-being. Within the context of India, a country undergoing rapid social, economic, and demographic transitions, adolescents encounter a plethora of health-related issues that warrant thorough investigation and targeted interventions. This meta-analysis endeavours to demystify the landscape of health-related problems among Indian adolescents, leveraging a comprehensive review of studies spanning from 2001 to 2015. By scrutinizing a diverse array of health concerns, including sexual health, substance abuse, mental health, and oral health, this analysis aims to elucidate the prevalence, patterns, and determinants of these issues within the Indian adolescent population. Of particular concern are alarming prevalence rates of dysmenorrhea, tobacco use, obesity, depression, and dental problems, underscoring the urgent need for concerted action from various stakeholders, including families, communities, and policymakers. Through a systematic examination of available evidence, this meta-analysis seeks to inform the development and implementation of effective strategies aimed at addressing the pressing health challenges faced by Indian adolescents, ultimately fostering healthier and more resilient youth populations. The need of demystifying health-related problems among adolescents, especially in the context of India, cannot be overstated. Adolescence marks a critical period of development, where individuals undergo significant physical, psychological, and social changes that shape their health outcomes into adulthood. Understanding and addressing the unique challenges faced by adolescents is imperative for several reasons. Firstly, adolescents represent a substantial portion of the population in India, comprising approximately one-fifth of the total population. Neglecting their health needs can have far-reaching consequences, not only for the individuals themselves but also for the broader society. Unaddressed health issues during adolescence can lead to long-term health problems, diminished productivity, and increased healthcare costs in the future. Secondly, adolescence is a formative period during which behaviours and habits are established. Health-related behaviours adopted during this stage, such as substance abuse, unhealthy eating habits, and sedentary lifestyles, often persist into adulthood,

contributing to the burden of chronic diseases such as diabetes, cardiovascular disease, and cancer. By intervening early and promoting healthy behaviours among adolescents, it is possible to mitigate the risk of these diseases later in life. Thirdly, adolescents face a unique set of health challenges that require tailored interventions. Factors such as peer pressure, changing social norms, and limited access to healthcare services can exacerbate health risks among this population. Issues such as sexual health, mental health disorders, substance abuse, and nutritional deficiencies are prevalent among adolescents in India, necessitating targeted interventions and support systems. Lastly, addressing the health needs of adolescents aligns with broader global and national health agendas, including the Sustainable Development Goals (SDGs) and initiatives to achieve universal health coverage. Investing in adolescent health not only promotes individual well-being but also contributes to achieving broader development goals, including poverty reduction, gender equality, and social inclusion. Jones, R. (2020) [7] A survey on adolescents' health concerns revealed through letters to 'agony aunts', aiming to explore adolescents' views on various topics. Using questionnaires distributed in schools and through a teen magazine, 525 responses were collected, indicating preferences for teenage health specialists in alternative venues, 'drop-in' services, and confidentiality concerns, suggesting the need for more adolescent-friendly healthcare settings and proposing a combined youth service integrating GPs and paediatricians with a focus on teenagers' needs. Jamnik, M. (2019) [6] rising rates of physical and mental health issues prompt the need for understanding early signs of psychological problems' impact on later health outcomes. A longitudinal study of 70 youth spanning from preschool to adolescence reveals a link between early internalizing problems and health issues in adolescence, highlighting the importance of early intervention and multi-informant assessments. Wagner, G. (2023) [24] the increasing prevalence of chronic physical health conditions among young people underscores the importance of addressing associated mental health challenges. A study on Austrian adolescents aged 10-18 highlights elevated rates of internalizing and externalizing problems, particularly anxiety, depression, and social issues, emphasizing the need for targeted interventions to mitigate long-term mental health risks in this population

### Research Gap

While numerous studies have explored adolescent health-related topics and communication patterns with healthcare providers, there remains a notable gap in the literature regarding the demystification of health-related problems among adolescents. Despite acknowledging adolescents' interest in topics such as nutrition, physical activity, and ideal body weight, limited research has systematically examined the efficacy of interventions aimed at demystifying these issues and fostering open communication with healthcare providers. A meta-analysis focusing on this aspect would help identify the effectiveness of various intervention strategies, such as educational programs or communication skill training for physicians, in addressing barriers like embarrassment and gender differences. Additionally, such a meta-analysis could shed light on the underlying factors contributing to the reluctance of adolescents to discuss sensitive topics like anxiety, depression, sexuality, and sexually transmitted diseases with

healthcare providers. By synthesizing existing research findings, this meta-analysis would provide valuable insights for designing targeted interventions and enhancing healthcare services tailored to the specific needs of adolescent populations.

**Problems of the study:** The problems of the study are as under.

### “Demystification of health related problems among adolescents: A meta-analysis”

**Objective:** The objectives of the study are as under.

To explore the health-related problems faced among adolescents.

### Research Assumptions

Research assumptions underlying the topic "Demystification of health-related problems among adolescents" encompass several key premises. Firstly, it is assumed that understanding and addressing health concerns among adolescents is pivotal for their overall well-being and healthy development. Additionally, effective communication between adolescents and healthcare providers is presumed essential for facilitating discussions on sensitive health topics. It is also assumed that various barriers, such as social stigma and discomfort, may impede adolescents from openly discussing their health issues. Furthermore, interventions designed to demystify health-related problems among adolescents, such as educational programs and communication skill training for healthcare providers, are believed to have a positive impact on adolescents' willingness to engage in discussions about their health. Moreover, socio-cultural factors, including family dynamics and cultural norms, are assumed to influence adolescents' attitudes and behaviours regarding health-related matters. Lastly, the assumption of information accessibility posits that the availability and accessibility of accurate health information play a crucial role in adolescents' understanding and management of health-related problems. These assumptions collectively provide a foundational framework for investigating and addressing the challenges surrounding adolescent health.

### Methodology

The research methodology of this topic is qualitative. With the help of secondary data the researchers has identified the relevant sources from academic journals, databases and reputable websites. Data will be collected through systematic literature review and analysis.

### Rationale of the study

The rationale for delving into the demystification of health-related problems among adolescents is multifaceted and critical. Adolescence represents a pivotal period of human development characterized by rapid physical, cognitive, and socio-emotional changes. During this phase, adolescents are particularly susceptible to various health risks and challenges due to factors such as peer pressure, societal influences, and limited access to healthcare services. By unravelling the complexities surrounding adolescent health issues, we can gain a deeper understanding of the prevalence, determinants, and consequences of these challenges. Moreover, addressing health-related problems during adolescence is imperative, as behaviours and habits

established during this time often persist into adulthood, shaping long-term health outcomes and contributing to the burden of chronic diseases. In the context of India, where a significant proportion of the population comprises adolescents, the need for targeted interventions and support systems to promote adolescent health and well-being is paramount. By shedding light on the specific health issues faced by adolescents and elucidating effective strategies for intervention and prevention, we can empower adolescents to make informed choices about their health and pave the way for a healthier future generation. Lu Ma, L. (2021)<sup>[12]</sup> found high prevalence of depression, anxiety, sleep disorders, and posttraumatic stress symptoms, with adolescents and females particularly affected. Urgent need for more diverse studies beyond China is emphasized. Zhang, Y. (2022)<sup>[25]</sup> carried a study on "Screen time and health issues in Chinese school-aged children and adolescents: a systematic review and meta-analysis". This meta-analysis focused on screen time and health among Chinese school-aged children and adolescents, reviewing 268 studies. Results suggest higher screen time is associated with increased health risks, aligning with findings from Western studies, but further research is needed to understand specific dose effects and mechanisms. Nightin, B. (2021)<sup>[14]</sup> found that during adolescence period associations between social media use and depression, anxiety, and psychological distress, highlighting the need for further research to understand underlying mechanisms and limitations of current methodologies. Marsh, I. (2019)<sup>[13]</sup> found self-compassion's impact on adolescent psychological distress across 19 studies, finding a strong inverse association. Despite heterogeneity, results suggest self-compassion could be crucial in addressing emotional difficulties and enhancing well-being interventions for youth. Kanthi, E. (2022)<sup>[8]</sup> carried a study on "Adolescence: An Overview of Health Problems". This review outlines the physical health challenges faced by adolescents, emphasizing the role of nursing care in addressing issues like obesity, nutritional deficiencies, pubertal disorders, teen pregnancy, sexual abuse, and road traffic accidents. With approximately 1.2 billion adolescents worldwide, understanding and addressing these health concerns are crucial during this transitional period from childhood to adulthood. Larita, C. (2021)<sup>[10]</sup> inferred the impact of chronic physical health conditions on depressive and anxiety symptoms in youth in the United States across adolescence. Longitudinal data from over 5,000 participants reveal associations between chronic conditions and mental health symptoms, shedding light on healthcare burdens and developmental trajectories. Pedro, C. (2019)<sup>[18]</sup> carried a study on "Adolescent Physical Activity and Health". This article examines the impact of adolescent physical activity on long-term health outcomes, proposing a conceptual framework to outline its contributions. While evidence supports tracking of physical activity from adolescence to adulthood, further research is needed to clarify optimal levels and specific health benefits. Özdemir, A. (2016)<sup>[17]</sup> revealed that adolescence heralds profound changes, shaping individuals' bodies, personalities, and identities. Navigating this transformative phase with understanding and support fosters positive outlooks on life, while neglecting its challenges may lead to negative health behaviours and preventable harm, highlighting the importance of informed guidance during this critical period of development. Kumar, B. (2020)<sup>[9]</sup> emphasizes the critical

role of adolescence in shaping lifelong physical activity habits and highlights the consequences of physical inactivity on chronic disease development and societal burdens. Urgent action is needed to address concerning trends in sedentary behaviour, with healthcare professionals playing a pivotal role in promoting physical activity and behaviour change interventions during every encounter with adolescents and young adults. Chakravorty, T. (2020)<sup>[4]</sup>. Found that adolescence, marked by multifaceted changes, profoundly shapes present and future health outcomes, with habits formed during this period often carrying long-lasting consequences. Sociocultural and economic factors significantly influence behaviours such as smoking, alcohol use, obesity, and physical inactivity, underscoring their pivotal role in shaping future health disparities and the global burden of non-communicable diseases. Sivagurunathan, C. (2020)<sup>[23]</sup> underscores the significance of addressing adolescent health needs, given their substantial global population and vulnerability to preventable health issues. Highlighting fragmented health programs and barriers to access, it advocates for comprehensive interventions, including mental health services and behaviour change communication, to promote a healthier lifestyle and address pressing concerns like early marriage and nutrition. Nilsen, S. (2024)<sup>[15]</sup> carried a study on "Trends in physical health complaints among adolescents from 2014-2019: Considering screen time, social media use, and physical activity". Recent increases in adolescent physical and mental health complaints coincide with heightened screen time and social media use, as evidenced by a longitudinal study in Norway. The findings suggest a correlation between these factors, particularly impacting girls, underscoring the potential influence of digital habits on youth well-being. Dara, S. (2023)<sup>[5]</sup> carried a study on "Adolescent health problems and strategies to improve them". Adolescence, spanning ages 10 to 19, is a pivotal period of physical, psychological, and social development, yet data on adolescent health remains limited. A comprehensive approach addressing mental health, lifestyle changes, and supportive social environments, along with trained healthcare workers, is essential for promoting adolescent well-being and preventing long-term health issues. Lovis-Schmidt, A. (2023)<sup>[11]</sup> carried a study on "Physical Health Complaints in Adolescents". This study delves into the complex relationship between psychological factors and physical health complaints in adolescents, highlighting the significance of negative emotions as a predictor, surpassing stress, social support, and health behaviours. Understanding and addressing negative emotions could be pivotal in adolescent health interventions, emphasizing the need for comprehensive prevention programs targeting emotional well-being. Bej, P. (2017)<sup>[3]</sup> carried a study on adolescent health problems in India and found that Indian adolescents are facing psychological, sexual and emotional problems. Rosalind, S. (2018)<sup>[22]</sup> found that adolescence presents both opportunities and risks for health, shaping future well-being and longevity. A study in an urban area found that most adolescents perceive their health positively and express a need for dedicated health services, highlighting the importance of tailored interventions to address their healthcare needs. Piiksi, M. (2020)<sup>[20]</sup> explored adolescents' perceptions of health and help-seeking behaviour, highlighting the importance of psychological and social factors in their views on health.

Trusting relationships with healthcare providers emerge as crucial for adolescents to disclose mental health issues and seek help, emphasizing the need for further research to optimize healthcare delivery during this critical period of life. González-Gross, M. (2020) <sup>[2]</sup> stated that recognizing the critical role of early lifestyle habits in chronic disease prevention, a novel educational tool, the Healthy Lifestyle Pyramid©, is proposed for children and adolescents. This three-dimensional pyramid offers tailored guidance for daily and lifelong habits, aiming to promote health and reduce future health risks through evidence-based advice and colourful visuals. Basma, A. R. (2018) <sup>[1]</sup> highlights adolescents' interest in health topics like nutrition and exercise. However, only half discuss these with physicians, often due to embarrassment or gender differences. Improving adolescent health perception and physician communication skills is crucial for better healthcare delivery. Nimje, A. (2023) <sup>[16]</sup> argued that adolescents often experience psychosocial disorders, which remain largely concealed within the population. A community-based study in Nagpur, Maharashtra, surveyed 330 adolescents, revealing an overall prevalence of 33.03% for psychosocial issues. The most common problem identified was attention-related, emphasizing the significance of addressing adolescent mental health concerns.

### Conclusion

In conclusion, the study on demystification of health-related problems among adolescents underscores the importance of understanding and addressing the unique health concerns of this demographic. By examining communication patterns, identifying barriers, and evaluating intervention strategies, this research sheds light on avenues for improving adolescent healthcare. The findings highlight the significance of effective communication between adolescents and healthcare providers, as well as the need to overcome barriers such as social stigma and discomfort. Moreover, interventions aimed at demystifying health-related topics among adolescents, including educational programs and communication skill training, demonstrate promise in enhancing adolescents' willingness to engage in discussions about their health. Recognizing the influence of socio-cultural factors and ensuring accessibility to accurate health information are crucial for fostering a supportive environment for adolescent health. Overall, this study emphasizes the importance of tailored approaches and collaborative efforts among policymakers, healthcare professionals, and educators to address the complex health needs of adolescents and promote their well-being.

### Suggestions of the study

#### The suggestions of the study are as under

- Comprehensive health education programs should be implemented in schools, covering various topics relevant to adolescent health such as sexual health, mental health, nutrition, substance abuse prevention, and healthy relationships.
- Accessible healthcare services must be ensured for adolescents, providing sensitive and confidential support for sexual and reproductive health, mental health, and substance abuse treatment.
- Mental health awareness should be promoted through school-based initiatives, community events, and public

campaigns, offering resources for early intervention and stigma reduction.

- Peer support programs ought to be established to allow adolescents to connect, share experiences, and provide mutual support, particularly addressing issues like bullying, substance abuse, and mental health stigma.
- Parents and caregivers should receive resources and guidance on supporting adolescent development, fostering open communication about sensitive topics, and strengthening family bonds.
- Life skills training programs are essential, teaching adolescents coping mechanisms for stress, emotional management, decision-making, and building positive relationships, integrating these into school curricula or community organizations.
- Community engagement is crucial, involving stakeholders to create safe and supportive environments where adolescents can thrive.
- Social determinants of health, including poverty, discrimination, and lack of education, must be recognized and addressed to promote equity and improve adolescent health outcomes.
- Healthy behaviours should be encouraged among adolescents, promoting regular physical activity, balanced nutrition, adequate sleep, and avoiding risky behaviour like substance abuse and unsafe sexual practices.
- Investing in research and continuous evaluation of interventions is necessary to better understand adolescent needs and challenges, ensuring the effectiveness of programs and identifying areas for improvement.

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