

A Study on Nutritional and Socio - Economic Status of Adolescent Girls

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Abstract

The nutrition and healthcare plays a pivotal role in uplifting a nation's progress. The paper highlights how nutrition forms the bedrock for harnessing the demographic advantage that India enjoys. This paper delves in clarifying the fundamental concepts utilized in the research for make it to a betterment. It also articulates the significance and necessity of the study of this topic. In addition, it expounds on the root causes and resulting repercussions of adolescent malnutrition, shedding light on the adverse effects of undernourishment in adolescent girls. Furthermore, the paper outlines the structure of the entire nutrition process. The primary aim of this research paper is to evaluate the nutritional well-being of adolescent girls in Tamil Nadu. The data collected for the study includes primary and secondary data. The researcher adopted an exploratory research enquiry that aims to explore, to allow a researcher to become familiar with a topic or the issues around a problem.

Keywords: Nutrition, Nutrition Process, Nutritional Status, Socio – Economic Status, Adolescent Girls

Introduction

Nutrition plays a crucial role in assessing the overall well-being of adolescents. During this phase, individuals undergo a significant increase in weight, amounting to approximately 50% of their eventual adult weight, with over 20% of adult weight gain occurring. Additionally, adolescents experience a substantial increase in skeletal mass, which is vital for their overall development. It's crucial to note that unmet nutritional requirements create a heightened vulnerability, particularly among adolescent girls (Bhagbanprakash, 2004). Nutrition also bears a direct connection to various indices of development, such as the Gender-related Development Index (GDI). The GDI, closely linked to the Human Development Index (HDI), is influenced by key factors like life expectancy, knowledge, and living standards. Furthermore, the GDI shares a significant relationship with the Human Poverty Index (HPI), as poverty is often a family-wide issue.

In Tamil Nadu, it's alarming that a considerable percentage of females marry before the age of 18, particularly among those aged 20-24, where this accounts for 26%. Within this group, 8.8% are between 15-19 years old and are already mothers or pregnant. Disturbingly, about 45% of girls in India suffer from malnourishment, as evidenced by stunting, wasting, thinness, iron deficiency, and anemia. Adolescents face many of the same nutritional challenges that adults do. However, it's important to highlight that the nutritional issues faced by adolescent girls are even more critical than those experienced by adolescent boys. Therefore, addressing the nutritional status of adolescent girls in Tamil Nadu is a pressing concern that requires immediate attention. The present study endeavors to tackle this issue and aims to provide valuable insights that can help shape nutritional programs for adolescent girls in Tamil Nadu, and potentially for similar groups across India (UNICEF, 1998).

Research Gap

An examination of research in developing nations, including India, reveals that diet-related chronic conditions such as obesity, hypertension, and diabetes are widespread in both urban and rural regions. Notably, it has been observed that there hasn't been any comprehensive and targeted study conducted to tackle the dietary issues among various age groups of adolescents in various underprivileged rural and urban areas.

The assessment of dietary habits and nutritional well-being is particularly significant in the context of Tamil Nadu, given the substantial youth population in the state. This youth demographic presents a valuable opportunity to enhance the state's development and overall prosperity.

Nutrition

Webster's seventh new collegiate Dictionary defines nutrition as the act or process of providing nourishment. More specifically, it refers to the processes through which animals or plants ingest and utilize food substances. Nutrition is a pivotal factor for overall health and well-being. The field of nutritional science encompasses knowledge about the role of dietary intake in maintaining health. In recent times, the scope of nutritional science has expanded beyond the realms of growth, development, maintenance, and repair to include various other health aspects such as immune system efficiency, aging, overall well-being, and the prevention (and delay) of degenerative diseases and cancer.

In addition, the Free Medical Dictionary by Farlex categorizes nutrition into six essential groups of nutrients that the body must obtain from food: protein, carbohydrates, fats, dietary fibers, vitamins, minerals, and water. Nutrition is essentially the scientific study of food and its interactions within an organism to support and sustain health. It encompasses a series of processes that facilitate all bodily components in obtaining and utilizing the necessary materials for their proper functioning and contribute to the growth and renewal of all bodily elements.

Adolescence

Adolescence is described as a stage in life marked by swift physical growth, intricate development, and transformations in physical, social, and psychological aspects. It's a period of attaining sexual maturity, experimenting, fostering adult cognitive abilities, and shifting from prior childhood and socio-economic reliance to a state of relative independence.

On the other hand, "adolescent" signifies a period of gaining energy and identity. During adolescence, a child evolves into a young adult.

Literature Review

Arage, Assefa & Worku (2019), in their study on “Socio-demographic and economic factors are associated with nutritional status of adolescent school girls in Lay Guyint Woreda, Northwest Ethiopia”. The school-based cross-sectional study comprising 362 adolescent girls aged 10–19 years was included in the study. Simple random sampling technique with proportional allocation to size was used to select the participants. An interviewer-administered questionnaire and anthropometric measurement were used to collect the data. An anthropometric measurement was converted to the indices of nutritional status using World Health Organization Anthro Plus software. The results show that the “Adolescents age”, “rural resident” and “no snack” were positively associated with stunting. Whereas “mother’s occupation” was negatively associated with stunting. Similarly, being a “rural resident” and “Adolescents age” were positively associated with thinness. Educational status of adolescent girls was negatively associated with thinness. So, the study concludes that the stunting and thinness are prevalent among adolescent girls. The age of adolescents, place of residence, having a snack and mother’s occupation was significantly associated with stunting and thinness. Having at least a one-time snack in addition to the usual diet is strongly recommended.

Abahussain NA (2011), in his study on “Was there a change in the body mass index of Saudi adolescent girls in Al-Khobar between 1997 and 2007?”. The main objective of the study includes special concern is focused on the nutritional status of adolescent girls in order to avoid future health problems. The aim of this study was to determine the change in body mass index (BMI) among adolescent Saudi girls living in Al-Khobar between 1997 and 2007. The researcher has identified that sample of adolescent Saudi girls, 15–19-years-old, living in Al-Khobar, Saudi Arabia, was analyzed through two data sets. The first data set (n = 400) was collected in 1997 and the second (n = 321) was collected in 2007. Both data sets used the same sampling method. Anthropometric measurements were made and the BMI was used to determine participants’ nutritional status. Statistical analysis was performed. There was an increase in the median weight of Saudi adolescent girls from 1997 to 2007, but the change was not statistically significant. There was a statistically significant change, however, in adolescent girls’ height during the 10-year interval. Using BMI to determine the nutritional status of the sample, no statistically significant difference was found. Overweight and obesity remain prevalent in about 30% of the adolescent girls, and about 3.5% of the girls in both sets were underweight. The study concludes that there was no change in BMI among Saudi adolescent girls living in Al-Khobar during the

10-year span. Underweight is of low prevalence, and overweight and obesity are the critical nutritional problems that are faced by this population. Further research using time span comparisons is important to assess changes in maladaptive overweight and obesity.

Black, Victora, Walker et al. (2013), Maternal and child malnutrition in low-income and middle-income countries encompasses both under nutrition and a growing problem with overweight and obesity. Low body-mass index, indicative of maternal under nutrition, has declined somewhat in the past two decades but continues to be prevalent in Asia and Africa. Prevalence of maternal overweight has had a steady increase since 1980 and exceeds that of underweight in all regions. Prevalence of stunting of linear growth of children younger than 5 years has decreased during the past two decades, but is higher in south Asia and sub-Saharan Africa than elsewhere and globally affected at least 165 million children in 2011; wasting affected at least 52 million children. Deficiencies of vitamin A and zinc result in deaths; deficiencies of iodine and iron, together with stunting, can contribute to children not reaching their developmental potential. Maternal under nutrition contributes to fetal growth restriction, which increases the risk of neonatal deaths and, for survivors, of stunting by 2 years of age. Suboptimum breastfeeding results in an increased risk for mortality in the first 2 years of life. We estimate that undernutrition in the aggregate—including fetal growth restriction, stunting, wasting, and deficiencies of vitamin A and zinc along with suboptimum breastfeeding—is a cause of 3.1 million child deaths annually or 45% of all child deaths in 2011. Maternal overweight and obesity result in increased maternal morbidity and infant mortality. Childhood overweight is becoming an increasingly important contributor to adult obesity, diabetes, and non-communicable diseases. The high present and future disease burden caused by malnutrition in women of reproductive age, pregnancy, and children in the first 2 years of life should lead to interventions focused on these groups.

Research Objectives

- To assess the strength of nutritional at adolescent age.
- To bring out the socio - economic status of adolescent girls
- To identify the importance of the problem of adolescent health.

- To know clearly the role played by the nutrition during the adolescent age.

Importance of the Problem of Adolescent Health

The concept of the demographic dividend, which refers to the potential economic benefits that come with a youthful population, can only become a reality if we harness the power of the youth to drive the economy towards greater prosperity. A country's future economic development is deeply intertwined with the health and well-being of its adolescent population. Factors like poverty, early marriage, and sexual activity among unmarried adolescents, healthcare systems, pregnancy rates, maternal mortality, HIV infections, and sexually transmitted infections (STIs) have a significant impact on the productivity and potential of adolescents.

Inadequate healthcare for adolescents, where their health needs go unmet, leads to marginalized and vulnerable life outcomes, especially for those in disadvantaged sections of the adolescent population, including homeless individuals, those without stable housing, and young people in broken families. Poverty often pushes young girls into the sex work market.

Adolescent healthcare services are not consistently available across regions, states, and countries. Adolescents living outside traditional family settings and in juvenile homes face particular challenges. Adolescence is a phase of life where risks such as juvenile delinquency, reckless driving, vulnerability to accidents, motor vehicle injuries, and violence are more prevalent. Factors like early initiation of sexual activity, early childbirth, awareness of contraception, and age at marriage serve as indicators of adolescent health. Assessing adolescent health in terms of nutrition, anemia, injuries, sexual violence, mental health, and substance abuse can provide essential data for developing programs and guidelines for healthcare services.

Adolescent Births

Each day, 20,000 girls under the age of 18 give birth in developing nations (United Nations Population Fund, 2013). Half of all adolescent births take place in seven countries, with India being one of them. These seven countries include Bangladesh, Brazil, Democratic Republic of Congo, Ethiopia, India, Nigeria, and the United States. Nutrition-related risks in adolescent programs encompass issues like stunted growth (both present and future), maternal and fetal

competition for nutrients, low birth weight, reduced head circumference, anemia, limited breastfeeding abilities, and obesity.

- **Mother's Knowledge on Child Care**

The data reveals that almost 40% of births are carried out through cesarean sections, and merely 9.3% of infants born at home receive a medical checkup by a doctor within the first day of birth.

- **Adolescent Population**

Globally, there are approximately 1.2 billion adolescents, with 85% of them residing in developing nations. In the South East Asian region, adolescents make up roughly 18-25% of the total population.

- **Adolescent Population in India**

Approximately one-fifth of India's population falls within the age group of 10-19 years, and adolescents make up a significant portion of the country's mothers. Surprisingly, despite the substantial presence of adolescents in the population, policies and initiatives in India have paid limited attention to this age group.

- **Adolescents in between group**

Adolescents are a unique group, facing nutrition issues that are a blend of those encountered by children and adults. Additionally, there are specific concerns unique to this age group that require tailored strategies and interventions.

- **Puberty and adolescence**

The period of adolescence, which commences with the onset of puberty, is a critical phase for a healthy transition into adulthood. However, many adolescents lack adequate information about the impending physical and physiological changes, as well as health-related issues and challenges. Common health concerns in the adolescent population in India include early marriages, elevated fertility rates, high occurrences of teenage pregnancies, increased susceptibility to Sexually Transmitted Infections/Reproductive Tract Infections (STI/RTI), and suboptimal nutritional status.

- **The Newer focus on women's health adds to importance of adolescent's health**

The renewed focus on Reproductive and Child Health (RCH) has been revitalized due to the growing recognition of the significance of women's health. It is now widely acknowledged that to enhance women's health, prioritizing the health of adolescents in Indian policy and program development and implementation is imperative. Girls face

deprivation when it comes to nutrition, healthcare access, and educational and employment opportunities. They are often withdrawn from schools once they begin menstruating. Right from their early years, girls are conditioned to conform to a male-dominated, patriarchal society.

- **Issues of adolescent girls and governmental initiatives**

It is concerning that many girls grow into adulthood without experiencing the crucial period of adolescence. Nearly 46.6% of adolescent girls are illiterate, a significantly higher figure compared to males (25.5%). Anemia is a widespread health issue among adolescent girls. Both the 1992 ICMR study on Iron and Folic Acid supplementation and UNICEF have reported low average hemoglobin levels and insufficient nutritional intake of proteins, calories, and macro/micronutrients among adolescent girls and pregnant mothers. Inadequate nutrition primarily leads to poor physical growth and stunted development. According to the 1998-99 NFHS-2, the highest prevalence of anemia (56%) was found among adolescents aged 15-19, in comparison to other groups of women of reproductive age.

Adolescent health is the responsibility of the Ministry of Health and Family Welfare at the central level and the Department of Health and Family Welfare at the state level. The Ministry of Women and Child Development plays a significant role in addressing the nutrition and development of children, particularly girls. The National Population Policy 2000 gave substantial emphasis to adolescent health, and the National Youth Policy of 1986 (and the New Draft National Youth Policy in 2000) included adolescent health as a dedicated subsection within the health sector.

8. Factors affecting Health status of Adolescents

Adolescent health is impacted by a variety of factors, encompassing social, transitional, political, developmental, familial, cultural, and other adverse elements.

- **Socio-Economic Factors**

Adolescent health is influenced by a multitude of factors, including social, transitional, political, developmental, familial, cultural, and other detrimental elements. The lives of numerous adolescents are marked by challenges such as poverty, limited access to education and employment, exploitation, conflict, civil upheaval, and biases related to ethnicity and gender. The rapid urbanization, increased connectivity through telecommunications, travel, and migration offers both new opportunities and potential risks to young individuals. These circumstances can directly threaten their well-being.

- **Household and Cultural factors**

The health issues affecting adolescents are interconnected. Several factors contribute to unhealthy development in adolescents, including reduced influence from family and culture, earlier onset of puberty, and delayed marriage. These factors increase the chances of unprotected sexual activity among unmarried adolescents in many regions worldwide. In some countries, early marriage and early childbirth result in elevated rates of maternal and infant mortality. Adolescents face significant health risks, including sexually transmitted diseases like HIV/AIDS.

- **Violence and Other Harmful Factors**

Harmful substances such as tobacco, alcohol, and various drugs are increasingly accessible to adolescents, posing threats to their well-being both in the immediate and distant future. Violence involving young individuals is a growing issue, with young men often engaging in violent acts, including participating in conflicts and wars. Additionally, there seems to be a rising trend in suicide attempts among young people.

Conclusion

The health of adolescent girls is closely tied to the socio-economic status of their households, as well as their age and their role within the family. India, historically a male-

dominated society with a strong preference for sons in many regions, often leads to discrimination against girls. This deep-rooted gender bias is evident in demographic trends, starting with female feticide and prenatal sex determination. Girls typically receive a smaller share of household resources, health, and services compared to their male counterparts. When food scarcity is acute, girls are disproportionately affected in terms of their nutritional status compared to boys. Data indicates that girls between 13 and 16 years of age consume less food than boys. However, within the household, adolescent girls bear the brunt of economic, procreative, and family responsibilities due to competing demands on their time and energy, as well as societal norms. This results in a tendency to neglect their own health. Limited access to food, combined with this neglect, often leads to poor nutritional status and overall ill health in most adolescent girls.

Given the widespread prevalence of malnutrition among the child population in the country, it follows that a significant number of girl children also experience moderate to severe malnutrition. This malnutrition persists throughout adolescence and during pregnancy. As a result, the growth and development of the unborn child are affected, leading to low birth weight. According to data from the National Nutrition Monitoring Bureau (NNMB), a substantial proportion of girls face obstetric risks as they enter their 14th-15th year of life, with a height less than 145 cm and a weight less than 38 kg. However, adolescent girls have not received significant attention from nutrition-related programs in developing countries. To break the cycle of anemia and malnutrition passed down from one generation to the next, anemia control is a top priority in the action plan for the Year of the Adolescent Girls.

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