Why Adolescent Nutrition and What Do We Need?

Adolescence is defined as the period of 10-19 years. In 2017, almost one out of five Indonesians was an adolescent (44.93 million adolescents). Nutrition is one of the cornerstones for adolescent health. Adolescence is a life stage for physical growth and an opportunity for developing healthy dietary practices. This is increasingly relevant in the context of Indonesia, where non-communicable diseases (NCDs) are estimated to contribute 71% of total deaths and many of NCDs can be prevented by reducing risk factors such as by improving healthy diets during adolescence.

A growing body of evidence shows that addressing nutritional problems and adopting a healthy diet during adolescence is pivotal as this period is the second window of opportunity for physical growth and development. Nutrition and dietary habit interventions at this stage are proven to increase cognitive abilities and reduce the risk of future NCDs as well as improving the health of future generations as the cohort moves into adulthood and becomes parents. The failure of health investments in adolescents diminishes the investment in the previous stages carried out in the mother and child groups and undermines efforts to improve quality of life in the future.

There is global consensus highlighting the important role of healthy and competent adolescent to achieve development targets, including the Sustainable Development Goals—SDGs, where adolescent nutrition is an inseparable component for achieving the goals on no poverty, zero hunger, ensuring good health and wellbeing, quality education and reduced inequalities (objectives 1, 2, 3, 4 and 10). Apart from the global agenda, the right to opportunities for growth and optimal health is a citizen’s basic rights as stated in article 28 of the 1945 Constitution. Failure to adequately invest in adolescent health, nutrition and development exacerbates the cycle of poverty rather than catalyzing the educational and employment opportunities and demographic dividend of having a healthy, well-nourished youth, future labor force and thought leaders thus hindering the current development's trajectory.

Adolescent nutrition must be considered in the context of both underweight and overweight, along with micronutrient deficiencies, such as anemia. The Basic Health Research (RISKESDAS) 2013 reported that more than a third of adolescents had short stature, more than 10% were thin and around 9% were overweight and obese. Anemia is estimated to be 40%-50% in adolescent girls. These have consequences for academic potential, current and future work capacity and productivity, and negative consequences for adolescents who become pregnant, for themselves and their children. The 2017 IDHS shows that 7% of girls aged 15-19 years have become mothers and nutritional problems such as stunting and anemia experienced during adolescence affect the health of adolescent mothers and the future generation.

The common nutrition problem in this age group is closely linked to eating habits and inadequate physical activity amongst adolescents. The Indonesian 2015 Global School Health Survey (GSHS) reported that only one third of adolescents aged 13-18 years old always had breakfast, only 3.81% brought packed lunch and more than three quarters of the Indonesian adolescents frequently bought food from street food vendors near their school, ate less than three portions of fruits or vegetables, lacked in physical activities and consume at least one packaged sweet drink per day. The various nutrition problems and eating habits amongst Indonesian adolescents are clear. There is an urgent need to work on an intervention package that works best for Indonesian context because this could be the key for nourishing both our present and future citizens.
Indonesian adolescents are experiencing a double burden of malnutrition that consists of overweight and undernutrition, including micronutrient deficiencies. But the available data in Indonesia rarely depicts problem within the exact age range of 10-19 years old and often reported as 13-18 years old. Moreover, the nutrition problems covered do not include other micronutrient deficiencies than anemia. Inequality between provinces adds to the complexity of Indonesian adolescent nutrition problems, where overweight and obesity are more prevalent in food secure areas while wasting and stunting are more prevalent in food insecure areas. Moreover data has not been disaggregated based on age, sex, marital status, in or out of school, child labour status, in or out of home. Also there is no geospatial mapping that can assist in policy formulation to address inequality and improving cost-effectiveness.

**WHAT CAN BE DONE?**

1. Studies have suggested that micronutrient supplementation among adolescents (predominantly females) can significantly decrease anemia prevalence, which could contribute to increased academic potential, productivity, and better outcomes for adolescent pregnancies, and even more if accompanied by efforts to prevent early marriage. In addition, interventions that improved nutritional status among pregnant adolescents improved birth weight, decreased low birth weight and preterm birth 45. Hence combinations of effective interventions to change behaviors around diet and physical activity levels and behavior change to reduce and prevent adolescent overweight and obesity are needed 37.

2. Nutrition interventions during adolescence would improve quality of life by increasing school performance and productivity to support participation in tasks at home or in the community. Therefore, efforts should be focused on improving dietary intake by implementing appropriate evidence-based interventions that maximize adolescents’ health and wellbeing, while taking into account fairness and adolescent participation.

3. However, implementation of such efforts should be supported by clear and strong policy and high community participation. As highlighted within the global accelerated action for the health of adolescent (AA-HA!), synergies between efforts at structural environment, organization and the community as well as interpersonal and individual is imperative to achieve better adolescent nutrition.
WHAT HAS BEEN DONE?

1

Presidential Regulation No. 42 year 2013 emphasized nutrition as the main stream for development of human resources, socio-cultural, and economic growth22. Likewise, Presidential Regulation No. 83 year 2017 concerning food and nutrition strategic policies23 has stated adolescent nutrition as a key factor. Strategies for cross-ministerial collaboration is also available24 In the “GERMAS” movement, school-based and community-based nutrition programs are an integral part of cross-sectoral campaigns25. A national program for weekly iron and folate acid supplementation (WIFAS) aimed at school going adolescent girls has been launched in 2016, with the target of reaching 30% of school going adolescent girls26. However, both coverage and adherence to WIFAS is still low, but an award-winning demonstration project as shown in the Ministry of Health and Nutrition International (NI)-supported program in West Java has shown the potential when good multi-sectoral collaboration is part of the program.27.

2

School-Based Health Service (UKS) is also present and supported by a joint decree from four ministries, but the UKS performance indicators do not explicitly measure the achievement of nutrition programs28. Similarly, the healthy school canteen indicators do not cover provision of nutritious and diverse food. Routine health screening of student from class VII and class X are in place, but monitoring and evaluation has not been adequate. Likewise, the youth-friendly community health centres or Puskesmas PKPR are still limited in quantity. In addition, the quality of the health services given as well as its accessibility are not well monitored and evaluated. Thus extraordinary efforts should be in place to overcome the barriers for better implementation.

IN AND OUT OF SCHOOL ADOLESCENTS AND THEIR CONTEXT

Schools play a central role in efforts to improve the nutritional status of adolescents29. The BPS data in 2016 showed that more than 70% of adolescents aged 10-19 years are in schools and education is one of the important factors in delaying marriage and first pregnancy. IDHS 2017 shows the median age of marriage increases along with the length of education. Despite the fact that the prevalence of child marriage is decreasing over time, the prevalence is still high. Analysis of the national socioeconomic survey in 2012 showed that 25% of all married women aged 20-24 years old were first married under the age of 18 years30. Thus, school is an important entry point for prevention as well as management of adolescent malnutrition. As an example, various efforts to overcome anaemia through the administration of WIFAS in various countries are school-based31–35 and the commitment of the school community increases program success36–38. One of the best practices of a school-based comprehensive adolescent health initiative is the “Aksu Bergizi” campaign supported by UNICEF in Klaten (Central Java) and East Lombok (West Nusa Tenggara), the intervention package is comprehensive and includes other healthy lifestyle practices. It is also designed to largely depend on the commitment of local leaders and stakeholders at district level.

Community-based efforts should be accessible for out of school adolescents because they are a marginalized and vulnerable group. Revitalization of Posbindu - PTM (Integrated Non-Communicable Disease Development Post), which embraces adolescents as well as Posyandu Remaja (Community Integrated Health Post for Adolescents) are key. However, implementation of both programs is still limited. Strong support from the community health centres, especially those of Youth-Friendly Community Health Centres (PKPR), is imperative. Assistance for quality improvement of the PKPR to provide youth responsive nutrition services should be a priority.

Some adolescents live in pockets of food insecure areas that require different approaches to the areas that have sufficient and sustainable food availability and access. The socio-economic level and the variety of local cultures influence parenting and the adolescent eating patterns. Health, hygiene and sanitation resources and adolescent morbidity are also heterogeneous and can affect the nutritional status of adolescents. While on the flip side, adolescents are also more connected with the global world through the high ownership or use of smartphones. Therefore, nutritional education through social media, especially Instagram and picture messages and short audio-visuals through the WhatsApp network are feasible, effective and are considered by teenagers as attractive and easily accessible39–41. A nutrition focused information campaign for adolescent girls called “The Pretty and Picky” supported by the Global Alliance for Improved Nutrition (GAIN) used these platforms to reach adolescent girls, while the Springster project integrated nutrition messages and content into an existing social media platform. By using social media for health education, adolescents can participate and be active agents in improving their own nutrition status and that of their peers both online and in real life.
Advocacy, program planning, monitoring and evaluation of adolescent nutrition in the future should be built from more specific data and answer to the diversity of the context of Indonesian adolescents. Continuous learning from best practices and barriers for implementation should be done to shape a future approach. The facilitating factors, thus quality of monitoring and evaluation is pivotal in the feedback loop.

The various technical guidelines available for nutrition programs and adolescent health that cover nutrition issues should be utilized more optimally. Stronger and measurable support and commitment from health and cross-sectoral stakeholders is needed for ongoing and future adolescent nutrition policy.

THE WAY FORWARD

- Improvement in dietary practices, physical activity and personal hygiene of all adolescents
- Lowering the prevalence of adolescent anemia, stunting and wasting, as well as reducing overweight and obesity problems
- Improvement in dietary practices, physical activity and personal hygiene of all adolescents
- Improvement in the quality and utilization of adolescent health and nutrition care services
- Increase in access to youth-responsive community-based adolescent health care services
- Support for pregnant adolescents through targeted programs
- Improvement of school performance and decreased absenteeism
- Improvement of the quality of schools' infrastructure to support school based nutrition intervention namely canteen, UKS, availability of clean water and toilets
- Inclusion of nutrition program implementation as an indicator for schools' accreditation system
- Decrease in gendered barriers to school attendance (Menstrual Hygiene Management, latrines, early marriage, delaying first pregnancy)
- Decrease in gendered barriers to health, education and legal labor force
- Increase in the capacity of healthcare workers in nutrition, teachers and peers for nutrition promotion
- Increase in coverage and quality of premarital counselling, by including a nutrition aspect for quality marriage and delaying first pregnancy
- Improvement of adolescents' participation in health promotion with nutrition as a topic of interest.
- Improvement on support and adolescents’ empowerment
- Improvement in coordination between ministries to improve quality of national human resources with special interest to adolescent age group

Needs Analysis for Adolescent Nutrition Intervention Package

- Improvement of the national human resources quality through improving the health and productivity of our present adolescents for safeguarding future generations when these adolescents become parents
- Improvement of access to quality health and education for adolescents will help curb social economic problems both at present and in the future
- Improvement in dietary practices, physical activity and personal hygiene of all adolescents
- Improvement in the quality and utilization of adolescent health and nutrition care services
- Increase in access to youth-responsive community-based adolescent health care services
- Support for pregnant adolescents through targeted programs
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### ROADMAP FOR ADOLESCENT NUTRITION IN INDONESIA

#### Policy Support
- Adolescent Nutrition Indicators in RPJMN
- Presidential and BAPPENAS Strategic Plan to secure funding and cross-sectoral collaboration
- Optimize use of available policies to support Ado Nutrition

#### Direct Beneficiaries
- In-School Adolescents
- Out of School Adolescents

#### Strategies
- Nutrition Education
  - Promotion of Healthy Eating Habit
  - Utilization of Class VII and X health screening data
- Targeted micronutrient supplementation
- Prevention and management of obesity
- Nutrition program for pre-marital and pregnant ados
- Peer educators for nutrition and healthy lifestyle
- Improvement of access and practices of WASH
- Targeted deworming and wasting management
- Social and Behaviour Change Communication

#### Delivery Platform
- Nutrition education and services in school-based health services
- School-based WIFAS
- Healthy and Nutritious school canteen
- "Germas" movement at school
- Breakfast and MyPlate awareness campaign at school
- Integrating all intervention implementation as child-friendly school indicators
- Social media and information and communication technology for nutrition
- Pre-marital counseling to include nutrition and IFA supplementation
- Adolescent social movement on nutrition or eating behaviour

#### Outcome
- Improved breakfast habits
- Improved consumption of fruit & vegetables
- Decreased consumption of sweetened packaged drink
- Increased physical activity and personal hygiene
- Increased coverage and adherence to WIFAS
- Decreased prevalence of anemia in ado girls
- Decreased prevalence of wasting and anemia in pregnant adolescents
- Decreased prevalence of stunting, wasting and anemia in adolescents
- Preventing prevalence of obesity in adolescents

#### Data and Research Gaps
- Disaggregated data for adolescent age groups, sex, education, marital status, labor status and geospatial context
- Research on effective and cost-effective nutrition specific and sensitive interventions for ado nutrition in regards to the diverse socio-economic political and geographical context
- Data on other micronutrient deficiencies

#### Indirect Beneficiaries
- Community
  - Increase School and Community Support
  - Nutrition education and promotion skills for teachers, community leaders and community-based organizations
  - Continuous training on program implementation and M&E
  - Up to date nutrition BCC materials at community health centers / Puskesmas
- Teachers
  - Increase quality and quantity of nutrition health workers
  - Improved quantity and quality of PKPR
- Health Workers
  - Improve capacity of PUSKESMAS in providing nutrition services
  - Improved quantity and quality of nutrition HWsPolicy
- Parents/Family
  - Improved capacity of PUSKESMAS in providing nutrition services
  - Improved quality of program monitoring & evaluation


#### Leading Sector: The Ministry of Health
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