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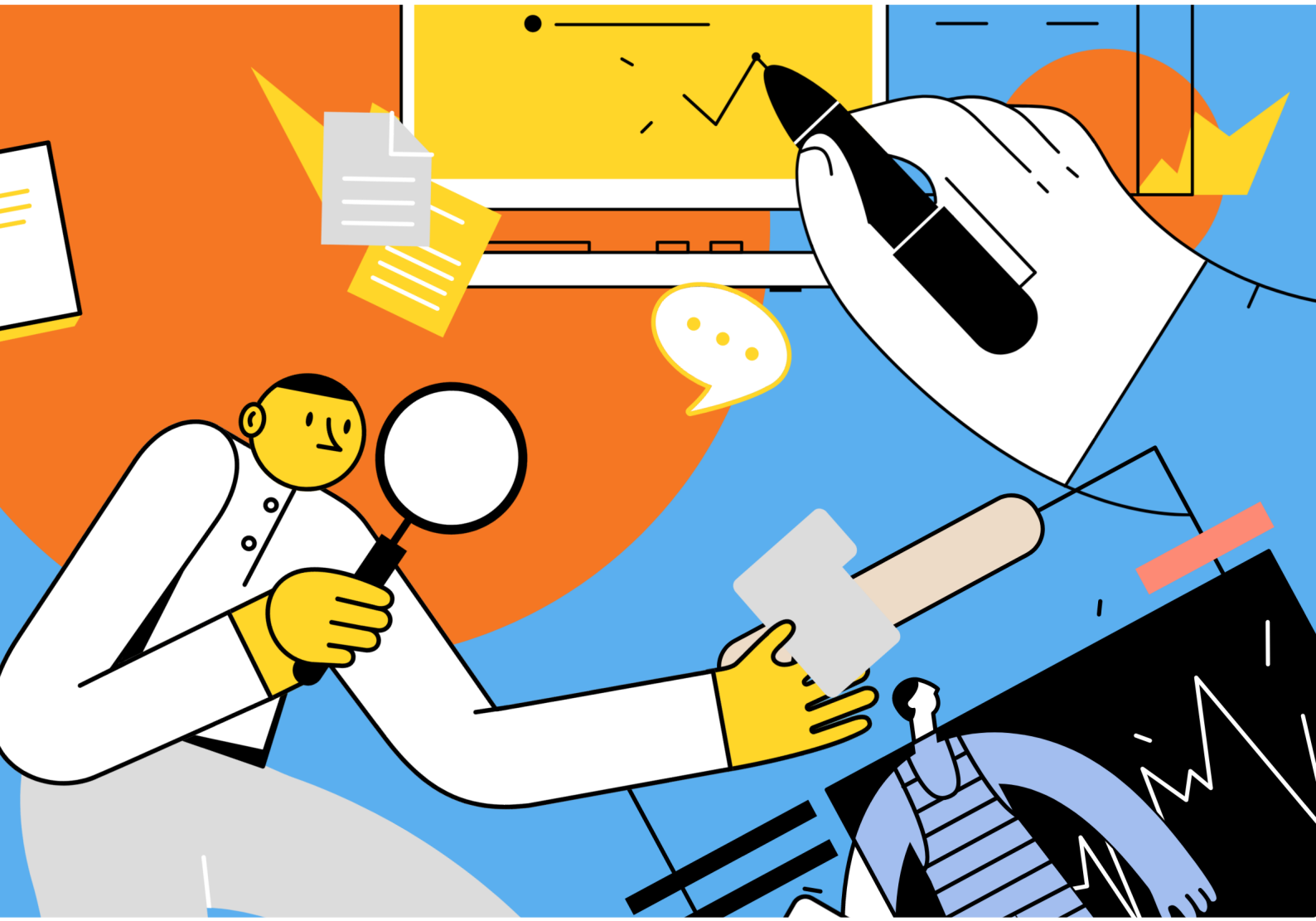

Conducting Sex- and Gender-Based Analysis (SGBA) of Adolescent Health and Nutrition Programs in Indonesia

Hesti Retno Budi Arini, Nurulita Aida Rahmasari
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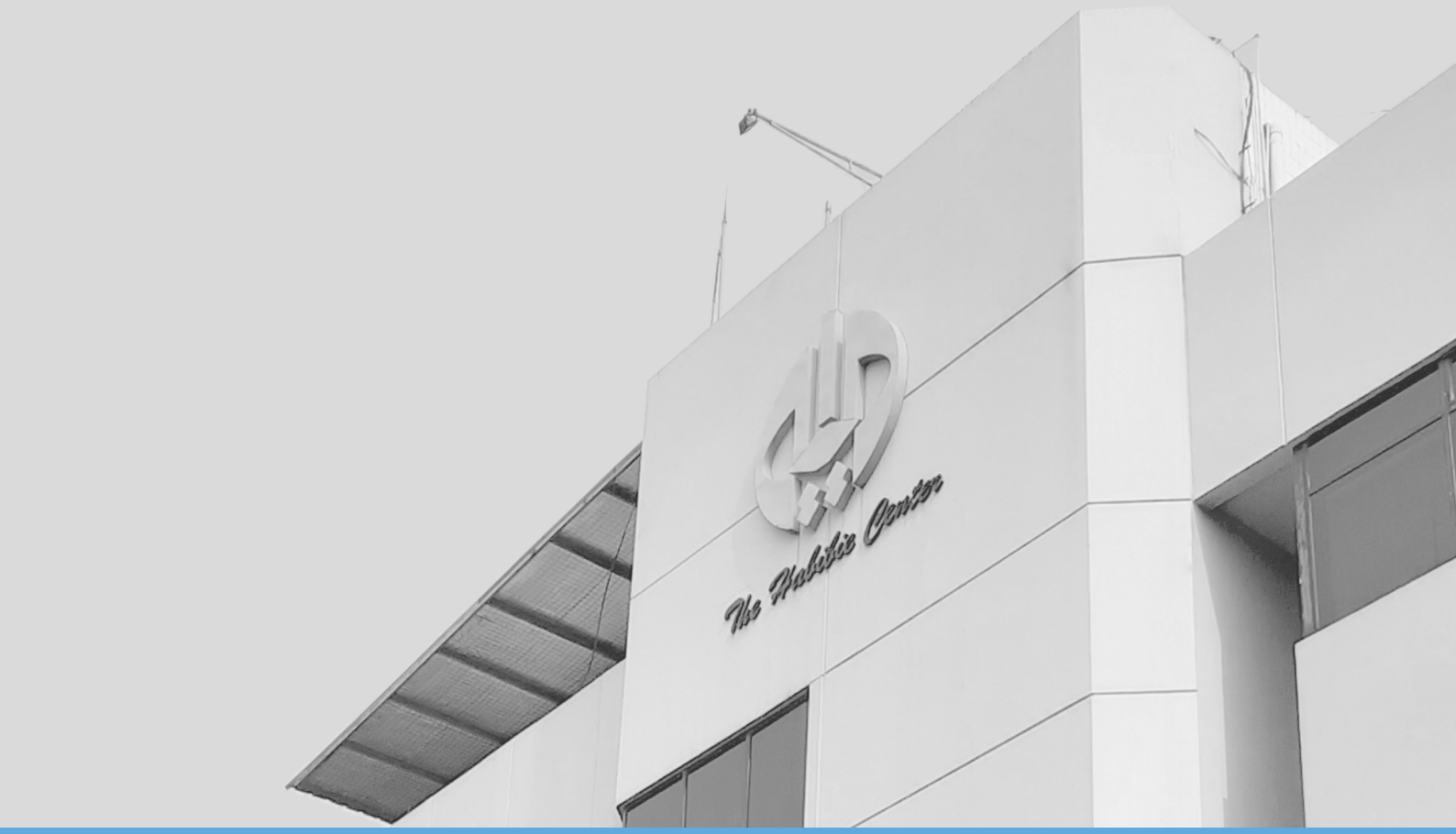

About The Habibie Center

The Habibie Center was founded by Bacharuddin Jusuf Habibie as an independent, non-governmental, and non-profit organization on November 10, 1999. Our vision is to promote the modernization and democratization of Indonesian society based on the morality and integrity of sound cultural and religious values. The missions are:

First, to establish a structurally and culturally democratic society that acknowledges, honors, and promotes human rights.

Second, to promote and advance effective human resources management and the socialization of technology.

Research Report

Conducting Sex- and Gender-Based Analysis (SGBA) of Adolescent Health and Nutrition Programs in Indonesia

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List of Acronyms

AHN	: Adolescent Health and Nutrition
ARG	: *Anggaran Responsif Gender*, or gender-responsive budgeting
ASI	: *Air Susu Ibu*, or breastmilk
BKKBN	: Badan Kependudukan dan Keluarga Berencana Nasional, or national family planning coordinating agency
BKR	: *Bina Keluarga Remaja*, or youth family coaching
BNN	: Badan Narkotika Nasional, or national narcotics agency
Cermin Sehat	: *Cek Rutin Mandiri Kesehatanku*, or routine health self-checking
Cetar	: *Cegah Tanggap Anemia*, or preventing anaemia
COVID-19	: Coronavirus Disease 19
CTPS	: *Cuci Tangan Pakai Sabun*, or handwashing with soap
FGD	: Focus Group Discussion
GAD	: Gender and Development
GAP	: Gender Analysis Pathway
GDI	: Gender Development Index
GEM	: Gender Empowerment Measure
GENRE	: *Generasi Berencana*, or family planning youth cadre
Hb	: Haemoglobin
KCD	: *Kantor Cabang Dinas*, or representative office in district
KTD	: *Kehamilan Tidak Diinginkan*, or unintended pregnancy
MA(N)	: Madrasah Aliyah (Negeri), or (public) Islamic senior high school
MoH	: Ministry of Health
MoU	: Memorandum of Understanding
MOS	: Masa Orientasi Siswa, or student orientation
NCDs	: Non-communicable Diseases
NI	: Nutrition International
OSIS	: *Organisasi Intra Sekolah*, or intra-school student's organization
PIK-R	: *Pusat Informasi dan Konseling Remaja*, or adolescent counselling & information center
PKK	: *Pembinaan Kesejahteraan Keluarga*, or family welfare movement
PKPR	: *Pelayanan Kesehatan Peduli Remaja*, or Adolescent Health Service
Posyandu	: Pos Pelayanan Terpadu, or integrated healthcare post

PPRG	: *Perencanaan dan Penganggaran Responsif Gender*, or gender-responsive planning and budgeting
PUG	: *Pengarusutamaan Gender*, or gender mainstreaming
Puskesmas	: *Pusat Kesehatan Masyarakat*, or community healthcare, referring to primary health care at the subdistrict level
Segani	: *Selasa Cegah Anemia*, or anaemia prevention every Tuesday
SGBA	: Sex and Gender-based Analysis
SD	: *Sekolah Dasar*, or elementary school
SLB	: *Sekolah Luar Biasa*, or school for special needs
SMP(N)	: *Sekolah Menengah Pertama (Negeri)*, or (public) junior high school
SMA(N)	: *Sekolah Menengah Atas (Negeri)*, or (public) senior high school
SMK	: *Sekolah Menengah Kejuruan*, or vocational high school
SRH	: Sexual and Reproductive Health
SUN	: Scaling Up Nutrition
THC	: The Habibie Center
UPF	: Ultra-processed foods
UKS/M	: *Usaha Kesehatan Sekolah/Madrasah*, or School/Madrasah Based Healthcare Unit
UMKM	: *Usaha Mikro, Kecil, dan Menengah*, or micro, small, and medium enterprises
UNFPA	: United Nation Population Fund
UNICEF	: United Nation Children's Fund
WHO	: World Health Organization
WID	: Women in Development
WIFAS	: Weekly Iron and Folic Acid Supplementation (referring to *Tablet Tambah Darah* or TTD)

Preface

Indonesia is a prime example of the triple burden of malnutrition.

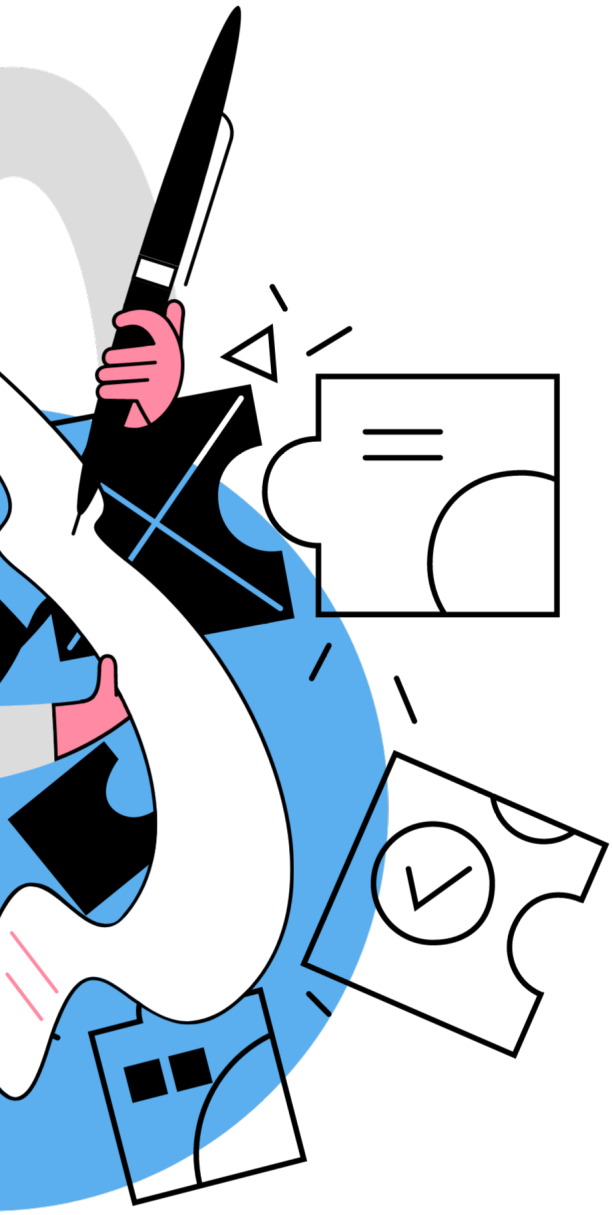
About 1 in 3 children aged under-5 years is stunted, and 1 in 10 children has wasting, while a further 8% are overweight (Rah et al, 2021). Indonesian adolescents are among the hardest hit, with approximately 1 in 4 adolescent girls having anaemia, while nearly 1 in 7 adolescents is overweight or obese (Rah et al, 2021; MoH, 2018). Iron deficiency anaemia among adolescent girls is one of the micronutrient deficiencies contributing to undernutrition problems, such as stunting, while anaemia among children and adolescents will also lead to decreased school performance, loss of productivity and other negative consequences on their health (Nasruddin et al, 2021). Anaemia prevalence in Indonesia is still high, in which 37.1% of adolescent girls and women of reproductive age were anaemic in 2013 and it increased to 48.9% in 2018 (MoH, 2013; MoH, 2018).

Anaemia becomes more prevalent among adolescent girls once they begin menstruation if iron intakes do not increase to meet the increased need. Furthermore, adolescent girls with menses have a higher risk of facing iron depletion compared to girls with no menses, and menstruation has been found to be the main cause of anaemia among nulliparous women (Moschonis et al, 2013; Ofojekwu et al, 2013). On the other hand, social context and cultural factors may also increase the risk of anaemia among adolescent girls due to various traditional customs, including religious norms, and the existing food taboos applied to women, children, and adolescents, as well as poor nutritional education.

Various policies and programs have been carried out by the government to encourage nutrition interventions and anemia management for adolescents, such as the 2020-2024 National Action Plan on Food and Nutrition has been developed. This document comprises a set of actions aiming at improving food availability, accessibility, and utilisation, as well as strengthening food and nutrition governance (National Development Agency, 2021). The government has also implemented this Nutritious Action Program in accordance with Presidential Instruction No. 1 of 2017 concerning the Healthy Living Community Movement (Germas). Civil society organizations in Indonesia have also contributed to promoting nutrition interventions and treating anemia for adolescents. One of them is NI's (Nutrition International) adolescent nutrition program, i.e., Weekly Iron and Folic Acid Supplementation (WIFAS). The program is one of the interventions intended to prevent anaemia among adolescents and to address gender inequality between adolescent girls and boys, particularly in health and nutritional status.

Furthermore, it is important for these policies and programs to prioritize aspects of gender equality in each of their implementations. Understanding gender discrimination and inequality in health and nutrition and their dynamic correlations to other factors in the communities is foundational to developing more comprehensive interventions. An intersectionality approach that considers addressing various factors, such as socioeconomic and demographic status, is required to deal with anaemia among adolescents. Meanwhile, gender equality and women's rights approaches are also fundamental in tackling adolescent health and nutrition (AHN) problems that address public mindsets and attitudes.

The Habibie Center with the support of Nutrition International has conducted in-depth studies to assess and analyses gender issues relevant to Adolescent Health and Nutrition (AHN) in the selected provinces to learn about contextual factors which result in different impacts on boys' and girls' nutrition, and health, well-being as well as their current and future socioeconomic status. This study used a qualitative design with a purposive sampling technique and literature review, interviews, focus group discussion methods. The Habibie Center would like to thank profusely to all parties who have assisted in this study, including our local partners, Anna Henny Talahatu, Eka Pertiwi, Putri Kurniawati, and Vindi Krisna Chandra. We are also grateful for the input and comments on this study report provided by Desiani Rizki Purwaningtyas from Muhammadiyah University of Prof. Dr. Hamka and NI's team.



Executive Summary

This report described the results of "Sex and Gender-Based Analysis of Adolescent Health and Nutrition Programs in Indonesia" conducted by The Habibie Center (THC). This study assessed and analysed gender issues relevant to Adolescent Health and Nutrition (AHN) in the selected provinces to learn about contextual factors which result in different impacts on boys' and girls' nutrition, and health, well-being as well as their current and future socioeconomic status (i.e., gender roles and their status within households, income levels, control over assets), participation and decision-making, access to nutrition information and services, and other intersecting vulnerabilities.

This study also analysed NI's current program of adolescent nutrition in Indonesia to identify opportunities for stronger gender- responsive programs and see impacts of current program. Furthermore, this study examined gender barriers, lessons learned, as well as key entry points that proved well in previous AHN programs. Lastly, this study also identified potential opportunities, risks and enablers and provides recommendations for developing short- and long-term strategies to tackle health and nutrition problems as well as promote gender equality and girls' and women's empowerment. This study applied a qualitative design with a purposive sampling technique. We interviewed 101 informants across the study locations, of which 36 central and local government representatives were interviewed online and the other 65 informants were interviewed in person. We also conducted FGD with 64 parents and students. There were 56 male and 109 female participants of this study. This study also targeted sixteen junior and senior high schools (SMP and SMA) from four cities/districts, namely Cilegon City, Bogor City, West Bandung District, and Kupang District.

Key Findings

Government policies and programs

- Compared to the previous national action plan, the current National Action Plan on Food and Nutrition starts considering gender equality as an important approach in designing and implementing food and nutrition actions. Improving adolescent health and nutrition has been part of Indonesia's ambition to reduce stunting, as reflected in the 2020-2024 National Development Plan and National Action Plan on Food and Nutrition covering nutrition and reproductive health programs and policies. The national nutrition programs include weekly iron and folic acid supplementation (WIFAS, or Tablet Tambah Darah or TTD) for adolescent girls, and nutrition and health education, which are delivered at community healthcare (i.e., Puskesmas or primary health care at the subdistrict level) and schools.
- Gender equality perspectives have also been observed in the government systems and structures, followed by the Local Development Plan which includes inclusive and gender-responsive development action. For example, the National Development Policy has stated that gender mainstreaming should not stop only from producing gender-responsive policies, but it is also necessary to make sure that women are equally treated across the development sectors and protected from any type of violence to improve their well-being and economic empowerment.
- Family planning, child protection, and women empowerment programs in many Indonesian regions are combined under one agency, known as the Local Agency of Women Empowerment, Child Protection, Population, and Family Planning. Thus, some programs may share similar themes around gender equality and reproductive health.

Findings from the education sector

- All participating schools have implemented programs or activities to improve the health quality of students to varying degrees. There are five major health programs and activities implemented in the school environment, such as WIFAS, school lunch recommendation, nutrition and health education, and health services in schools through School Health Unit (UKS/M), the Adolescent Counselling and Information Centre or PIK-R as a place for Family Planning youth cadres (GENRE), and vaccination/immunizations and health screening.
- This study has captured the varied implementation of health programs and activities in schools. Regarding WIFAS program, the change during COVID adaptation of consuming iron supplementation/tablets at home once weekly (or during school closure) to consuming it directly at school has resulted in an increase in adherence to weekly iron and folic acid supplementation in school among adolescent girls, as was seen pre-COVID. A consideration is that girls who are out

of school will need more support for adherence if they are not being reached through a routine weekly contact point.

- Involvement of female students in iron tablets distribution as peer supporters at school, may give benefits as the students feeling more comfortable and not confused because they gain knowledge and understanding from their peers at school.
- The school lunch recommendation as part of Aksi Bergizi program has not been evenly implemented in schools in the four regions due to different challenges. School lunch recommendation implementation is likely to be successful through strict supervision of the school head and teachers. On the other hand, several schools that have started implementing school lunch recommendation about determining healthy diets, leading to unclear benefits of the program on improving students' diet quality at school. Nevertheless, the healthy canteen implementation in several schools has supported healthy diet promotion through the school's efforts to maintain and ensure that the foods and snacks sold are healthy and nutritious. In practice, female students are more likely to participate in these activities, while male students are often embarrassed to bring food and they might comment on each other's food.

Findings from the health sector

- Boys and girls may have distinct patterns and preferences when it comes to accessing health information. The study revealed that information seeking is done through several channels including the internet, parents, teachers, and community health workers. However, the type and extent of health information may be influenced by gender norms and communication patterns within families.
- Parental influence plays a significant role in providing health information to both boys and girls. In terms of information regarding puberty and reproductive health, parents and family are still the main guidance sources for adolescents. However, girls were more exposed to sexual and reproductive health information from their parents compared to boys.
- The community health programs in this study were supported by collaborative efforts involving nutritionists, adolescent program coordinators, and community health workers at Puskesmas. The community health programs might also be supported by various cadres who play a significant role in youth engagement, such as Adolescent Integrated Health Post cadres, Duta Saka or Duta Sehat, and PKK (Family Welfare Movement). The collaboration is also extended to schools, where most of the adolescent health programs are conducted and adolescent cadres have also been introduced as peer counsellors.
- Community health care has a higher representation of female staff members, although the exact number of male or female staff was not specified in this study. Some programs, e.g., "Duta Sehat" or Health Ambassadors, both male and female representatives are required from each program area. The composition of youth cadres at school varies, but it is predominantly female. Boys generally prefer speaking to male youth cadres, while girls tend to engage more in searching for health information, regardless of the cadres' gender.

Gender norms and practices

- Most parents and adolescents from district/rural areas either never heard of or do not understand gender as well as gender equality terms. Despite the unfamiliarity of most rural adolescents with gender terms, the gender concept still emerged when they explained the role of family members, especially husband-and-wife responsibilities. Women's participation in decision-making processes at the village, sub-district, or district level is also being recognized. Meanwhile, most of the study participants stated that boys and girls have equal rights to pursue higher education as well as their goals, and this view was likely to be influenced by parents' and adolescents' better education.
- On the other hand, this study still found that there are adolescent girls and young women who experienced early marriage with older men. Some girls even get married while they are still in elementary school. Study participants also revealed several reasons behind the decision to leave school, such as economic factors and early pregnancy.
- This study found that unintended pregnancy among adolescent girls is a critical issue in Kupang District, and most cases are observed among unmarried adolescent girls. In some cases, unwanted pregnancy was due to rape committed by family members living with adolescent girls in the same house.
- Decisions on household matters are predominantly made by mothers despite the family being female single-headed or not. In the men-headed family, fathers are positioned as the main income earner and supported by mothers as caretakers of the family. Household matters, including domestic chores, are perceived as a women's working area, of which women have more authority.
- Management of financial resources, typically come from wage earned by parents, are varied. At least two types of financial management emerged in this study. The first type is where mothers have full responsibility to manage all resources in the family. In this management type, fathers, as the main earner, will give all the monthly income to mothers to be used for daily needs as well as bigger purchases, such as education, vacation and health. In the second type, fathers and mothers share the responsibility of managing financial resources. Fathers will commonly handle big purchases, such as education and monthly groceries, while mothers will be in charge of smaller daily spending, such as daily food purchases and children's pocket money. In the women-headed family, mothers will take full responsibility for earnings as well as financial and household management. In this type of family, adolescents are typically involved in managing the household, especially the older ones regardless of gender.

Recommendations

In order to support gender mainstreaming within adolescent health and nutrition programs, we propose a set of recommendations as follows.

Central government

- Continuing gender mainstreaming efforts (i.e., PUG and PPRG). The Ministry of Women Empowerment and Child Protection and other relevant ministries can collaborate on mainstreaming gender and budget tagging, particularly on adolescent health and nutrition programs.
- Considering sexual and reproductive health (SRH) education and other gender-responsive programs to be delivered at different types of schools. The Ministry of Health, Ministry of Education and Culture, and Ministry of Religious Affairs might consider delivering SRH education and gender-responsive programs in different mechanisms depending on the school's nature. For example, SRH education at School for Special Needs might also need further education for parents/caregivers, while SRH education at other schools can be delivered separately between female and male students to increase their participation, particularly male students.
- Evaluating current policies for child marriage prevention, e.g., reconsidering the effectiveness and impact of granting "dispensasi nikah", as well as other preventive policies. Preventing child marriage and early pregnancies might not only be beneficial for adolescents' health and economics, but it might also help stunting prevention, considering adolescent pregnancy is key contributor to stunting.

Local government

- Initiating multisectoral collaborations to support gender-sensitive AHN programs, e.g., MoU between the district/city health office and the district/city education office in terms of WIFAS, Aksi Bergizi, or other programs requiring collaboration.
- Introducing gender mainstreaming attempts to a wider society, e.g., schools, Puskesmas, and other communities. These attempts can help address health-related gender inequality issues affecting adolescent health and nutritional status, e.g., child marriage, early pregnancy, body image perception, and poor dietary patterns, and can highlight benefits of improved healthy lifestyle practices.
- The district/city health office might need to strengthen coordination with Puskesmas and schools about adolescent health programs, e.g., ensuring the distribution of iron supplements to support WIFAS, improving the availability of healthcare facilities within UKS/M, attempting to better health service provision for out-of-school girls with the help of health cadres in the community, and implementing better monitoring of equipment and healthcare facilities for adolescents both in and out of school.

Community, e.g., Puskesmas and schools

- Ensuring an adequate supply of health facilities and logistics across Puskesmas and schools.
- Establishing more adolescent-integrated health posts with more health and nutrition programs for both adolescent boys and girls, including out-of-school adolescents.
- Identifying different contexts and motivations in accessing health services and information, e.g., adolescent boys and girls might have interests in different health and nutrition topics, so accommodating this difference might help in increasing the use of health services and attracting more adolescents to health and nutrition education.
- Building the capacity of adolescent health cadres by involving community leaders, the Family Welfare Movement (PKK), and other community groups focusing on adolescents.
- Improving school health programs, such as SRH education, including menstrual health, mental health program, and school lunch recommendation, as well as accounting for measures to improve equity in accessing programs
- Increasing parental involvement by socialising the program and communicating related issues, e.g., the importance of nutritious foods and other health programs at school.
- Healthcare services and nutrition programs should consider the specific needs and gender preferences of each adolescent group. It is crucial to actively involve adolescents in planning and designing the programs to ensure that the programs will accommodate their unique requirements.

Parents/caregivers and adolescents

- Ensuring adequate parental supervision (e.g., social media use) and parental involvement in general (e.g., supporting adolescents in terms of SRH and mental health issues). This study has highlighted the importance of parents-adolescent communication to support adolescent health as well as protect adolescents from social and gender-related issues.
- Implementing gender equality concepts in daily life (e.g., distributing domestic chores equally between boys and girls, providing adequate foods to support adolescent growth regardless of gender) as parents/caregivers will be adolescents' role models in understanding gender equality.
- Parents and adolescents can collaborate to promote and maintain healthy lifestyles and balanced diets at home and understand potential of adolescents to benefit from improved diet and lifestyle practices.
- Accounting for healthy and balanced diets in providing food for adolescents and other family members and WIFAS for adolescent girls to fill iron gap.

NI and potential partners

- Initiating and advocating gender-responsive AHN programs, e.g., nutrition education, SRH and mental health programs, as well as ensuring gender equity in accessing the programs.
- Providing technical support for gender mainstreaming in AHN programs through technical guidance, capacity building and other forms of assistance.
- Evaluating the existing programs in collaboration with the government, e.g., the implementation of school lunch recommendation program in poor areas, seeking solutions for program improvement, and identifying opportunities to increase opportunities for equity in access and to support adolescents' empowerment.
- Promote gender equality and girls' and women's empowerment through NI's AHN programs.

Introduction

Indonesia ranked 92 out of 146 countries with a global gender gap index of 0.697 in 2022 (World Economic Forum, 2022). Despite the increased subindexes of economic participation and educational attainment, Indonesia still needs improvement in the health sector, as shown by the health and survival subindex score of 0.169 (World Economic Forum, 2022). Maternal mortality deaths were still high with 177 deaths per 100,000 live births last year (World Economic Forum, 2022). Furthermore, Indonesia's Gender Development Index (GDI) was 91.63 in 2022, which was based on healthy life expectancy, education participation, and income level (Statistics Indonesia, 2023). Meanwhile, the Gender Empowerment Measure (GEM) was 76.59 last year, comprising gender representation in parliament, decision-making, and income distribution (Statistics Indonesia, 2023). However, early marriage and gender violence cases were still found among women, and the rights of reproductive autonomy were considered uneven (World Economic Forum, 2022).

Indonesia is a prime example of the triple burden of malnutrition. About 1 in 3 children aged under-5 years is stunted, and 1 in 10 children has wasting, while a further 8% are overweight (Rah et al, 2021). Indonesian adolescents are among the hardest hit, with approximately 1 in 4 adolescent girls having anaemia, while nearly 1 in 7 adolescents is overweight or obese (Rah et al, 2021; MoH, 2018). Iron deficiency anaemia among adolescent girls is one of the micronutrient deficiencies contributing to undernutrition problems, such as stunting, while anaemia among children and adolescents will also lead to decreased school performance, loss of productivity and other negative consequences on their health (Nasruddin et al, 2021). Anaemia prevalence in Indonesia is still high, in which 37.1% of adolescent girls and women of reproductive age were anaemic in 2013 and it increased to 48.9% in 2018 (MoH, 2013; MoH, 2018). NI's adolescent nutrition program, i.e., Weekly Iron and Folic Acid Supplementation (WIFAS) is one of the interventions intended to prevent anaemia among adolescents and to address gender inequality between adolescent girls and boys, particularly in health and nutritional status.

Iron deficiency anaemia among adolescent girls is a significant public health problem, yet it is still underemphasized (Cooke et al, 2017). Iron deficiency anaemia may be caused by inadequate dietary intake of iron and other micronutrients required to support iron absorption, such as folate, vitamin C. High consumption levels of anti-nutrients may also hinder iron absorption, which results in low haemoglobin levels. Iron depletion is also associated with high consumption of fast foods containing high sugar, high fat and low nutrient, and low consumption of fruits, vegetables, legumes and meat and poultry, while iron deficiency and resulting fatigue are common among young women with heavy menstrual bleeding (Moschonis et al, 2013). Anaemia becomes more prevalent among adolescent girls once they begin menstruation if iron intakes do not increase to meet the increased need. Furthermore, adolescent girls with menses have a higher risk of facing iron depletion compared to girls with no menses, and menstruation has been found to be the main cause of anaemia among nulliparous women (Moschonis et al, 2013; Ofojekwu et al, 2013). The adolescent girls' negative body image and intention to manage their ideal body weight through extreme diets and restricted eating may also result in poor dietary intake and an increased risk of anaemia (Nasruddin et al, 2021). Meanwhile, low consumption of meats, lack of household latrine use, and problems related to transferrin receptors may also increase anaemia odds in adolescent boys (Ford et al, 2022). Social context and cultural factors may also increase the risk of anaemia among adolescent girls due to various traditional customs, including religious norms, and the existing food taboos applied to women, children, and adolescents, as well as poor nutritional education. However, no available study focuses on gender discriminatory practices in terms of food consumption among Indonesian adolescents.

Understanding gender discrimination and inequality in health and nutrition and their dynamic correlations to other factors in the communities is foundational to developing more comprehensive interventions. An intersectionality approach that considers addressing various factors, such as socioeconomic and demographic status, is required to deal with anaemia among adolescents, Meanwhile, gender equality and women's rights approaches are also fundamental in tackling adolescent health and nutrition (AHN) problems that address public mindsets and attitudes. For instance, menstrual leave or break for female students; family education related to girls' rights when having menstruation in which they need to have some rest, access to pain management if needed, continue to eat good food, and to be enabled to maintain their desired level of participation in school, recreation and other social activities. Thus, this sex- and gender-based analysis was conducted to analyse the gender equality issues relevant to AHN in the selected provinces, assess NI's current programs for adolescent nutrition in Indonesia, and identify potential challenges and opportunities for developing strategies that will promote gender equality and girls' and women's empowerment through NI's AHN programs.

1.1 The context of the study location

Indonesia is an archipelagic country comprising more than 13,000 islands occupied by at least 250 million people. The western part of Indonesia, including Java and Sumatera, is considered more developed than other islands in the eastern region. However, the development gaps among urban and rural populations also occur across the country. The government is divided into central and local government, of which the latter consists of provincial, city, and district government. This sex- and gender-based analysis was conducted in two districts and two cities under three different provinces located in Java and Timor islands, i.e., Cilegon City in Banten Province, Bogor City and West Bandung District in West Java Province, and Kupang District in East Nusa Tenggara Province.

1.1.1. Cilegon

Cilegon is a major coastal industrial city in Banten Province, the northwest coast of Java Island. The city had a population of 434,896 in the 2020 Census. Cilegon is an industrial area where Krakatau Steel Company, one of Indonesia's vital companies, produces steel for industrial (domestic and foreign) needs. Cilegon City is divided into eight subdistricts (kecamatan), but this study only focused on two subdistricts, namely Cibeber and Grogol. Cibeber is the eastern part of Cilegon, an urban area with a fairly dense population. Meanwhile, Grogol subdistrict area is land jutting into the sea and hills, with many large factories that can be found alongside the roads. Approximately 22,000 adolescent girls lived in Cilegon, with 82% of them already receiving WIFAS through their school in 2021 (Cilegon Health Office, 2022). In terms of gender equality, Cilegon had a GDI of 87.57% and a GEM of 51.30% in 2022 (Statistics Indonesia, 2023).

1.1.2. Bogor

Bogor city lies in West Java Province, and it consists of 6 subdistricts, namely South Bogor, North Bogor, East Bogor, West Bogor, Central Bogor and Tanah Sareal, which cover 68 villages. The total area of Bogor City is around 11,850 hectares covering 0.27% of the area of West Java province. As one of the urban areas, the population density of the city of Bogor is high, occupied by 6,662 inhabitants. The highest density is in the Central Bogor subdistrict, which is 11,770 people/km^2 and the lowest is in the South Bogor subdistrict, 5,019 people/km^2. In 2021, Bogor had around 172,533 adolescents. This number is equal to 16-17% of the city's total population (Statistics Indonesia Bogor City, 2021). There is no data on anaemia prevalence available for this city. However, a study at four middle schools in Bogor found that 20.9% of adolescent girls were anaemic (Permatasari, 2020).

1.1.3. West Bandung

West Bandung has 16 subdistricts with two of them selected for this study, namely Sindangkerta and Saguling. Sindangkerta subdistrict has 11 villages, with an area of 120.51 km^2. In every village in Sindangkerta subdistrict, there are elementary schools (SD) and junior high schools (SMP). There are three villages that do not have a Senior High School (SMA), namely Mekarwangi Village, Wangunsari Village and Rancasenggang Village, but only two villages have Vocational High Schools (SMK) namely Mekarwangi Village and Cikadu Village. However, no university or hospital is available in this subdistrict. Meanwhile, Saguling subdistrict has 6 villages with an area of 51.46 km^2. Most educational facilities ranging from elementary to high school level are located in Saguling Village. The number of adolescents in West Bandung was 311,565 in 2021 (Statistics Indonesia West Bandung District, 2021), with at least 68% of adolescent girls being anaemic (West Bandung Education Office, 2020). The GDI of West Bandung was 79.69%, while the GEM was 65.32% in 2022 (Statistics Indonesia, 2023).

1.1.4. Kupang

Kupang District is located in East Nusa Tenggara Province, surrounding Kupang City, the province's capital. Kupang District is Indonesia's southernmost district with an area of 5,431.23 km^2. This district has a tropical and dry climate with low rainfall, some active rivers, and mountainous areas. Its area is bordered by the Indian Ocean in the south, Sawu Sea in the north, and other East Nusa Tenggara districts and Timor Leste in the west and east, respectively. The topography of Kupang District has also led to some socioeconomic and physical isolations due to the limited infrastructure and the high-cost transportation. This district is divided into 24 subdistricts, and this study only focused on West Kupang and Amarasi subdistricts. The population of Kupang District is around 370,000, with at least 50% of the population aged ≤20 years. The anaemia prevalence among girls aged 5-14 years was 26.4% and at least 18% of girls aged 15-24 years were anaemic (Gasong et al, 2019). Several health education programs were delivered to youth aged 15-24 years, comprising information on reproductive health, family planning, and HIV/AIDS (Statistics Indonesia East Nusa Tenggara, 2022). The GDI of Kupang was 88.27%, while the GEM was 64.44 % in 2022 (Statistics Indonesia, 2023).

Methodology

This research used a qualitative design with a purposive sampling technique. The selection of subjects was based on several inclusion criteria for each group of key informants in conducting interviews and focus group discussions (FGD). The research started with a set of online interviews (i.e., virtual conversations) with ministries and agencies as parts of the central government. It was later followed by interviewing local governments of the selected districts across the three provinces, i.e., Cilegon in Banten Province, Bogor and West Bandung in West Java Province, and Kupang in East Nusa Tenggara Province. Those three provinces were selected by considering 1) WIFAS coverage among adolescent girls; 2) Child and adolescent nutrition and health issues (e.g., stunting and anaemia); and 3) The availability of NI's support in those provinces. Two subdistricts (see Table 1) were selected from each district/city by accounting for 1) WIFAS coverage among adolescent girls; 2) Child and adolescent nutrition and health issues (e.g., anaemia and stunting prevalence); 3) Best practices in adolescent nutrition interventions; 4) suggestions from local health practitioners, and 5) The availability of NI's support in those subdistricts.

Table 1. Study location

District/City and Province	Subdistrict
Cilegon City, Banten Province	Cibeber and Grogol
Bogor City, West Java Province	Tanah Sareal and South Bogor
West Bandung District, West Java Province	Sindangkerta and Saguling
Kupang District, East Nusa Tenggara Province	West Kupang and Amarasi

The field data collection consisted of 1) interviews with health workers at Puskesmas (community healthcare), community leaders and/or representatives, teachers and/or heads of schools, and 2) FGD with adolescents and their parents/caregivers. A separate focus group with out-of-school adolescents was not conducted due to the limited number and difficulties in reaching this population. Instead, information on out-of-school adolescents was obtained from other informants, e.g., teachers and community health workers. Two Puskesmas at the subdistrict level were selected from each district/city, and two schools were selected from each subdistrict where the Puskesmas is located. Thus, there were eight Puskesmas and 16 schools included in this study. The schools included diverse levels and characteristics, i.e., public and private junior high schools, senior high schools, vocational schools, and religion-based schools (i.e., madrasah and Islamic boarding schools). Teaching representatives from School for Special Needs (i.e., SLB) were also interviewed in this study. Each interview was conducted for 60 minutes while each FGD ranged from 60 to 120 minutes, which were also recorded. The detailed information of selected informants is presented in Table 2.

Table 2. The selection criteria of informants and FGD participants

Level	Criteria
The central government, including: 1. National Development Agency 2. Ministry of Women Empowerment and Child Protection 3. Ministry of Education, Culture, Research, and Technology 4. Ministry of Religious Affairs 5. Ministry of Villages, Development of Disadvantaged Regions, and Transmigration 6. Ministry of Health 7. National Population and Family Planning Board	Inclusion: The policyholders at National Level related to: • Nutrition and health • Gender equality • Education • Child protection Exclusion: Not willing to be interviewed

Provincial and district/city government, including: 1. Department of Health/Local Health Office 2. Local Planning Agency 3. Agency of Women Empowerment, Child Protection, and Family Planning 4. Department of Education and Culture/Local Education Office	Inclusion: The policyholders at National Level related to: • Nutrition and health • Gender equality • Education • Child protection Exclusion: Not willing to be interviewed
Community, including: 1. PKPR representatives, Puskesmas staff 2. Teachers, head of school 3. Village head/Head of subdistrict, Representative of Family Welfare Agency (PKK), Youth Posyandu's Cadres, community leaders 4. Female and male students with their parents/caregivers	Inclusion: The parts of the community concerned with: • Nutrition and health • Gender equality • Education • Child protection Exclusion: Not willing to be interviewed

We interviewed 101 informants across the study locations, of which 36 central and local government representatives were interviewed online and the other 65 informants were interviewed in person. We also conducted FGD with 64 parents and students. Detailed information on the number of informants and FGD participants is presented in Table 3. The qualitative data obtained from both key informant interviews and FGDs were transcribed (verbatim) and analysed using thematic analysis. This analysis technique consisted of three stages namely coding text, generating descriptive themes and developing analytical themes. These themes helped to find and categorise the obtained information, as well as to identify the gaps and to propose the required strategies. The analysis was continued by writing the findings in a narrative way considering the socio-ecological model in gender studies.

Table 3. Number of key informants and FGD participants

Level and location		Male	Female
Central government		3	7
Provincial government	Banten	-	3
	West Java	2	2
	East Nusa Tenggara	1	3
Local government	Cilegon City	2	2
	Bogor City	2	2
	West Bandung District	2	2
	Kupang District	1	3
Community health care	Cilegon City	-	4
	Bogor City	2	2
	West Bandung District	1	3
	Kupang District	-	4
Community leaders and representatives	Cilegon City	-	4
	Bogor City	2	2
	West Bandung District	1	3
	Kupang District	3	1
School	Cilegon City	2	6
	Bogor City	1	7
	West Bandung District	3	5
	Kupang District	5	3
FGD participants – parents	Cilegon City	-	8
	Bogor City	2	6
	West Bandung District	3	5
	Kupang District	2	6
FGD participants – students	Cilegon City	4	4
	Bogor City	4	4
	West Bandung District	4	4
	Kupang District	4	4
	Total	**56**	**109**

Findings

3.1. Government policies and programs

3.1.1. Policies and programs of central government

Following the 2020-2024 National Development Plan, the 2020-2024 National Action Plan on Food and Nutrition has been developed. This document comprises a set of actions aiming at improving food availability, accessibility, and utilisation, as well as strengthening food and nutrition governance (National Development Agency, 2021). This action plan has been in line with the National Strategy on Gender Mainstreaming (see Section 3.1.2), and the gender dimension strengthening for food and nutrition security has been initiated across involving ministries and agencies (Ali, 2021). Gender dimension strengthening has been integrated into four actions, as shown in Table 4. The action plan has also recognised that gender equality is associated with nutrition in empowering women to get their rights for a better quality of life, obtain adequate nutrition and food intake, and attain better job opportunities to support the country's development (National Development Agency, 2021).

Table 4. Summary of the gender-related action plan on food and nutrition

Action	Indicator	Examples of Food and Nutrition Targets	Involving Ministries
Building capacity in terms of gender mainstreaming and gender-responsive budgeting among central and local government institutions that are responsible for food and nutrition issues	Modules or guidelines for the implementation of stunting reduction interventions at the local level (i.e., districts or cities), which contain gender mainstreaming and gender-responsive budgeting actions The number of ministries/ agencies involved in education, health, and family development sectors which increase their capacity in gender mainstreaming and gender-responsive budgeting	1. Sex-disaggregated stunting prevalence of 14% and wasting prevalence of 7% 2. Desired dietary pattern score of 95.2	1. Ministry of Women Empowerment and Child Protection 2. Ministry of Finance 3. Ministry of Home Affairs 4. National Development Agency
Building the capacity of women's organisations in supporting household food and nutrition security	The number of provinces that provide capacity-building programs for community organisations in terms of gender mainstreaming and child rights mainstreaming	1. Sex-disaggregated stunting prevalence of 14% and wasting prevalence of 7% 2. Desired dietary pattern score of 95.2	1. Ministry of Women Empowerment and Child Protection 2. Ministry of Finance 3. Ministry of Home Affairs 4. Ministry of Agriculture
The improved women's roles in the implementation of limiting discretionary foods, increasing physical activity, and early detection of non-communicable diseases (NCDs)	The number of local women's organisations that benefit from capacity-building programs for healthy lifestyle movement, and obesity and NCDs management	1. Sex-disaggregated obesity prevalence among those aged >18 years (up to 21.8%)	1. Ministry of Health 2. Ministry of Home Affairs 3. Ministry of Education and Culture 4. Scaling Up Nutrition (SUN) Network
Developing social monitoring mechanisms by women's organisations, community organisations, and media for policies regulating exclusive breastfeeding, infant formula, and related products	The documents containing social monitoring mechanisms conducted by women's organisations, community organisations, and media for policies regulating exclusive breastfeeding, infant formula, and related products	1. Sex-disaggregated stunting prevalence of 14% and wasting prevalence of 7% 2. Desired dietary pattern score of 95.2	1. Ministry of Health 2. Ministry of Home Affairs 3. Scaling Up Nutrition (SUN) Network

The current National Action Plan on Food and Nutrition has recently integrated gender concepts by considering the intersectionality between health, nutrition, gender, education, and other socioeconomic factors (National Development Agency, 2021). Compared to the previous national action plan, the current plan starts considering gender equality as an important approach in designing and implementing food and nutrition actions. The action plan has considered the different nutritional requirements across sex, age, and other related factors, mainly among women and girls. The potential influence of gender roles and responsibilities to influence nutritional requirements has also been addressed in this document by acknowledging that gender inequality can serve as a determinant of malnutrition. Gender inequality might limit women's and girls' access to education, employment opportunities and food security, which can lead to poor health status. Gender inequality can also hinder women and girls from participating and receiving the benefits of nutritional interventions, which can lead to the decreased effectiveness and efficiency of the interventions.

Improving adolescent health and nutrition has been part of Indonesia's ambition to reduce stunting, as reflected in the 2020-2024 National Development Plan and National Action Plan on Food and Nutrition covering nutrition and reproductive health programs and policies. The national nutrition programs include weekly iron and folic acid supplementation (WIFAS, or Tablet Tambah Darah or TTD) for adolescent girls, and nutrition and health education, which are delivered through community healthcare and schools. In terms of schools, Indonesia operates public schools under the Ministry of Education and Culture, religious schools (i.e., Madrasah) and Islamic boarding schools (i.e., Pesantren) both under the Ministry of Religious Affairs. The fact that most of many adolescents' times is spent at school requires collaboration between health and education sectors, mainly the Ministry of Health, Ministry of Education and Culture, and Ministry of Religious Affairs at the national level. The school enrolment rate for girls aged 13-15 years was 92.47% and for boys was 91.78%, while the school enrolment rate for girls aged 16-18 years was 87.85% and for boys was 83.24% (Statistics Indonesia, 2023). However, girls who are out of school do not have equitable access to nutrition and health interventions. The Ministry of Health has also extended its programs to other organisations, such as orphanages, detention centres, and integrated healthcare posts, aiming at reaching more adolescents who are not enrolled in formal education.[1]

The other program at the school level is Aksi Bergizi, which was initiated in 2017 (UNICEF, 2019). This program comprises WIFAS and free breakfast at school, multisectoral nutrition education (i.e., collaborative nutrition education between schools and community healthcare), and comprehensive social behavioural communication change interventions to promote healthy eating and physical activity improvement among adolescents. The implementation of Aksi Bergizi is integrated with the school health unit (i.e., Usaha Kesehatan Sekolah/Madrasah or UKS/M), which is the main national policy aimed at nutrition and health improvement at school.

1 Interview with Directorate of Maternal and Child Health, Ministry of Health, January 2023

Aksi Bergizi has been conducted in several schools across 12 priority provinces of stunting reduction, including West Java, Banten, and East Nusa Tenggara, and this program is expected to be implemented nationally.

As part of the stunting reduction policy, sexual and reproductive health modules are also delivered to adolescents, mainly coordinated by the National Population and Family Planning Board. The National Population and Family Planning Board has prepared sexual and reproductive health modules with different information for each adolescent age group.[2] The *Berani* module is intended for those aged 10-14 years and mainly discusses the different reproductive organs between female and male individuals and simple reproductive healthcare. Through this module, adolescents are also encouraged to speak up when they face or experience sexual harassment. The *Beraksi* module is delivered to adolescents aged 15-19 years, covering both the function of the reproductive system and signs of puberty. The *Berkolaborasi* module is intended for those aged 20-24 years, comprising information on sexual activities and family planning, of which this module is also given to married adolescents aged 18 years. These modules have been introduced across Indonesian provinces; however, the use of these modules has not been reported yet by the informants of this study at the local level.

Adolescent health education is also managed by the National Population and Family Planning Board, mainly through their programs namely the Adolescent Counselling and Information Centre (i.e., Pusat Informasi dan Konseling Remaja or PIK-R) and the Youth Family Coaching (i.e., Bina Keluarga Remaja or BKR). A number of students are trained to be a peer-educator at their school, considering the openness of adolescents to their peers rather than older individuals. The peer educators will not only explain reproductive health but also discuss nutrition information, such as healthy food choices and snacking behaviour. Meanwhile, youth family coaching is delivered by some trained cadres and social workers in the community. This program may include both reproductive health and family planning education for households with adolescents in the community.

In terms of gender-sensitive programs, Indonesian adolescents are the indirect beneficiaries of women empowerment and child protection programs. The Ministry of Women's Empowerment and Child Protection has integrated health and nutrition improvement into its programs, such as the prosperous children kampong (i.e., Kampung Anak Sejahtera) and women's school (i.e., Sekolah Perempuan).[3] For example, information on stunting and health is part of the six modules delivered in the women's school program. This program has been initiated in 25 villages and replicated in 44 villages across six provinces, targeting women from low socioeconomic status (National Development Agency, 2020). Recently, women's school program beneficiaries were also expanded to adolescent girls, focusing on adolescent self-capacity building and early marriage prevention (Ascholani, 2020). Meanwhile, healthy diet

2 Interview with Adolescent Resilience Department, National Population and Family Planning Board, January 2023

3 Interview with Child Right Protection Department and Gender Equality Department, Ministry of Women's Empowerment and Child Protection, January 2023; Interview with Directorate of Family, Women, Children, Youth and Sport, National Development Agency, January 2023

information and reproductive health education are also given to households that have children and adolescents through the prosperous children kampong program.

3.1.2. Gender mainstreaming within the government

Gender mainstreaming in the National Development Plan is defined as the attempts to integrate gender perspectives into each development stage, such as policymaking, planning, budgeting, implementation, and monitoring and evaluation (National Development Agency, 2021). Gender perspectives might include the experiences, needs, issues, and aspirations of both men and women (Erni, 2020). The National Development Plan has included several gender equality indicators, namely the GDI, the GEM, the Female Labour Force Participation Rate, and the Prevalence of Violence against Women. Those indicators will guide the collaborating ministries in ensuring the integration of gender equality perspectives within the policymaking process.[4] The government targeted GDI and GEM of 91.39 and 74.72 by 2024, respectively, which will be achieved by improving women's quality of life and contribution across development sectors and strengthening gender mainstreaming and gender-responsive budgeting in central, local, and village government (Erni, 2020).

The Ministry of Women's Empowerment and Child Protection has the responsibility to lead the gender mainstreaming process at the national level, as reflected in the National Strategy of Gender Mainstreaming (i.e., Pengarusutamaan Gender or PUG) Acceleration through Gender-Responsive Planning and Budgeting (i.e., Perencanaan Penganggaran Responsif Gender or PPRG). This national strategy was established by four ministries, i.e., the National Development Agency, the Ministry of Finance, the Ministry of Home Affairs, and the Ministry of Women's Empowerment and Child Protection (National Development Agency, 2012). The Ministry of Women's Empowerment and Child Protection has also started the gender analysis pathway (GAP) and budget tagging (i.e., Anggaran Responsif Gender or ARG) in the health sector, such as gender tagging 78 out of 86 outputs of stunting reduction policies (Erni, 2020). This process has identified several gender issues relevant to reduce stunting, such as the lack of mothers' and children's authority in accessing health services and participating in health programs unless permitted by their husbands or fathers, the view that maternal and child nutrition is only women's responsibilities, and insufficient nutrition knowledge among adolescents, particularly the importance of balanced diets and good nutrition for adolescent girls.

In addition to the gender-nutrition relationship, gender equality perspectives have also been observed among the central government in general. For example, the National Development Policy has stated that gender mainstreaming should not stop only from producing gender-responsive policies, but it is also necessary to make sure that women are equally treated across the development sectors and protected from any type of violence to improve their well-being and economic empowerment. Another

4 Interview with Directorate of Family, Women, Children, Youth and Sport, National Development Agency, January 2023

example is the attempts to reduce the maternal mortality rate, which may not only be caused medical reasons but also by gender-based violence and women's inability to access health services without their spouse's permission.[5]

Similarly, the Ministry of Religious Affairs has stated that the gender equality perspective has been introduced to both religious schools (i.e., Madrasah) and Islamic boarding schools (i.e., Pesantren). For example, male and female students in Islamic boarding schools are given the same services and responsibilities, from receiving reproductive health and nutrition education to completing daily chores. Gender sensitisation has been started among teachers, including power relations between female and male students, students and teachers, and gender-based violence prevention. Teachers are also encouraged to deliver gender-sensitive learning materials while maintaining religious moderation.[6]

On the other hand, the Ministry of Education and Culture states that everyone has the right to education, and it seems unnecessary to have separate educational policies or measures for different gender. In other words, the universal words within the policy of education have indirectly addressed gender equality without necessarily mentioning male vs female students. For example, there is no policy requiring schools to equally allocate male and female students in class or extracurricular activities. Thus, if the participants of a health-related extracurricular activity are predominantly female students, the perception was that this just represents skills and interests rather than gender stereotypes or inequality.[7]

> Does a general policy have to state that it relates to gender equality… or have to say something about gender equality? When we say gender equality, I imagine we have segregated men and women…Like, if we don't mention gender equality and so on, does it mean that we don't accommodate gender equality? Gender equality issues are usually discussed in several ministerial meetings, but in the education sector, (we know that) education is for all…
>
> (F, Ministry of Education and Culture)

5 Interview with Directorate of Family, Women, Children, Youth and Sport, National Development Agency, January 2023

6 Interview with Directorate of Religious Education and Islamic Boarding School, Ministry of Religious Affairs, January 2023

7 Interview with Directorate of Senior High School, Ministry of Education and Culture, January 2023

3.1.3. Policies and programs of local government

This study highlights the agreement among informants that WIFAS is the main nutrition program intended for adolescents, particularly adolescent girls. Female high school students are given iron supplementation on the same day every week, and the distribution is managed through collaboration between community healthcare and schools. In addition to WIFAS, Aksi Bergizi program includes nutrition education and having breakfast together at schools. Both WIFAS and Aksi Bergizi program implementation will be explained in Section 3.2.1.

Following the gender mainstreaming initiated at the national level, the Local Development Plan also includes inclusive and gender-responsive development actions. However, family planning, child protection, and women empowerment programs in many Indonesian regions are combined under one agency, known as the Local Agency of Women Empowerment, Child Protection, Population, and Family Planning. Thus, some programs may share similar themes around gender equality and reproductive health. For example, the Adolescent Counselling and Information Centre program was adopted at the district/city level, known as the Family Planning Friends Network (i.e., Jaringan Sahabat Keluarga Berencana or Jabat Genre). The Genre ambassadors and the cadres of the Adolescent Counselling and Information Centre (i.e., PIK-R) were recruited by selecting one adolescent girl and one adolescent boy from each village/subdistrict. They would later be trained by the Local Agency of Women Empowerment, Child Protection, Population, and Family Planning with some modules, including sexual and reproductive health, child marriage prevention, and malnutrition.[8]

The other programs implemented at the local level are Women's School (i.e., Sekolah Perempuan) and Dad's Breastfeeding Support (i.e., Ayah ASI). The Women's School comprised capacity building for women aimed at improving their economic independence, while the Dad's Breastfeeding Support delivered the fathers' essential roles in supporting their wives during the pregnancy until breastfeeding.[9] Another example of gender-responsive programs targeting adolescents is the Youth Family Coaching, where the cadres will provide some information to the parents of adolescents about sexual and reproductive health, child marriage prevention, and how to communicate with adolescents.[10]

8 Interview with West Bandung Local Agency of Women Empowerment, Child Protection, Population, and Family Planning, February 2023

9 Interview with East Nusa Tenggara Provincial Agency of Women Empowerment and Child Protection, February 2023

10 Interview with Kupang Local Agency of Women Empowerment, Child Protection, Population, and Family Planning, February 2023

3.2. Findings from the education sector

3.2.1. Health programs at schools

Schools have an important role in connecting aspects of education and health services for students in Indonesia, and a set of school-based health programs and activities have been carried out. Gabhainn and Kelleher (2000) stated that school-based health education or health promotion is often perceived as having the same impacts on students, while multiple challenges are actually encountered when health promotion interventions are delivered across different gender. Therefore, in this part of the study, The Habibie Center looked at various health programs and activities related to gender issues in the school environment.

The first health program implemented in schools is WIFAS, which is fully supported by community healthcare (i.e., Puskesmas). Puskesmas health workers will collect information on the number of female students, and distribute the iron supplementation to schools, usually school health unit (i.e., UKS/M). Teachers who act as the UKS/M coordinator will distribute the supplementation to female students with the assistance of students trained as school health cadres, and then report the distribution periodically to the health workers. The UKS/M coordinator will also request iron supplementation from the health workers when the supply is limited.Posyandu Remaja), which are also managed by Puskesmas. However, this program is recently initiated across all study locations, so the posts cannot be found in each subdistrict yet and the opening schedule might vary depending on the availability of Puskesmas health workers and local adolescent health cadres.

The implementation of WIFAS at schools varied across regions. For example, the head of SMA 1 Batakte Kupang said that the school is working closely with Puskesmas, in terms of increasing the teachers' knowledge, distribution of the supplementation, administration of WIFAS, monitoring system, and WIFAS socialisation.[11] The UKS teacher of SMP 1 Batakte also said that when there were questions from the adolescent girls' parents regarding iron supplementation, the school head and teachers would discuss and ask for suggestions from Puskesmas health workers to answer these questions.[12] Some informants described that the supplements distribution is usually followed by nutrition and health messages or education.[13] Similarly, iron supplementation in West Bandung District is usually distributed every Friday to female students, while at the same time, male students will also be given milk, eggs, or other foods.[14] This information may not be applicable in a general context, as practices may vary across different schools. However, equal food provision for both boys and girls would be more beneficial for helping both boys and girls in meeting their dietary requirements as girls would

11 Interview with Headmaster of SMA 1 Batakte Kupang, February 2023

12 Interview with Teacher of School health Unit of SMP 1 Batakte Kupang, February 2023

13 Interview with Kupang District Health Office, February 2023

14 Interview with West Bandung District Health Office, February 2023

also benefit from receiving those foods and of greater cost than the supplements and they are receiving the iron due to their greater biological need for iron. In Cilegon City, the Local Health Office signed a Memorandum of Understanding with the Local Education Office in 2018 to conduct WIFAS under the name of "Selasa Cegah Anemia" (abbrev. Segani), which means anaemia prevention every Tuesday. This program was followed by regular training for selected students to be Segani ambassadors (i.e., Duta Segani), regardless of their gender. Segani ambassadors are responsible for distributing iron supplementation together with the teachers and acting as health peer educators in their schools.[15] A similar program was also observed in Bogor City, where the iron supplementation is distributed as the "Cegah Tanggap Anemia" (abbrev. Cetar) program, involving students as Cetar ambassadors (i.e., Duta Cetar) and followed by regular self-health check (i.e, Cek Rutin Mandiri Kesehatanku or Cermin Sehat) as another school innovation.[16]

Schools are given authority in managing WIFAS implementation. First, some schools might allow male students to get iron supplementation if they asked for it from the teacher or person in charge with acceptable reasons. Second, schools can determine the day for giving iron supplementation without any difference impacts on iron supplementation distribution or students' attendance at school. Third, some schools had different ways of recording iron supplementation distribution. Some schools might use iron supplementation control boxes that have been provided by community healthcare, while other schools that do not have good control/attendance sheets will only use a simple control list, i.e., whether the students have consumed the iron supplementation/tablets. Fourth, most female students are suggested to consume iron supplements together under teachers' supervision at school, but some female students whose schools have no such policy preferred to bring the tablets home, regardless of whether they consume them or not considering adverse effects that may arise after consumption. While some parents noticed WIFAS positive benefits for their daughters, some still treated it as a medicine and perceived that iron tablets should be taken only in sick conditions, while some do not know at all about WIFAS. Therefore, supervision of WIFAS consumption at home is still inadequate due to this low awareness among some of the risks and consequences of anaemia for adolescent girls and the benefits of preventing anaemia with WIFAS.

The second program is the school lunch and breakfast recommendation program across West Java, Banten, and East Nusa Tenggara where students are encouraged to bring their meals from home based on the MoH balance nutrition recommendation to be eaten together at school. This program is part of Aksi Bergizi, which also includes WIFAS, physical activity (e.g., gymnastics or other sports), and social behaviour change communication (e.g., nutrition education). Nutrition education is usually delivered in collaboration with nutritionists from community healthcare. The education topic is mainly based on national dietary guidelines, such as how to choose and combine

15 Interview with Cilegon Health Office, February 2023

16 Interview with Bogor Health Office, February 2023

healthy but affordable foods.[17] This information on healthy food choices is later implemented during the school meals program, and iron supplementation is usually given on the same day. The school lunch recommendation program implementation can be done weekly or monthly, depending on the school's policy. Some schools might also run healthy school canteens by encouraging healthy snacks and limiting discretionary foods as part of Aksi Bergizi.[18]

Unlike the provision of iron supplementation, this program is intended for both female and male students. However, this study found that the program is only implemented in several schools. For example, school meals in Kupang District have not been implemented yet due to several obstacles, such as limited funds and students' willingness to bring meals to school. In terms of having meals at school, the head of SMPN 5 Cilegon said that eating together with balanced diets is one of the school's priority programs.[19] The school lunch recommendation program at SMPN 5 Cilegon is followed by monitoring students' foods at the school's entrance gate to ensure that students bring balanced and nutritious foods. This activity was even carried out before the government promoted Aksi Bergizi at schools, and the head of SMPN 5 Cilegon believed that eating together once a week can train adolescents and parents to prepare and consume nutritious foods. Similarly, the deputy head of SMPN 10 Kota Bogor said that they conducted the program according to the local Education Office's direction.[20] However, the school allowed parents to prepare students' foods without strongly recommending balanced diets. As a result, many parents gave their children unhealthy snacks and less nutritious foods, such as instant noodles. Meanwhile, the head of SMA 1 Sindangkerta in West Bandung District mentioned that there is a school lunch recommendation program special moment, namely National Nutrition Day[21], but Aksi Bergizi has not been started in their area on a regular basis.

The third program is education and health services in schools through School Health Unit (UKS/M). UKS/M programs include promoting Hand Washing with Soap (i.e., Cuci Tangan Pakai Sabun or CTPS), fostering school canteens by providing healthy menus, and daily student health services at school. The role of UKS/M is central to improving school health quality. As in healthy canteen activities, UKS/M teachers and cadres together with the community healthcare and canteen vendors routinely check menus and types of snacks. The deputy head of SMA IT RJ Cilegon said that a healthy canteen is important in promoting a healthy lifestyle through healthy snack provision at school.[22] Apart from that, several UKS/M rooms also provided common medications (e.g., paracetamol) which serve as first aid for students. Furthermore, some menstrual health supplies (e.g., menstrual pads and heating pads) are also available in the UKS/M room. It also accommodates students who suffer from menstrual cramps during school time while they are allowed to skip study time unless they feel better.

17 Interview with Bogor Health Office, February 2023

18 Interview with Bogor Education Office, February 2023

19 Interview with Headmaster of SMP 5 Cilegon, February 2023

20 Interview with Headmaster of SMP 10 Bogor, February 2023

21 Interview with Headmaster of SMA 1 Sindangkerta, February 2023

22 Interview with Representative of SMA IT RJ Cilegon Headmaster, March 2023

If the symptoms persist, girls will be allowed to leave school earlier. The UKS/M teachers also coordinated with Puskesmas to provide medical referrals for students who are sick and need further medical treatment. In several schools, the UKS/M room has been provided separately for female and male students.

The fourth program is the Adolescent Counselling and Information Centre or abbreviated as PIK-R, which is a place for Generation Planning (GENRE) program activities that are managed from, by and for youth. PIK-R is an activity of the PKPR program (i.e., Preparation for Adolescent Family Life) which aims to provide information and counselling services on reproductive health, family planning, and other supporting activities for adolescents at school. This program was initiated by the local Agency of Women's Empowerment and Child Protection in each region, although PIK-R has not yet been implemented in Kupang District. Teachers of SMPN 5 Cilegon stated that PIK-R, or youth cadres in some areas, can conduct peer counselling when students experience problems both inside and outside of school, such as bullying.[23] Some mental health services were also conducted at school, such as mental health counselling by counselling teachers, peer counselling, and most of the time, students' protection from bullying. One of the adolescents who participated in *tim sekolah ramah anak* or child-friendly school team stated that there is also education about polite language to prevent verbal bullying.

The fifth program is vaccination/immunisations and health screening. MA Cikande teachers said that health screenings are regularly facilitated by Puskesmas at the beginning of the school year.[24] The routine checks included height and weight measurement and blood pressure checks for all students and Hb tests for female students only. The vaccination/immunisations (e.g., measles and rubella immunisations) were also facilitated by Puskesmas.

3.2.2. Impact of school health programs

This study has captured perceived experiences and impact of health programs and activities in schools. For example, the original strategy of consuming supplements in school, which was adapted to consuming iron supplementation/ tablets at home during COVID-19 to returning to consuming the tablet directly at school has increased adherence to iron supplementation in school. SMAN 1 Sindangkerta teacher said that the teacher's supervision encouraged students' willingness to consume iron supplementation/ tablets.[25] Iron tablet distribution also involved female students as ambassadors or cadres for iron supplementation at school, which led to the students being more comfortable in consuming iron supplementation and gaining knowledge from their peers. Furthermore, the teacher at SMPN 5 Cilegon said that female students who regularly consume iron tablets look fresher and more focused on teaching and learning activities[26]. There seems to be misperceptions around the preventative nature of the intervention and some of this is confusion from the Hb screening, which is not a recommended

23 Interview with Teacher of SMP 5 Cilegon, February 2023.

24 Interview with Teacher of MA Cikande, March 2023

25 Interview with Teacher of SMA 1 Sindangkerta, March 2023

26 Interview with Teacher of SMP 5 Cilegon, February 2023

component of the WIFAS program, as WIFAS is for reducing and preventing anaemia. Pre- and post-WIFAS screening is not recommended. The head of SMAN 1 Batakte said that many of their students were still anaemic, and it might be influenced by family and environmental factors, such as the diet and behaviour of adolescent girls.[27]

The findings of this study indicated that Aksi Bergizi program has not been evenly implemented in schools in the four regions due to different challenges. There is greater need to understand how parents can be enabled and encouraged to prepare healthy meals by strict supervision of the school head and teachers as was done by SMPN 5 Cilegon. On the other hand, several schools that have started implementing school lunch recommendations are still not firm about determining healthy diets. As a result, there is no visible impact on improving students' diet quality at school. Nevertheless, the healthy canteen implementation in several schools has shown continuous healthy diet promotion, as shown by the school's efforts to maintain and ensure that foods and snacks sold in the canteen are healthy and do not contain harmful ingredients.

In terms of health services at schools by the UKS/M, this study indicated that work patterns are already in place, such as picket schedules, UKS/M program development, service procedures and discipline, and operational standards for implementation. This has resulted in more secure and systematic access to health services for students. Moreover, various collaborations with related parties, such as community healthcare, have led to easy access to health information and services, both for general and emergency health issues among students.

3.2.3. Gender norms and concepts in teaching and learning processes

Gender norms and concepts influence adolescents' access to education and their educational experiences. For example, the rule that female students must submit the assignment to male students might create a stereotypical view that girls are academically inferior. At the same time, the expectation that girls' domestic role is more important than their career can lead teachers to prioritise boys in class. According to Barker et al. (2012), gender norms can also be detrimental to boys in education, despite most of the currently available literature still focusing on education's impacts on girls.

This study also found that gender norms play an influential role in creating gender barriers in the school environment. SMP 3 Cilegon teachers stated that male students were more active motorically, so they were more inclined to sports subjects.[28] Meanwhile, female students tend to be smarter and more diligent in class, especially in science and mathematics. Male students tend to be lazier and more defiant than female students, indicating a gender barrier or differentiation in behaviours among students in the school environment.

Gender norms are also observed in the health aspect at school. The UKS teacher of SMA 1 Batakte said that female students tend to be

27 Interview with Headmaster SMA 1 Batakte Kupang, February 2023

28 Interview with Teacher of SMP 3 Cilegon, March 2023

weak, often faint and get sick.[29] Meanwhile, male students are stronger and become helpers for female students when they are sick or unwell. In school lunch recommendations, male students are usually reluctant in carrying meals to school, so the teacher was concerned that they might be malnourished in the future. The perspective toward individual characteristics, roles and behaviours, as well as physical appearance among male students still indicate strong masculinity among adolescents, but at the same time, male students' awareness of health is still lacking.

Interestingly, despite gender norms and labelling in some cases, the shift in gender norms at schools was observed when it comes to student leadership. As in the Intra-School Student Organization (OSIS), the presidential election is conducted democratically by accounting for candidates' capabilities, despite their gender. The head of SMP 5 Cilegon stated that this phenomenon could not be separated from the school's role in enabling equal space for female and male students to participate in both intra- and extra-school activities.[30] In addition, exposure to social media also encourages female students to actively participate in school activities. As the SMP 5 Cilegon teacher said, adolescent girls were excited to watch WIFAS videos on Youtube, and these videos encouraged them to be more active in being involved in WIFAS program at school.[31]

3.3. Findings from the health sector

3.3.1. Integrated health service

Integrated health service posts for adolescents aim to enhance participation, improve health outcomes, and create a supportive environment for adolescents' overall well-being. The adolescent integrated health service posts, such as those being established in regions like Bogor, Cilegon, and Kupang, serve as vital platforms for reaching underserved adolescents, providing health examinations, counselling, and referrals, and addressing specific issues like reproductive health and child marriage. However, the adolescent integrated health service post in West Bandung is still in the establishment process and has not been running continuously.

There is no written data on the number of male and female adolescents' attendance in the health post to date, and each region has different challenges in increasing adolescent participation. For example, there is a tendency for male adolescents in Bogor to be more actively involved as cadres and participants. Meanwhile, in Kupang, some adolescent health post programs are integrated with schools and churches, where more adolescent girls are involved. Meanwhile, in Cilegon, the adolescent integrated health service posts were recently initiated and currently, there is only one being established, so the coverage is still focused on both female and male adolescents in the school settings

29 Interview with Teacher of School health Unit of SMA 1 Batakte Kupang, February 2023

30 Interview with head of SMP 5 Cilegon, February 2023

31 Interview with teacher of SMP 5 Cilegon, February 2023

but has not covered out-of-school adolescents yet. Some innovations are attempted to enhance adolescent participation in adolescent health posts, such as games and podcasts. The health workers and cadres also use casual language and engaging approaches in reproductive health programs for adolescents. Another innovation is involving integrated health service post cadres with other programs to boost community participation, including providing rewards as incentives for attendance. The implementation of programs usually takes place after school hours or on Saturdays. Still, the schedule is typically discussed between the youth cadres and adolescents, while the health center usually adjusts accordingly.

3.3.2. Adolescent health knowledge and access to health information

Adolescent girls and boys generally have different health and nutrition understanding. Some girls and boys understood several basic information such as the definition of anaemia, where they referred to haemoglobin in erythrocytes deficiency, causes of anaemia (e.g., poor dietary pattern and menstruation in girls), as well as anaemia prevention (e.g., WIFAS consumption and nutritious food intake). Some also can mention anaemia signs and symptoms, which are widely known as 5L *(Lelah*, *Letih*, *Lemah*, *Lesu*, *Lunglai)* in Bahasa Indonesia or weak and tiredness on a daily basis. Some already described the long-term benefits of iron supplementation on reproductive health and stunting prevention. However, some adolescents did not know about the importance of taking the tablets and why it is specifically targeting adolescent girls. Therefore, some boys wondered why they were not given the tablets. In terms of body image, both girls and boys defined an ideal body as one that has proportional weight and height based on BMI. However, only a few participants understood the balanced nutrition concepts (i.e., current Indonesian food-based dietary guidelines), and are still familiar with the old concept of *4 sehat 5 sempurna* (i.e., the healthy and perfect diet should include staple, animal and plant protein, vegetables, fruits, and milk).

Boys and girls may have distinct patterns and preferences when it comes to accessing health information. The study revealed that information seeking is done through several channels including the internet, social media, parents, teachers, teen health organisations, friends, and socialisation conducted by community health centres or other non-governmental organisations. Both girls and boys tend to use social media platforms to seek health information, but girls are more aware and active in seeking health-related issues compared to boys. They are more likely to search for information on diseases, medications, COVID-19 updates, and healthy lifestyles. Girls often have a greater awareness of their health and a greater interest in gaining deeper knowledge about various aspects of health. Through social media, they can find content related to diagnoses, symptoms, treatments, and disease prevention. Girls may also seek information about healthy lifestyles, such as nutrition, fitness, stress management, and self-care. With their active engagement in seeking health information, girls potentially gain a better understanding of their health and adopt behaviours that support overall well-being.

Girls and boys also seek health information from their peers. Girls may be more active in discussing health issues with their peers. On the other hand, boys may be more likely to obtain information from their peers through activities outside the home, such as sports clubs or gyms. They may learn about physical changes and basic aspects from their peers or through programs like the Adolescent Information and Counseling Center (PIK-R).

"Boys often receive health information from their friends or activities outside home… Basic information about physical changes, such as the growth of facial hair, from their parents, but they obtain in-depth knowledge from other sources like the Adolescent Information and Counseling Center (PIK-R)… and more about health-related topics from their friends at the gym"
(T, Adolescent boy in Cilegon)

Parental influence also plays a significant role in providing health information to both boys and girls. However, the type and extent of health information shared may be influenced by gender norms and communication patterns within families. In terms of information regarding puberty and reproductive health, parents and family are still the main guidance sources for adolescents, besides friends. However, data from the interviews indicated that girls were more exposed to information related to puberty and reproductive health from their parents compared to boys. There also seemed to be a perception that girls were more affected than boys and hygiene was a priority.

"My mother talks more to my sister. She has to maintain her hygiene and take a shower regularly because girls are more sensitive in the puberty period. So, my mother tends to… I tend to learn about it by myself"
(I, Adolescent boy in Kupang)

Some girls also obtained knowledge from their older siblings or friends through daily conversations. Girls also tend to be more open to their parents, especially mothers, when they have experienced their first menstruation cycle. Meanwhile, clumsiness was noticed when it comes to puberty talks between parents and their sons. Adolescent boys are mostly reluctant to talk about their first wet dream experience to their parents and tend to discuss it with their older siblings or friends instead. This highlights the role of parents, particularly female relatives, as valuable sources of health information for girls, emphasizing the importance of hygiene practices. Moreover, adolescents also reported that schools delivered reproductive health education through several subjects, such as biology and counselling programs. The information included puberty, sex education, and hygiene, delivered to female and male students in the same class. There is no specific subject for gender studies at school, so gender-related knowledge is delivered through other subjects, such as biology. An extra lesson called *Keputrian* is also provided for female students during the Friday prayer, usually led by a female teacher. In terms of menstruation as one of the puberty signs in adolescent girls, the interviewees reported special supplies provided at school, such as menstrual pad provision and permission to not

attend class or leave early if necessary. Girls were also treated differently at home during the periods by not being allowed to do house chores and their needs were provided by other family members. A female adolescent with disabilities participating in this study was also permitted to not come to school during her period to avoid extreme tantrums or further meltdowns due to mood swings.

Meanwhile, such communication and treatment are rarely found in boys as they tend to not communicate their puberty phase to their parents and vice versa. School-based health education actually provides equal opportunities for boys and girls to receive health education through the School Health Enterprise (UKS/M) and health awareness campaigns conducted in schools. However, it is also crucial to ensure that the content delivered addresses the specific health concerns and challenges faced by each gender. Girls may benefit from addressing issues such as menstrual health, reproductive health, and body image, while boys may be given information on substance abuse, violence prevention, and mental health. Schools can also invite relevant speakers, such as partnering with the National Narcotics Agency (BNN), to provide health awareness campaigns on specific topics.

Access to information through various media sources is now more prevalent among adolescents. However, this easy access to information can also pose risks. The information they can come across may include pornography, which is easily accessible and can promote unhealthy relationship expectations and gender dynamics. There is also a risk of inaccurate information from social media leading to deviant behaviour among adolescents. Thus, it is important for parents and healthcare providers to provide accurate information to help adolescents make informed decisions about their health.[32] Adolescents are proactive in clarifying their findings with parents, teachers, or healthcare providers as they become increasingly aware of the potential risks of inaccurate information from the internet. Specifically, some adolescents seek guidance from nutritionists at health centres to make decisions about their dietary choices. Nutritionists and other health professionals they referring to can clarify the inaccuracy by providing reliable information, as well as by distributing leaflets to adolescents as part of their nutrition promotion.

"One time, I got a question at the adolescent health post: "Is it allowed to eat this food (while showing a certain food)?", so I directly clarified (about healthy foods)"
(J, Nutritionist at Saguling community healthcare)

3.3.3. Community health programs

The community in this study refers to the collaborative efforts involving nutritionists, adolescent program coordinators, and community health workers at Puskesmas. The community health programs might also be supported by various cadres who play a significant role in youth engagement, such as Adolescent Integrated Health Post cadres, Karang Taruna members, Duta Saka or Duta Sehat in Bogor, Duta Genre, PKK (Family

32 Interview with Klasis Amarasi Oekabiti (Community organisation), February 2023

Welfare Movement), and Family Resilience Motivator cadres. The collaboration is also extended to schools, where most of the adolescent health programs are conducted and adolescent cadres have also been introduced as peer counsellors. This subtopic explores the findings related to community involvement and its contributions to adolescent health and well-being.

Some adolescent health initiatives have been made in several areas, such as in Cilegon and Bogor community healthcare, where the PKPR program (i.e., Pelayanan Kesehatan Peduli Remaja or Adolescent Health Service) focused on addressing adolescent health as the root cause of stunting. In addition, there are family motivator cadres in West Bandung that provided health education and counselling to adolescents. In Bogor, community organisations were formed as agents of change to support adolescents (i.e., Duta Saka and Duta Sehat). Meanwhile, church pastors played a significant role in providing health services for adolescents integrated into the church curriculum in Kupang.

3.4. Gender norms and practices at the community level

3.4.1. Gender concept

Despite the fact of sex and gender are used interchangeably in the community, gender is understood by some as a concept that goes beyond sex. Study participants from urban areas, such as Bogor and Cilegon, are more familiar with 'gender' terms, compared to those from district/rural areas, such as West Bandung and Kupang. Better information access from social media and social environments may allow urban society to be more exposed to gender equality and gender-related information. Urban adolescents also showed a better understanding of gender equality, where they perceived gender equality as an opportunity for girls/women to have the same rights as boys/men. Thus, gender should not determine a person's position or restrict their abilities and rights. On the other hand, most parents and adolescents from district/rural areas either never heard of or did not understand gender and gender equality terms. Despite the unfamiliarity of most rural adolescents with gender terms, the gender concept still emerged when they explained the role of family members, especially husband-and-wife responsibilities.

3.4.2. Women's participation in the workplace

This study found that gender equality in the workplace was not described or perceived to imply that women can perform all the same jobs as men. Instead, informants described that different tasks and responsibilities may be suitable for specific gender only. For example, dealing with dirt or physical labour is considered unsuitable or less preferable for women, and there was distinct gender division of labour in and out of the house.

"...the activities can be considered quite messy. So, how would it be for girls if it involves tasks that require getting dirty?"
(R,Karang Taruna Saguling)

"…Nowadays, women can also work in traditionally male-dominated fields such as electrical work. Some women work as electricians. That's my understanding. Regarding gender, it's like that"
(S, Cibeber Cilegon's Family Welfare Cadre)

"…. They can work, but their roles need to be distinguished. For example, if a girl becomes a construction worker, it would be considered unusual, right? It's not possible. Like what happened before, gender equality means women can work, but the proportions should be different…
(B, Health Cadre Bogor)

These societal expectations can influence women's participation and limit women's involvement in specific industries or fields.[33] Unfortunately, disparities in wage payments also persist between female and male workers, particularly in home-based small and medium enterprises (UMKM). Female workers often face limited recognition and feedback for their physical labour, contributing to the gender wage gap. Addressing these disparities is crucial to achieving gender equality in the workplace, ensuring fair compensation and acknowledgment of women's contributions.[34,35] Another notable difference that was described was the decision-making approaches: women were described to tend to rely more on their emotions when making decisions, while men were perceived to use more logical thinking. This difference in perceived approach suggests diverse perspectives and influence of sex and gender on approaches to problem-solving within the workplace.[36]

3.4.3. Women's participation in community activities and education

There is currently an increasing number of social and religious associations in society that is open to both men and women. Women's participation in decision-making processes at the village, sub-district, or district level is also being recognised.[37] Notably, the PKK serves as an example where women actively contribute and lead the organisation. It is common in certain sub-districts of West Bandung where most PKK members are men, with women as leaders, suggesting the growing involvement of women in community activities.

33 Interview with SAKA Ambasador community organisation Bogor, February 2023
34 Interview with Adolescent integrated health cadre Bogor, February 2023
35 Interview with Adolescent officer program Cicangkangkirang Community healthcare, February 2023
36 Interview with Health Ambassador community organisation Bogor, February 2023
37 Interview with Priest community organisation Batakte, February 2023

Women's decisions and activities were perceived to be dependent on their husbands' or fathers' permission, but more women are currently challenging this perspective and aspiring to be respected equally to men in a broader setting, including marriage and social life. Despite these efforts, there are still cases of dropout among adolescent girls. This dropout can be caused by various factors, such as pregnancy, delinquency –as determined by school, economic constraints, and societal beliefs that girls are expected to focus on domestic roles, rather than pursuing careers and higher education.[38]

However, most of the study participants stated that boys and girls have equal rights to pursue higher education as well as their goals, and this view was likely to be influenced by parents' and adolescents' better education. Parents who were educated and exposed to more information sources are more likely to pass the view to their children and support gender equality as well. There were no policy differences in opportunities for women to obtain formal education in all study areas; however systemic and societal barriers clearly exist, including gender roles of females in the domestic spheres.

3.4.4. Child marriage

This study found that many adolescent girls and young women experienced early marriage with older men. Some girls even get married while they are still in elementary school. In some parts of Bogor area, women are stigmatised and labelled as "old maids" by society if they remain unmarried for long. This label leads to a tendency among parents to marry off their daughters quickly, whether in an arranged marriage or with older boyfriends. In rural areas, knowledge about family planning and contraception is still lacking, followed by negative views on contraception. However, there are differences in trends of early marriage between urban and rural areas, where early marriage tends to occur more in rural areas or areas with strong cultural and traditional characteristics. Thus, parental knowledge about the importance of education plays a significant role in preventing early marriage.

"There were 19 early pregnancies in 2021, yes many pregnancies among those aged less than 19 years, after being investigated, some of them experienced early marriage, some already drop out (from school) and some are still at high school. It was 8 (early pregnancy) cases in 2022. We'd assume that this decrease is part of Puskesmas success in educating through media…"
(F, Nutritionist at Batakte Community Healthcare)

Another gender-related phenomenon arose around out-of-school students. Participants revealed that there are several reasons behind the decision to leave school, such as economic factors and early pregnancy. There is no different proportion between boys and girls leaving school due to economic factors. However, in some cases, boys are expected to support the family economy by working, while girls might be expected to support their family by getting married earlier rather than working. The economic support may come from the amount of property given as a dowry in certain cultures, e.g., *belis* practice in East

38 Interview with Health Ambassador community organisation Bogor, February 2023

Nusa Tenggara. Moreover, girls are observed to be more likely to experience school dropout when early and unwanted pregnancy happens. Based on the participants' information, early pregnancies that mostly ended in early marriage are mainly caused by a lack of parental control, a perception that there has been a relationship with unsafe sex practice resulting in the pregnancy, and adolescents' inability to protect themselves from unsafe sex practices.

3.4.5. Delinquent behaviours

Adolescents who were raised by their grandparents due to their parents' divorce or parents being migrant workers, often struggle to meet their nutritional needs, and this situation has significantly impacted their health and well-being.[39] Some male students might have disruptive or rebellious behaviours, such as smoking or drinking alcohol. The influences from the social environment outside of school and the lack of parental guidance were considered the determinants of those behaviours. Boys who were not raised by their parents might also spend more time outside with friends and engage in activities that were described as "teenage delinquency activities" which might come with higher health risks. Thus, offering free programs, such as counselling sessions and sports-related activities was suggested by study informants to help address negative behaviours, anxiety and discomfort among adolescent boys that arise from their family situations, while encouraging age-appropriate social opportunities.

"For boys who were not raised by their parents, it is possible that their caregivers automatically think, "Ah, it's better for them to be outside with friends, maybe engaging in typical teenage activities"
(L, Saguling Community and Women's Organizations)

3.4.6. Unintended pregnancy (KTD or *Kehamilan Tidak Diinginkan*)

This study found that unintended pregnancy among adolescent girls is a critical issue in Kupang District, and most cases are observed among unmarried adolescent girls. The head of SMA 1 Batakte said that the school had found at least seven unintended pregnancies among female students in a year, and the family can be one of the causes. In some cases, KTD was due to rape committed by family members living with adolescent girls in the same house. KTD can also happen when the parents work on the farm, leaving their daughters at home unattended. In Indonesia, abortion is strictly prohibited by law. According to Article 75(1) of Health Law No. 36 of 2009, it is forbidden for anyone to perform an abortion. Consequently, discussions regarding abortion as an option in these cases are limited. This legal prohibition on abortion in Indonesia significantly influences individuals to consider marriage as an alternative instead of opting for abortion.

The school carried out several responses to unintended pregnancies, mainly focused among female students, such as socialising negative impacts of unintended pregnancy for adolescent girls. The responses vary depending on each school. For instance, when a student is found to

39 Interview with Adolescent officer program Oekabiti Community healthcare, February 2023

have an unintended pregnancy, some schools may choose to drop the student out immediately. In contrast, others may allow them to continue attending until their exams. In many cases, the students themselves decide to leave the school due to the stigma and embarrassment associated with the situation. Activities to focus on boys or men were not a focus and is an area of greater need. These activities are usually carried out during Student Orientation Periods (MOS), which parents also attend. During academic activities, such as UKS/M activities and study report distribution every semester, efforts to prevent unintended pregnancies for young women are also being carried out. Schools will also give opportunities for students experiencing KTD to participate in final exams, rather than immediately drop them out. There are also policies that provide intermission for female students with KTD until delivery. However, it is not uncommon for female students to drop out independently, mainly due to the shame and fear of bullying.

3.5. Gender norms at the household level

3.5.1. Decision-making

Decisions on household matters are predominantly made by mothers despite the family being female single-headed or not. In the men-headed family, fathers are positioned as the main income earner and supported by mothers as nurturers and caretakers of the family. Household matters, including domestic chores and financial management, are perceived as a women's working area, of which women have more authority. It is not uncommon that fathers will hand their income to their wives to be managed and to fulfil the household's needs, regardless of the amount of money. Furthermore, mothers are also perceived to have more understanding of the household as they spend more time with the family. In some cases, both father and mother, sometimes including children, will discuss in order to reach the best decision. Meanwhile, in the women-headed family, mothers will take responsibility for earnings as well as household management. In this type of family, adolescents are typically involved in managing the household, especially the older ones regardless of gender. Gender-related decision-making occurred in different matters, including education, health, and food consumption.

Education is mostly decided between adolescents and parents, initiated by adolescents who propose their desired school options to their parents. These options will be discussed between both parties and parents will also explain their opinions. School selection is usually based on school ranking, distance from home, economic condition, and friends' choice. In some households, decisions on education are made by parents, whether mothers or fathers. However, all participants stated that there are no differences between girls and boys in terms of the right to access education.

When adolescents are sick or need some health treatments, the decisions are often made by parents. In some families, mothers are in charge of making decisions and taking care of sick family members. If the signs and symptoms are mild and common, mothers tend to give home treatment, such as traditional remedies and generic medicine. In severe cases, both mothers and fathers can make decisions to bring the family members to the health facilities, such as community healthcare, private healthcare providers, and hospitals.

In terms of food consumption, food purchase and preparation vary between days. However, decisions on what food to be purchased and the menus for each day are mainly made by mothers, sometimes by also considering family members' preferences. Although children's requests are often taken into account, all family members have the same voice. Meanwhile, when the adolescents live in the boarding house, food purchase and preparation are done by designated staff. In special cases like in the women-headed household where the mother becomes the main breadwinner, children take part in food decision-making to help their mother. In terms of food distribution, there are no differences between family members. Anyone can take all the food served without any limitation.

"To decide the dinner, I and my sister will discuss, 'What soups should we make this afternoon'"
(I, Adolescent boy in Kupang)

3.5.2. Division of labour

In terms of household duties, participants reported that men/boys and women/girls were generally involved in doing the house chores, with the mother as the main household manager. Mothers usually have the biggest responsibilities in doing and ensuring that the domestic work is done. However, although working parents and adolescents are mostly busy with their activities and spend more time at the office or school, they still do certain tasks, such as making the bed, gardening, and accompanying younger siblings.
In terms of food consumption, mothers are typically in charge of buying fresh food on a daily basis from traditional markets, supermarkets, and greengrocers. Meanwhile, the monthly groceries for preserved food or other household needs usually become the father's responsibility. Sometimes, adolescents help in buying incidental food needs, such as condiments and seasonings in nearby stores. Mothers are also the main responsible person for food preparation. Girls are commonly involved in cooking, whether on a daily or weekly basis, depending on their activities at school. Boys in some households might help with cooking, especially where fathers are involved in food preparation.

"Even though he is a boy, he still wants to (cook). Maybe because he sees his father also doing the same. I always told them that there is no such thing as women's or men's type of chores, we should do everything we can do. Alhamdulillah, all of my family members can cook"
(W, Parent, Women in Cilegon)

Adolescents and other family members might take part in the non-food-related household chores with no difference in labour division for boys and girls. Both take care of house cleanliness by sweeping, mopping, washing dishes, and doing laundry, as well as being involved in nurturing the younger siblings. However, boys are also in charge of chores that require more physical strength, such as drawing water, gardening, and cleaning the pond. Adolescents in rural areas or districts tend to have more responsibilities regarding household chores, including cooking and cleaning the house as they rarely have a maid or servant in the family which might also be influenced by their socioeconomic status. In the urban areas, where family members tend to have more activities outside the house, employing household assistants to handle household chores is more common.

3.5.3 Dietary patterns

Dietary patterns of adolescents in West Java and Banten tended to be similar. Most of the girls reported breakfast skipping as they are not used to or simply because they have to leave early for school and have no time for breakfast and did not describe it as a priority. Girls sometimes reduced their food intake to maintain their body shape, such as only having one or two main meals a day, typically at lunch or dinner. When they are not required to bring a lunchbox to school, they tended to purchase and eat snacks from the school canteen. Therefore, parents were satisfied and supported the school lunch recommendation program because their children can have healthier diets.

Adolescents nowadays tend to focus on stomach satisfaction or feeling full but often overlook diet quality, such as by choosing junk foods over vegetables because of the food's prestige and the desire to try new things. There is also a tendency for adolescents, especially girls, to consume fast food such as *seblak* or tastier food outside the home and with friends. Furthermore, in order to improve adolescents' understanding of food and nutrition, it is important to involve peer groups in promoting healthy eating habits as snacking with peers has social importance to adolescents. Peer groups can help to influence children's choices in a positive way, encouraging them to make healthier food choices and promoting the importance of a balanced diet. In other ways, peer influence can also affect their eating habits, where they can be tempted to consume the latest popular foods or drinks among their peers. Although some adolescents maintain a healthy lifestyle, they can easily be influenced by friends or their environment.

"Sometimes, those who do not want to get fat adopt extreme dieting, they only eat what tastes good to them. My daughter sometimes prefers fast food over fruits and vegetables. Adolescents have high curiosity and think that it's not cool to consume certain foods. They prefer ramen, seblak, cilor, over pecel, and Thai tea, Chatime, over fruit juice"
(N, Nutritionist at Grogol community healthcare)

Living place is also one of the eating patterns and food choice influencing factors. In the Saguling sub-district, West Bandung, due to its proximity to a very developed area called "Kota Baru," people in the area are more familiar with various types of fast food and ultra-processed

foods (UPF) of high energy and low nutrient density and fast foods are increasingly available. For adolescents who live at the boarding house, eating schedules are more organised as they have to eat three times a day and the foods are already prepared from the boarding house kitchen. In terms of diet composition, vegetables are usually excluded from girls' daily menus due to their taste and their unfamiliarity with the types of vegetables. Meanwhile, boys tend to eat more carbohydrate and protein sources as boys were expected to have a taller and bulky body by building their muscles and these foods were perceived as important for growth.

Different patterns are seen in East Nusa Tenggara. Daily meals in the family consist of carbohydrate sources, plant-based protein, and vegetables. Consumption of animal protein sources is relatively limited due to economic conditions. Animal protein sources are commonly consumed on special occasions only, such as Christmas, wedding parties, and funeral wakes. Despite the economic condition, eating habits have also become a concern in the area. Instant foods, such as instant noodles, are widely consumed and classified as one of the favourites. In some circumstances, the family will trade their chicken or livestock for instant noodles so that their children have more appetite.

Based on the given information, there were no food taboos found specifically for adolescents, but rather for pregnant women. However, there are beliefs in some regions that prohibit rice consumption at funeral feasts. Meanwhile, there is a belief in Kupang that certain parts of animal protein should be given to men or women based on their perceived level of hard work. For example, chicken breasts will be given to hardworking men, while women will only get chicken heads or feet, limiting the potential of women to equal nutritional benefits.

> "If we consume chicken, the breast part will be given to men, while women will get the head or feet. That kind of practice still exists, even though it's uncommon now. That's because men are the ones who work hard. In the pre-marital catechism, I stated that there are two types of work, public and domestic. Previously, people believed that domestic work belonged to women, while public work belonged to men. But now it's diminished and women can take part in public work that makes money. Men are also in charge of domestic work, like cooking and washing like what I did recently."
>
> (J, Priest in Kupang)

3.6. Challenges and strategies

3.6.1. Challenges and strategies at the government level

Three main challenges are faced in implementing adolescent health and nutrition programs. The first challenge is coordination and collaboration, particularly at the local level. For example, WIFAS program implementation is managed by community healthcare in collaboration with both junior and senior high schools. At the local government level, community healthcare is under the supervision of the District/City Health Office, junior high schools are under the District/City Education Office, and senior high schools are under the Provincial Education Office which has representatives in some district/city (i.e., Kantor Cabang Dinas or KCD). This has led to the difficulty in coordinating WIFAS at senior high schools, as faced in Cilegon. Thus, it is expected to improve the coordination by signing an MoU to provide more financial and technical support in WIFAS at senior high schools. Furthermore, the second challenge is the rejection of the program, either from parents, community leaders, or other parties. This rejection can be influenced by different perspectives towards health programs, such as WIFAS. It might also be caused by the lack of health information received by the parents/community/other parties and the lack of awareness of the needs of adolescents and the specific unmet needs of girls and their risks for anaemia. Meanwhile, the third challenge is the varied geographical location, which might hinder the access and establishment of adolescent-integrated health posts.

"The challenge is, still, some parents did not allow (the adolescents) to consume iron supplementation. Then, the collaboration with KCD is still not optimal yet. Also (nutrition and health) education among community leaders is not satisfying yet. Then, family involvement in the Segani program is still not optimal yet…"

(S, Cilegon Health Office)

The diverse gender concept, cultural and religious norms, and the limited budget serve as the main challenges to gender-responsive programs. Gender and sex are usually used interchangeably in Indonesia, while at the same time, some gender norms, stereotypes, and roles are culturally inherited and perpetuated by systems and structures. For example, child marriage prevention might not only rely on sexual and reproductive health education by the local government. Instead, a collaboration with community or religious leaders might lead to higher acceptance of child marriage prevention and gender-responsive programs. This collaboration may not only include the use of local language in introducing gender concepts but also accounting for religious and cultural values. Furthermore, child marriage prevention programs at the local level might need further assessment, e.g., whether the programs are impactful. On the other hand, the gender-balance participation rate has become an issue in some cases due to the view that gender issues are "women issues", which led to more female government representatives being delegated to gender-related capacity building. Lastly, the limited budget available for gender-responsive programs might result in the programs can only be

implemented in some priority areas.

3.6.2. Challenges and strategies at the school level

The implementation of health programs and activities in schools faces five challenges both internally and externally. The first challenge is associated with continuity between education and health services in schools and homes. This challenge occurs in almost all schools investigated in this study. The UKS teacher of MAN 2 Cilegon said that many students had gained knowledge about health and took iron tablets regularly. However, these practices are often disrupted when they return home, such as staying up late, eating non-nutritious food, and often going out at night. Some study participants stated that one of the contributing factors to the absence of proper supervision at home is insufficient communication regarding WIFAS from the health care services and school to parents. Thus, in some schools, this issue has been routinely socialised by the school to parents when receiving study reports, which also highlighted the importance of maintaining students' healthy lifestyles that have been carried out in schools.

The second challenge is related to the supply of health facilities and logistics, and this challenge often occurs in schools in NTT. This study noted that there were still delays in the distribution of iron supplements to schools by community healthcare leading to irregular iron supplementation among adolescent girls. In Kupang District, the supply of iron supplements at schools had run out and community healthcare had not distributed them for more than a month. It might also be due to low iron tablet stocks at the provincial and district levels. Some UKS/M in the study location also had inadequate health facilities and equipment to support health service provision for students, as stated by the head of SMAN 1 Sindangkerta.

The third challenge is the system for recording iron tablet consumption is not evenly distributed in the four regions. In urban areas that have been running WIFAS for a long time and have support from relevant stakeholders, such as Cilegon and Bogor, the monitoring system and record of iron supplementation consumption have been running systematically. There is even a control sheet that is used as a guide for adolescent girls at school. However, in schools in Kupang District, the recording format is still in the form of a regular checklist/sheet. The UKS teachers of SMAN 1 Batakte said that at the initial training on WIFAS, they would be given a format for recording iron tablets. However, they have not received the format to date. As a result, they still record in a simple way using the school attendance format. This condition resulted in suboptimal measures to monitor each adolescent girl in taking iron tablets and additional work for teachers.

The fourth challenge is related to parents' economic factors, which may hinder students' participation in health programs and activities at school. This study found in four regions that students whose parents have a low economic status tend to have difficulties participating in school lunch recommendations. The head of SMAN 1 Batakte said that many parents were in the low economic category so they might face difficulties in preparing nutritious foods during

the school lunch recommendation program implementation. The implementation of school lunch recommendation might also raise jealousy among students, especially those from poor families. They might also get bullied by their friends when they only brought cheap meals to school. For this reason, it is important to pay attention to parents' conditions in implementing health programs at schools.

The fifth challenge is bullying cases at schools. Most bullying cases are mutual insults or ridicule of parents' names by both young girls and boys. Bullying is also caused by fights over girlfriends between male students who taunt or verbally abuse each other, with some possibility of physical violence. Some bullying cases are also related to the deep trauma of students who experience bullying outside of school (e.g., home environment), but they take revenge at school against their friends. The deputy head of SMP 10 Bogor stated that an intensive psychological approach will be given to students facing this case. Regarding cases of bullying, the role of counselling teachers is essential. They do not only handle existing cases, but they also provide an understanding to students regarding the negative effects of bullying.

3.6.3. Challenges and strategies at the community level

The main challenge in implementing adolescent health programs is the lack of community awareness, especially among those with lower education levels, and the gender differences in nutritional risks and needs are not well understood, and adolescent nutrition is not a priority. Some social groups, such as conservative or religious communities, may avoid health services that do not align with their religious or cultural beliefs. Some adolescents may not fully understand the benefits of health services or prefer health services at school to integrated health service posts. Unsupervised use of social media can also lead to health misinformation, especially when adolescents rely on social media as the only source of health information.

Child marriage mostly affects adolescent girls because when girls decide to marry at a young age, they tend to drop out of school, with many only completing elementary school. This decision is often influenced by parents, e.g., being encouraged to get married as the girls already have a wealthy boyfriend who might help the parents' economy. It is not common for adolescent boys to get married, as they are generally encouraged to finish their education first. However, in some cases, boys may also be affected by child marriage, especially in cultures where child marriage is widely accepted.

In addition to cultural and societal factors, government policies and regulations also contribute to the prevalence of child marriage. *"Dispensasi nikah"* or marriage dispensation is one such policy that allows underage marriage with parental or court consent. The potential for marital age exemption under this policy can also make it easier for parents to marry off their children and adolescents. Thus, it is important to adjust these policies and regulations to prevent and reduce child marriage prevalence.

Analysis and Discussion

4.1. Gender perspectives in health

This study highlighted the distinct and common health needs between adolescent boys and girls, which require a different approach in health programs. This may involve targeted interventions, education, and access to health services tailored to the unique needs and situations of girls and boys, taking into account their developmental stages, cultural norms, and social determinants of health. It is important to promote gender equality in health programs, and equity in access and also valuing positive male role models in the distribution of nutrition, health decision-making, care, or professional responsibilities related to health. This can have multifaceted effects in promoting gender equality, empowering women, and improving nutrition in the short- and long-term period while ensuring that both boys and girls receive equitable access to health and nutrition services, recognizing their risks and experiences, and attention and care for their overall health and well-being (Buitenbos, 2022; Jourdan et al, 2021).

In terms of anaemia, this study highlighted that adolescent girls are still more vulnerable to anaemia and iron deficiency due to menstruation and cultural norms that may limit their access to nutritious food and they have unmet needs for iron. Adolescent girls also tend to pay more attention to their health by seeking and following health advice; yet have limited access to health services.

The distribution of iron and folic acid supplementation is currently targeting female students, although some male students in certain schools also receive tablets based on teachers' observations of signs and symptoms of anaemia. This indicates the possibility of misunderstanding among parents about the purpose and benefits of this program, resulting in inconsistent tablet distribution (Gosdin et al, 2021). Furthermore, this study also reveals that boys and girls receive information about sexuality in the same class, but girls also receive additional sessions during Friday prayers, as well as more information about puberty from parents or older siblings. They also experience special treatment at school and at home during menstruation, such as providing menstrual pads and permission to leave school earlier, while boys tend to communicate less about their puberty phases with their parents. These findings indicate gender norms and gender-based health needs that should be considered in providing health services and education for adolescents to ensure equitable access and outcomes for all genders (Decker et al, 2021), otherwise the disparities can impact boys' and girls' understanding of their own health and well-being (DeJaeghere & Lee, 2011).

This study also revealed differences in eating patterns between girls and boys, where girls often skip breakfast, reduce food intake to maintain body shape, and generally only eat one or two large meals a day, while boys tend to consume more sources of carbohydrates and protein. Economic conditions also influence eating patterns, with limited consumption of animal protein sources in some areas. This study also found that despite boys having higher energy, iron, calcium, and protein intake compared to girls, the prevalence of malnutrition in boys is higher. This might be due to differences in physical activity between boys and girls, influenced by gender and cultural norms, indicating that addressing gender disparities in food intake and nutritional status requires a comprehensive understanding of the underlying social and cultural factors (Ghosh, 2020).

4.2. Mainstreaming gender in adolescent health and nutrition programs

According to the technical guidelines for gender mainstreaming (Ministry of Women's Empowerment and Child Protection, 2012), it is not uncommon that policymakers are not aware of their gender-neutral policies or policies to overcome inequities. The produced policies might focus on the national goals but pay less attention to the differences across policies' beneficiaries, mainly between men/boys and women/girls. Thus, as part of gender mainstreaming, the Ministry of Women's Empowerment and Child Protection has provided technical assistance for central and local government, as well as guidelines for gender-responsive planning and budgeting.

Gender-responsive planning (i.e., Perencanaan dan Penganggaran Responsif Gender or PPRG) was conducted to attempt for equality between men/boys and women/girls in development sectors by considering their needs, experiences, aspirations, and issues throughout the policymaking process

(Ministry of Women's Empowerment and Child Protection, 2012). The gender-responsive planning is aimed to produce gender-responsive budgeting (i.e., Anggaran Responsif Gender or ARG), of which this budget is intended to accommodate different needs between men/boys and women/girls. This gender-responsive budgeting is also aimed at narrowing the gap between men/boys and women/girls' status and seeing how they are equitably benefiting from the country's development, as well as improving policies and programs' effectiveness and efficiency. There are three categories of gender-responsive budgeting, i.e., gender-specific budgeting for fulfilling gender-specific basic needs, gender equality budgeting for addressing gender inequality issues, and gender equality institutionalised budgeting for gender-related data collection and capacity building (Ministry of Women's Empowerment and Child Protection, 2012).

Gender mainstreaming has been initiated in the policymaking process, including health and nutrition policies. The current policies indicate the shift from the Women in Development (WID) approach to the Gender and Development (GAD) approach (Hafner-Burton & Pollack, 2002), which is plausible since child marriage, gender-based violence and other women-targeting issues still exist across the country. This transition phase will require some efforts for mainstreaming gender equality concepts, which have been initiated by the government at the national and local levels. In the health and nutrition context, this transition will also require the government and related stakeholders to not only attempt to increase women's and girls' program participation but also identify gender inequality issues that contribute to poor health and nutritional status of both women/girls and men/boys. Furthermore, many nutrition and health programs are under different ministries, agencies, and local government institutions, which means the budget for nutrition and health programs is not centrally managed by a stakeholder. Thus, collaboration is required among the involved stakeholders to ensure the success of gender-responsive nutrition and health programs and to address the health and nutrition inequities.

Despite the gender mainstreaming in the existing policies and programs, this study suggested the need for more health and nutrition programs targeting adolescents that also incorporate gender equality concepts. Focusing on adolescent girls will still be important considering the health inequities that girls face and the low gender equality indices as well as the consequences of adolescent well-being for the country's priority in reducing stunting, while at the same time programs addressing the needs of adolescent boys, such as with specific sexual and reproductive health and nutrition information might also be of interest and relevant. Referring to the WHO Regional Office for Southeast Asia (2017), adolescent boys might face a higher risk of substance misuse, bullying at school, and suicidal attempts. Therefore, mental health programs and campaigns may also be needed, which also include parental engagement and adequate support from the school and community.

In terms of program implementation, WIFAS is the main nutrition program targeting Indonesian adolescents to follow the WHO

recommendation for iron and folic acid for menstruating girls and women. This program has been implemented in junior and senior high schools across the country, requiring multisectoral collaboration between the health and education sectors at the central and local levels. This collaboration makes WIFAS implementation in Indonesia unique as it allows the integration of local context and innovation, such as the adolescents' involvement as Segani ambassadors in Cilegon and Cetar ambassadors in Bogor. However, WIFAS implementation as a collaborative project might face the challenge of diverse will and understanding across the sectors, including the gender perspective toward WIFAS. Nutrition International has played a significant role in providing technical assistance and training to support WIFAS implementation (Roche et al, 2018), and this role can be extended by addressing gender barriers related to other health issues, such as different support for accessing health and nutrition information between adolescent girls and boys. This gender mainstreaming may cover the intersection between gender and health and bring the related stakeholders to the same goal of achieving gender equality between adolescent girls and boys.

Reflecting on the current WIFAS implementation as one of the gender-sensitive programs for adolescents, there are potential areas for developing other gender-responsive programs for adolescents in addition to sustaining WIFAS itself. First, this study captured the willingness of the government, teachers, and related parties to support WIFAS as they are aware of the need to improve adolescent girls' health. While at the same time, this study has identified other adolescent health issues, such as mental health and reproductive health issues, including adolescent pregnancy and other dimensions of nutrition. Thus, it is potential to develop such programs for improving adolescent health while gaining adequate support from the government, schools, and related parties. Second, both challenges and innovations in WIFAS implementation, monitoring, and evaluation suggest the need for NI's further support. For instance, some rejections to WIFAS suggested the need for BCC to raise awareness and nutrition education, which later can be integrated into the current WIFAS or established as a separate program. The gender equality concept can also be introduced to adolescents through nutrition education, aiming at improving their nutrition knowledge and addressing unequal gender norms and practices that might limit their access to healthy diets as well as unique biological needs. Third, sexual and reproductive health (SRH) school programs might be warranted to address poor SRH knowledge and protect adolescents from unwanted pregnancy or unsafe sexual behaviours.

The implementation of Aksi Bergizi, which includes WIFAS, school breakfast guidance, and behaviour change interventions, increased attention to adolescent nutrition improvement. At the same time, this program may be another entry point for mainstreaming gender equality, particularly in the adolescent health and nutrition context. Drawing from Aksi Bergizi implementation, this study highlighted two main factors influencing adolescent health and nutrition program sustainability, i.e., parents' socioeconomic status, where parents are

required to provide healthy meals to send to school and school leadership. Aksi Bergizi or other adolescent nutrition programs might not be fully implemented in schools with most of the parents having low socioeconomic status due to household food insecurity and limited ability to provide healthy foods for students on a regular basis. A study among adolescents and parents reported an increased risk of adolescent food insecurity among nutritionally illiterate adolescents, and poor parental food literacy increased the household food insecurity risk (Hoteit et al, 2022). Thus, improving food and nutrition literacy is essential, which may include how to prepare healthy and affordable diets.

School leadership is another key for adolescent health and nutrition programs. For example, promotion of school breakfast and WIFAS have been conducted regularly in SMP 5 Cilegon, and this success is attributed to the school head's enthusiasm to improve adolescent health and nutrition. The case of SMP 5 Cilegon is in line with the study of Machado et al (2022), which suggested school nutrition leaders to elaborate technical expertise, clear communication, and staff involvement as a means to implement nutrition programs successfully. At this school, some teachers will check students' meals in the morning, whether each student brings a nutritionally balanced diet including staples, vegetables, fruits, and protein food sources. The recap of these meal checks will be reported to the parents, and the parents whose children did not bring the balanced diet will be invited for discussions. Through this discussion, the head of the school described that they could figure out why the students did not bring meals as suggested. One of the common causes is parents' inability to provide healthy meals in the morning, so the school head will give some examples of healthy and affordable foods, as well as explain why it is important to provide healthy and nutritious meals. However, even though some more affordable options may exist, more exploration on the risks of stigma and perceptions of this practice are required before broader recommendations are made to ensure it does not have negative consequences on attendance of student wellbeing and to see if it promotes dietary change. The school head and UKS/M teacher also collaborate with community healthcare in providing a healthy canteen and training the canteen vendors about healthy foods as well as discussing, an opportunity to improve available foods.

4.3. Gender norms in adolescent health and nutrition

Gender gaps in Indonesia have been narrowed, particularly gender disparity in education, women's participation in the political sector, and gender mainstreaming in policy making. However, gender-related challenges persist in the health field (UNFPA Indonesia, 2015). Gender norms are known to be one of the mediating factors of health and nutrition and its impact on mortality (Richards et al, 2013). In this study, we found that certain norms are still adopted in the communities, including at the household level.

Fathers are perceived as the main breadwinner, while mothers have a role in household management. In most cases in this study, domestic authority, including financial management, is held by the mother.

Decision-making in the family is predominantly done through parental discussion. Every child has the same rights to access education, healthcare, and food regardless of gender. Most of them are also allowed to give their opinion and are involved in the decision-making process, especially related to education. In terms of labour division at home, mothers are expected to take care of most household chores, ensuring that the family lives properly. Although other family members are also involved in the household-related labours, food purchase and preparation are still mainly the responsibility of the mother. This finding is also reported in the UNICEF publication, which stated that unequal distribution of household labour between parents, where women are responsible for food shopping and family meal preparation, became one of the barriers to improving adolescents' dietary practice and physical activity (UNICEF, 2021).

Limited time in nutritious food preparation due to many responsibilities may also increase the probability of consuming ultra-processed foods (UPFs). UNICEF's study involving global adolescents and mothers in 18 countries indicates that UPFs are favoured, even though they are known to be unhealthy, but they are cheap, easy to find, quick to prepare and tasty (UNICEF, 2023). It may be relevant to the findings of this study where adolescent girls reported that they often consume unhealthy snacks, such as *seblak*, and exclude vegetables from their diet. The different dietary pattern was observed among adolescent boys. Some adolescent boys in Banten tend to pay more attention to their diet, especially protein intake for building their muscles. However, the case is not commonly found in other study sites where adolescent boys usually have a regular dietary pattern following their family. In East Nusa Tenggara, adolescents prefer instant noodles rather than other homemade food. Sometimes, families even trade their livestock with instant noodles so that their children could eat pleasantly. UPF consumption is known to be one of the risk factors for overweight and diet-related noncommunicable diseases. Meanwhile, UPFs tend to be low in essential micronutrients (UNICEF, 2023). Thus, low micronutrient intake should be a concern in this type of dietary pattern as it may contribute to the anaemia, especially among adolescent girls despite the WIFAS program.

In terms of child marriage, the data suggested that the prevalence is declining, indicating a positive attitude change towards the discriminatory norm. However, it remains an obstacle to the health status of adolescent girls and women. There are still cases where girls drop out of school due to pregnancy, delinquency, economic reasons, or failure to continue to higher levels of education. Due to societal stigma, this is still prevalent in areas not close to urban centres, such as West Java and East Nusa Tenggara. Moreover, as it is considered a disgrace and private matter, child marriage and early pregnancy are rarely reported. This practice may hinder the chance of adolescent girls to get proper health services based on their condition.

Furthermore, this study found that adolescent girls get knowledge about puberty but not through comprehensive sex education. Meanwhile, such communication and treatment

are rarely found in boys as they tend to not communicate their puberty phase to their parents and vice versa. Girls also tend to be more open to their parents, especially mothers, when they have experienced their first menstruation cycle. Clumsiness was noticed when it comes to puberty talks between parents and their son. Adolescent boys are mostly reluctant to talk about their first nocturnal emission experience to their parents and tend to discuss it with their older siblings or friends instead. Rigid gender norms, such as boys should be tough and not show emotion, can be harmful and may cause damage to the relationships between men and women, and between parents and their children (UNFPA Indonesia, 2015). Moreover, there is a different perspective on reproductive issues between girls and boys. Menstruation is considered a health matter, while nocturnal emission is viewed as a sexual matter, and discussing the sexual matter is still considered taboo in the Indonesian context.

Access to learning and education programs is key in supporting gender equality, including in the health and nutrition fields. This study captured diverse cultural and gender norms across different geographical backgrounds, such as between rural and urban areas. Specifically, there is a marked difference in terms of learning programs and access to knowledge and information on gender and gender equality across different geographical backgrounds. As women's and feminist organisations do not exist or run such programs in most rural areas, schools are most likely to be the main institution to provide gender education programs in rural areas.

Conclusion and Recommendations

This study has investigated gender equality in Indonesian adolescent health and nutrition programs, which also revealed the potential roles of government, communities, schools, and households in promoting gender equality. Despite the initiation of gender mainstreaming at the national level, some gender inequality issues are still observed in the studied location, which is likely to hinder potential equity in access and benefits of adolescent health and nutrition programs. These findings also highlight the need to address gender inequalities in improving adolescent girls' nutrition. Thus, future gender mainstreaming attempts might need to broaden the focus not only on health and nutrition issues but also on the potential determinants around the issues. The diverse society included in this study (e.g., religious and public schools, rural and urban populations) suggested the needs for in-depth attention to the local context during the policymaking process and program implementation.

The results of this study also showed that more health and nutrition programs that target adolescents and incorporate gender equality concepts are needed. These programs should not only focus on adolescent girls due to their unmet nutrition needs and inequities in access to good nutrition, and as Indonesia prioritises reducing stunting, but programs targeting adolescent boys are also important especially around sexual and reproductive health and nutrition education. In addition, it is important to involve adolescents in developing gender-responsive and youth responsive health and nutrition programs as it can accommodate their voices and increase the potential for program success. There are also potential areas for developing gender-responsive programs, including nutrition education and SRH school programs. Meanwhile, school leadership is also crucial for the sustainability of adolescent health and nutrition programs.

In response to the findings on adolescent health and nutrition and gender-related issues, some recommendations are proposed as follows:

Central government

1. Continuing gender mainstreaming attempts (i.e., PUG and PPRG). The Ministry of Women Empowerment and Child Protection and other relevant ministries can collaborate on mainstreaming gender and budget tagging, particularly on adolescent health and nutrition programs.
2. Considering SRH education and other gender-responsive programs to be delivered at different types of schools. The Ministry of Health, Ministry of Education and Culture, and Ministry of Religious Affairs might consider delivering SRH education and gender-responsive programs in different mechanisms depending on the school's nature. For example, SRH education at School for Special Needs might also need further education for parents/caregivers, while SRH education at other schools can be delivered separately between female and male students.
3. Evaluating current policies for child marriage prevention, e.g., reconsidering the effectiveness and impact of granting "dispensasi nikah", as well as other preventive policies.

Local government

1. Initiating multisectoral collaborations to support gender-sensitive AHN programs, e.g., MoU between the district/city health office and the district/city education office in terms of WIFAS, Aksi Bergizi, or other programs requiring collaboration.
2. Introducing gender mainstreaming attempts to a wider society, e.g., schools, Puskesmas, and other communities. These attempts can help address health-related gender inequality issues affecting adolescent health and nutritional status, e.g., child marriage, early pregnancy, body

image perception, and poor dietary patterns.

3. The district/city health office might need to strengthen coordination with Puskesmas and schools about adolescent health programs, e.g., ensuring the distribution of iron supplements to support WIFAS, improving the availability of healthcare facilities within UKS/M, and implementing better monitoring of equipment and healthcare facilities for adolescents both in and out of school.

Community, e.g., Puskesmas and schools

1. Ensuring an adequate availability of youth responsive services at health facilities and logistics across Puskesmas and schools.
2. Establishing more adolescent-integrated health posts with more health and nutrition programs for both adolescent boys and girls, including out-of-school adolescents.
3. Identifying different contexts and motivations by diverse adolescents in accessing health services and information (e.g., adolescent boys and girls might have interests in different health and nutrition topics, so accommodating this difference might help in increasing the use of health services and attracting more adolescents to health and nutrition education).
4. Building the capacity of adolescent health cadres by involving community leaders, the Family Welfare Movement (PKK), and other community groups focusing on adolescents.
5. Improving school health programs, such as SRH education, mental health program, and understanding benefits and equity in access to school lunch recommendation, promotion of healthy breakfasts etc.
6. Increasing parental involvement by program socialisation and communicating related issues, e.g., nutritious foods and other health programs at school.
7. Health service provision and nutrition program development should consider the specific needs and gender preferences of each adolescent group. It is crucial to actively involve adolescents in designing the programs to ensure that the programs will address their unique requirements.

Parents/caregivers and adolescents

1. Ensuring adequate parental supervision (e.g., social media use) and parental involvement in general (e.g., supporting adolescents in terms of SRH and mental health issues). This study has highlighted the importance of parents-adolescent communication to support adolescent health as well as protect adolescents from social and gender-related issues.
2. Implementing gender equality concepts in daily life (e.g., distributing domestic chores equally between boys and girls, providing adequate foods to support adolescent growth regardless of gender) as parents/ caregivers will be adolescents' role models in understanding gender equality.
3. Parents and adolescents can collaborate to promote and maintain healthy lifestyles and balanced diets at home.
4. Accounting for healthy and balanced diets in providing food for adolescents and other family members. In doing so, parents/caregivers will need to understand the nutritional and health needs of adolescent stage of life, and their potential to benefit from improved nutrition and lifestyle behaviours. Parents will also need to understand the unmet needs of adolescent girls and potential benefits of WIFAS to prevent and reduce anaemia, of which information can be obtained from community health workers, health cadres, or teacher.

NI and potential partners

1. Initiating and advocating gender-responsive AHN programs, e.g., nutrition education, SRH and mental health programs.
2. Providing technical support for gender mainstreaming in AHN programs through technical guidance, capacity building and other forms of assistance.
3. Evaluating the existing programs in collaboration with the government, e.g., school meals program implementation in poor areas, and seeking solutions for program improvement.
4. Engage youth to make programs more responsive and relevant to their expressed needs, motivations and priorities and to engage them as champions for their own health and access to their rights.

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Annexes

Data Collection Guidance: List of Questions

Interview and Focus Group Discussion
Sex and Gender-Based Study of Adolescent Health and Nutrition Programs
The Habibie Center and Nutrition International

Interview

Category	Criteria	Keywords	Questions
Government (Central & Local)	1. Ministry of Health 2. National Development Planning Board (Bappenas)	1. National issue mapping of malnutrition 2. National policies for addressing malnutrition among children and adolescents. 3. Programs and implementation 4. Gender-based program participation and representation 5. Health and nutrition information dissemination and access provision	1. Do you have a specific written policy or document about malnutrition among adolescents? 2. What factors are considered the most in making these policies? 3. What programs do you have to overcome malnutrition among adolescents? Do these programs address prevention as well as an intervention? 4. In creating and implementing these programs, how do you account for gender and sex? 5. Do you see any different problems of malnutrition between those faced by girls/women and by men/boys? 6. If so, how do you accommodate and consider these different problems? 7. Do you also see different needs women/girls and men/boys have in terms of health and nutrition? If so, how do you reflect and accommodate these differences in your policies and agendas? 8. Do you have sex-disaggregated data on malnutrition? Do you develop gender-responsive budgets in your programs? 9. How did you make the policies on malnutrition? How is women's participation incorporated in the making of these policies? To what extent is women's participation important in making policies? 10. In your understanding, what are the root problems of malnutrition among children and adolescents? 11. What gender equality considerations are taken into account when developing programs? 12. Are there any specific nutrition programs for women/men and girls/boys? 13. How are the implementation and coverage of malnutrition programs across the country, particularly among children and adolescents? What are the key implementation challenges? Are these challenges different for boys and girls? Are there any steps taken to increase attendance in school/reduce absenteeism to increase access/coverage of the program? 14. How is the decision made for distribution? Are gender and sex considered in classifying target groups? Why? Are women and girls involved in the implementation of these programs? 15. How do you think the policies and programs on malnutrition among children and adolescents contribute to enhancing gender equality and empowering girls? 16. How long have you been implementing these programs?

		6. Unmet/ unreached population groups in the AHN programs 7. Multisectoral collaboration 8. Challenges and barriers to delivering a) malnutrition programs and b) gender-responsive programs (if any) for children and adolescents	17. How successful are the programs in combating malnutrition? What factors help you accomplish successful goals? What challenges and obstacles do you encounter? 18. Do you have collaborative programs and agendas with other institutions and organizations? If so, with whom do you collaborate? How does the collaboration help you improve the implementation of the programs? In specific, how does the collaboration help you mainstream gender in your programs? 19. Do you have specific collaborative works with the Ministry of Women's Empowerment? Do you think it is important to work with this government body? Why or why not? 20. If you have grand national planning on malnutrition among adolescents, how do you ensure the programs reach the targeted goals? Especially, related to gender mainstreaming, how do you prepare resource persons who can deliver programs with a strong gender perspective? 21. Do you consider disability or disabled persons (boys and girls) specific in your policies and programs on malnutrition? 22. Outside malnutrition, in what ways gender is mainstreamed in your policies and agendas? How is gender equality considered one of the key goals of these programs? 23. How do you attempt to build public awareness of malnutrition? How do involve both women and men in your programs of building public awareness and participation? 24. What areas do you think need further efforts to better overcome malnutrition in Indonesia, especially among adolescents? What next strategies do you think most priority? What strategic ways do you think need to build in the future?
	1. Ministry of Education 2. Ministry of Religious Affairs 3. Ministry of Village (Kemendesa) 4. Ministry of Home Affairs	1. National issue mapping of women and adolescents' protection, gender equality 2. National policies for addressing women- and adolescents-related issues	1. What gender inequality issues are related to your Ministerial scopes of policies? 2. Do you have policies or programs on gender equality? If so, what forms of policies and programs? What are the goals of these policies and programs? If don't have any, why? 3. Do you have policies and programs on combating malnutrition among children and adolescents? If so, what forms of policies and programs? What are the goals of these policies and programs? If you don't have one, why? 4. How are the implementation and coverage of malnutrition programs across the country, particularly among children and adolescents? What are the key implementation challenges? Are these challenges different for boys and girls? Are there any steps taken to increase attendance in school/reduce absenteeism to increase access/coverage of the program?

		3. Programs and implementation 4. Gender-based program participation and representation 5. Unmet/ unreached population groups in the programs, particularly related to health, nutrition, and education issues 6. Multisectoral collaboration 7. Challenges and barriers to delivering a) malnutrition programs and b) gender-responsive programs (if any) for children and adolescents	5. If you don't have a direct program or policy on malnutrition and gender equality, are there any policies or programs that can contribute to these two agendas? What are their contributions? 6. For Education and Religious Ministry, how important are schools in campaigning for gender equality and against malnutrition among children and adolescents? 7. Do you think it is important to integrate gender and malnutrition in learning systems, for example in the syllabus? Do you already have a syllabus that teaches students about gender equality? 8. Do you have school-based programs on gender equality and malnutrition? Do you think it is important to approach teachers in gender equality and malnutrition programs? 9. Are there any cases of bullying based on gender and sexual identity and orientation involving students? How do you tackle the cases, If any? What is body shaming? How do you respond? 10. Do you think it is important to integrate programs on malnutrition in schools with gender equality agendas? Do have this kind of program? 11. Do you consider the representation of women and girls in the implementation of your programs on malnutrition? 12. Do you include the specific needs of people with disabilities in your policies or programs related to malnutrition or health? Do you have programs that empower people with disabilities? 13. (a) Are there certain groups of people not currently reached by existing health, nutrition, and education services? (b) If so, who are they? 14. Is there any collaboration across ministries and agencies for those issues? 15. What are the challenges and solutions to delivering a) malnutrition programs and b) gender-responsive programs for children and adolescents (if any)? b) programs or any attempts aimed at reducing gender barriers in access and adoption of malnutrition programs

	Ministry of Women's Empowerment and Children Protection	1. Existing policies and programs on malnutrition among women, girls, and children. 2. Malnutrition as a gender equality issue should be addressed by the Ministry 3. Gender mainstreaming in malnutrition policies and programs 4. Strategies for implementing gender-mainstreaming policies and agendas	1. Do you have particular programs and policies on malnutrition among women and girls? What forms of policy and what kinds of programs do you have? 2. How long you have been working on these programs? 3. Do you see malnutrition among women, girls and children as a gender equality issue? Do you think there is any correlation between malnutrition and gender equality? In what way? Do you also see different needs women/girls and men/boys have in terms of health and nutrition? If so, how do you reflect and accommodate these differences in your policies and agendas? 4. Do you have sex-disaggregated data on malnutrition? Do you develop gender-responsive budgets in your programs? 5. In some areas in Indonesia, there is still a high case of child marriage (i.e., a marriage of anyone below the age of 18 years). Do you see any correlation between child marriage with malnutrition among girls? If so, how do you integrate the agendas against child marriage with combating malnutrition among girls? 6. How do you see malnutrition among adolescents and children as an issue of children's rights? What children's rights are yet to meet in the cases of malnutrition among adolescents and children? 7. How do you see domestic violence or gender relation in households impacts malnutrition among women and girls and children? 8. Do you think women and girls have a bigger vulnerability to malnutrition? Why or why not? 9. How do your policies and programs on women's empowerment and child protection address health and malnutrition among women and girls? 10. Do you prioritize the participation of women and girls in the implementation of your programs on malnutrition? Why do you think is it fundamental to organize women's and girls' participation? 11. Do you have collaborative programs and agendas with other institutions and organizations? If so, with whom do you collaborate? How does the collaboration help you improve the implementation of the programs? In specific, how does the collaboration help you mainstream gender in your programs? 12. If you have grand national planning on malnutrition among adolescents, how do you ensure the programs reach the targeted goals? Especially, related to gender mainstreaming, how do you prepare resource persons who can deliver programs with a strong gender perspective? 13. Do you consider disability or disabled persons (boys and girls) specific in your policies and programs on malnutrition? 14. Ministry of Women's Empowerment is found to actively campaign for men's participation in gender equality. Why men's participation is important? Do you think men's participation in gender equality is strategic and relevant in the particular case of malnutrition? 15. Malnutrition has a relation with reproductive health, for instance in the case of menstruation, pregnancy, and many others. Do you have programs that integrate these two women's issues, malnutrition and reproductive health? 16. How do you attempt to build public awareness of malnutrition? How do involve both women and men in your programs of building public awareness and participation?

			17. What areas do you think need further efforts to better overcome malnutrition in Indonesia, especially among adolescents and children? What next strategies do you think most priority? What strategic ways do you think need to build in the future?
	National Family Planning Coordinating Agency (BKKBN)	1. Programs related to adolescent health, nutrition and related rights 2. Child marriage 3. Gender-based program participation and representation 4. Unmet/ unreached population groups in the programs, particularly related to health, nutrition, and education issues 5. Reproductive health programs for out-of-school adolescents 6. Challenges and barriers to delivering a) malnutrition programs and b) gender-responsive programs (if any) for children and adolescents	1. (a) What are the goals, policies and programs of your ministries/agencies aiming at improving adolescent health and nutrition and promoting gender equality? (b) How is the current progress of national stunting reduction, especially in relation to adolescent nutrition and health? 2. (a) How is the trend of child marriage across the country? (b) Are there programs delivered to prevent and manage this issue? 3. (a) How is the implementation so far? (b) Are there issues that disproportionately affect the consumption of health and nutrition services and products for women and girls vs. men and boys, for adolescent girls and boys vs. older women and men, e.g., lack of demand for services due to stigma and social norms? 4. (a) Are there certain groups of people not currently reached by the existing health and nutrition services delivered by BKKBN? (b) If so, who are they? 5. Are there specific health, nutrition, or education programs for out-of-school adolescents, e.g., education on reproductive health? 6. What are the challenges and solutions to delivering a) malnutrition programs and b) gender-responsive programs for children and adolescents (if any)? What factors negatively influence the distribution of nutrition and health services and products that you have?

	Provincial and District Health Office	1. Sex-disaggregated data in health, nutrition, and gender issues (Data availability and monitoring) 2. Policies and implementation 3. Agenda and measures for child and adolescent health improvement 4. Gender-based program participation and representation 5. Gender as a framework in policymaking and implementation 6. Health and disability 7. Challenges and barriers to delivering a) malnutrition programs and b) gender-responsive programs (if any) for children and adolescents	1. (a) Do you apply gender framework in your intervention to health problems in your area? (b) Do you have sex-disaggregated data? (c) Do you have policies that consider sex and gender differences in health? (d) How does the monitoring program work? 2. (a) What are the goals, policies and programs of your agencies aiming at improving adolescent health and nutrition and empowering gender equality? (b) How is the implementation so far? 3. (a) What are the current activities and measures for improving child and adolescent health? (b) Are they fully implemented? 4. Are there issues that disproportionately affect the consumption of health and nutrition services and products for women and girls vs. men and boys, for adolescent girls and boys vs. older women and men, e.g., lack of demand for services due to stigma and social norms? 5. Do you consider gender perspective in policy making and implementation? Could you please provide an example of that consideration? 6. (a) What is the impact on the health issue in people living with disabilities? (b) To what extent does the health program benefit people with disabilities? (c) What is the impact on the health issue in other marginalised groups, e.g., those living in remote areas or particular ethnic groups? (d) To what extent does the health program benefit those marginalised groups? 7. What are the challenges and solutions to delivering a) malnutrition programs and b) gender-responsive programs for children and adolescents (if any)? What are the enabling and hindering factors of the distribution of nutrition and health services and products that you have?

	Agency of Women Empowerment, Child Protection, and Family Planning (DP3AKB at the provincial/district level)	1. Policy and program for child/adolescent gender justice 2. Child marriage 3. Adolescent health, reproductive health, and related rights 4. Men's participation strengthening in gender justice 5. Gender identity and gender-diverse perspectives 6. Unmet/ unreached population groups in the programs, particularly related to health, nutrition, and education issues 7. Challenges and barriers to delivering a) malnutrition programs and b) gender-responsive programs (if any) for children and adolescents	1. What are the goals, policies and programs of your agencies aiming at improving child/adolescent health and nutrition and promoting gender equality? 2. (a) What is the trend of child marriage across the country? (b) Are there programs delivered to prevent and manage this issue? 3. Are there specific programs addressing health, nutrition, or reproductive health and other related rights for adolescents, e.g., education on reproductive health? 4. How does the status of men compare to the status of women? What about the enjoyment of rights for boys and girls? 5. What stereotypical gender norms (if any) or exclusionary practices exist in communities? What is a man's role in gender equality activism? 6. Are there certain groups of people not currently reached by the existing health and nutrition services delivered by DP3AKB? Who are they? 7. What are the challenges and solutions to delivering a) malnutrition programs and b) gender-responsive programs for children and adolescents (if any)? What factors negatively influence the distribution of nutrition and health services and products that you have?

	Provincial and District Planning Agency	1. Local regulations on adolescent health and nutrition 2. Monitoring and evaluation of adolescent health and nutrition programs 3. Gender-based program participation and representation 4. Unmet/ unreached population groups in the programs, particularly related to health, nutrition, and education issues	1. (a) What are the goals, local policies and programs of your agencies aiming at improving adolescent health and nutrition and promoting gender equality? (b) What are the challenges and solutions (if any)? 2. (a) How is the M&E program carried out? (b) Is there a certain period for doing it? (c) And if something is found that is not appropriate, what feedback loops or grievance mechanisms exist? 3. Are there any issues that disproportionately affect the consumption of health and nutrition services and products for women and girls vs. men and boys? 4. (a) Are there any certain groups of people who are not currently reached by existing health and nutrition services? (b) Who are they? (c) Are any steps taken to provide access to these groups? If yes, what are these steps?
	Subdistrict/Village Head	1. Village government authority 2. Gender-based program participation and representation 3. Health-, well-being-, women- and adolescent-related policies and programs	1. In general, what is the situation of health and malnutrition in your area? 2. What are the roots of malnutrition in your area? Who experience it the most? 3. Do you have any programs to overcome malnutrition in your area? What kinds of program? How do you implement these programs (who involve in the implementation, who are the target groups). Do you consider including women and girls in the implementation of the programs? 4. What is the authority and role of the village government in addressing malnutrition issues as well as gender-responsive programs for children and adolescents? 5. Do you provide sex-disaggregated data on adolescent health? (a) What conditions cause these problems? (b) What stereotypical gender norms (if any) or exclusionary practices exist in communities? (c) What are your roles in preventing the problems, e.g., young marriage? (d) Do you integrate gender into your strategy? (e) If yes, how do you apply a gender perspective to your strategy?

		4. Available resources and facilities 5. Challenges and barriers to delivering a) malnutrition programs and b) gender-responsive programs (if any) for children and adolescents	6. Do you see and notice gender equality issues in your areas? If so, what kinds of issues? Do you think these are serious social problems for your people? 7. Do you find cases of child marriage in your areas? If so, how do you respond to it? 8. Who usually makes decisions around accessing health service within households in your community? Who controls finances within household in your community? Who receives information about health and nutrition services? What are the health problems among adolescents? Are there health and nutrition programs for women and adolescents in your area? 9. Are there resources and facilities in place to address the issue? e.g., a social club mobilized by the village government to prevent sexual violence against children and adolescents. 10. Do you work with local women's groups or organizations or figures in developing and implementing programs on malnutrition? 11. (a) What are the challenges and solutions to delivering health and malnutrition programs in your area? (b) What approaches/strategies/policies do you have to tackle the problems?
	Provincial and District Social Affairs Office, Provincial and District Education Office	1. Health- and well-being-related policy 2. Perspectives on adolescent malnutrition and child marriage as social issues 3. Other social issues among children and adolescents 4. Health and well-being of children/adolescents with disabilities 5. Social insurance	1. What are the goals, policies and programs of your ministries/agencies aiming at improving adolescent health and nutrition and promoting gender equality? How is the implementation so far? 2. What is the phenomenon of malnutrition in the social environment? Is there a gender equity related to malnutrition? 3. Are there any other issues related to children and adolescents? Are there any issues that stand out in terms of men and women? What problem trends afflict male children and adolescents as well as female ones? How prevalent is child marriage in this locality? What are the reasons usually given for the practice? 4. What is the impact on the health issue in people living with disabilities? 5. Do all children and adolescents have social insurance that protects them? Which groups do not? 6. Are there certain groups of people not currently reached by the existing health and nutrition services delivered (b) If so, who are they? 7. Are there any gender gaps in the data with respect to enrolment and completion rates? 8. Do you have policies that consider sex and gender differences in education, health and other human rights?

		6. Gender-based program participation and representation 7. Sex-disaggregated education data 8. Education-related policy 9. Gender issues at school (e.g., sexual abuse, child marriage) 10. Health and gender literacy programs 11. Treatment for out-of-school adolescents 12. Challenges and barriers to delivering a) malnutrition programs and b) gender-responsive programs (if any) for children and adolescents	9. Are there issues of sexual violence among students in the community? 10. Are there any activities addressing gender issues in a school? What form does this take? Is it done for students as well as people in the school environment such as principals, teachers, staff and others? 11. Are there specific activities in terms of improving gender literacy in the health program? Who are the targets? 12. Do out-of-school adolescents remain a priority in the program's response to health monitoring? Are there issues of sexual violence among out-of-school adolescents in the community? 13. What are the challenges and solutions to delivering a) malnutrition programs and b) gender-responsive programs for children and adolescents (if any)? What factors negatively influence the distribution of nutrition and health services and products that you have?

Community healthcare	Puskesmas (Community health centre) and local clinic (if any)	1. Service capacity and cost 2. Type of regular health service 3. Nutrition education and counselling service 4. Health service for mothers, children, and children experiencing underage marriage (e.g., specific education) 5. Mental health and disability services 6. Male involvement and use of health services 7. Challenges and barriers to delivering gender-responsive nutrition and health service/ programs for adolescents	1. What types of services are intended for young girls and boys? How do adolescents usually pay for the service cost (e.g., health insurance, parents' out-of-pocket)? 2. What are the experiences of young women and men in using these health facilities, such as going to the Youth Posyandu? 3. Where do teenagers usually go for information about health or look for answers/help/opinions when they have questions/problems about health? Are there other platforms that could be used to reach women, men, adolescent girls and boys with health and nutrition services and products? 4. Are there health services for adolescents who faced early marriage? (e.g., specific education, pre-marital or marital counselling, family planning services, nutrition services for pregnant adolescents)? Are additional considerations given to them during pregnancy, or to their newborns (as they are at a higher risk of malnutrition) 5. Are there services for mental health and disability issues? 6. Are there any specific measures in place to respond to the needs of adolescent girls and boys? Could you provide any examples? How do you deliver the program for out-of-school and marginalized/vulnerable adolescents? (e.g., through PKBM) 7. Do you feel that you have sufficient knowledge and understanding on how to respond to adolescents, especially in delivering nutrition and health service/programs? Are there any other challenges and barriers in the implementation? Are there environmental conditions in the community that put either adolescent boys or girls, particularly at risk of ill health and nutrition problems? *Can use a flip chart consisting of type/source of information, existing problems, types of services*

	Posyandu (Integrated health service)	1. Type of service provided 2. Health service for mothers, children, and children experiencing underage marriage (e.g., specific education) 3. Male involvement and use of health services 4. Nutrition education and counselling service 5. Challenges and barriers to delivering gender-responsive nutrition and health service/ programs for adolescents	1. What types of services are intended for young girls and boys? 2. Where do teenagers usually go for information about health or look for answers/help/opinions when they have questions/problems about health? 3. What are the experiences of young women and men in using these health facilities, such as going to the Youth Posyandu? 4. Are there environmental conditions in the community that put either adolescent boys or girls, particularly at risk of ill health and nutrition problems? 5. Are there other platforms that could be used to reach women, men, adolescent girls and boys with health and nutrition services and products? 6. Are there any specific measures in place to respond to the needs of adolescent girls and boys? Could you provide any examples? How do you deliver the program for out-of-school and marginalized/vulnerable adolescents? (e.g., through PKBM) 7. Do you feel that you have sufficient knowledge and understanding on how to respond to adolescents, especially in delivering nutrition and health service/programs? Are there any other challenges and barriers in the implementation? *Can use a flip chart consisting of type/source of information, existing problems, types of services*

School 1. Public and private 2. Junior and senior high school 3. Boarding School	Headmaster	1. Health issues and programs at school 2. Gender-related issues at school 3. Education on children's rights 4. Gender-based program participation and representation (particularly health programs) 5. Inclusive policies and programs for students with disabilities 6. Parents' collaboration and participation, particularly in health, gender, and educational programs 7. Challenges and barriers to delivering a) malnutrition programs and b) gender-responsive programs (if any) for adolescents at school	1. (a) What diseases and/or signs of illness are currently being suffered by many students here? (b) Are there any male or female students suffering from these diseases and/or signs and symptoms of the disease? (c) This school received the Iron Supplementation Program (Tablet Tambah Darah - TTD) from the Puskesmas. What do you think is the importance of this program? How to evaluate its implementation? 2. (a) In your opinion, what is gender and does it have anything to do with the teaching and learning process at school? (b)Is there any different treatment for male students and female students or not related to the learning and teaching process (c) In your opinion, as the Principal, teachers and staff at this school, do you see any differences between male and female students in terms of: diligence, obedience, capabilities, performance? 3. Is there any treatment, rules and/or learning provided by the school to fulfill children's rights (receiving lessons, receiving learning facilities, being safe and healthy while studying) while at school? 4. (a) Apart from TTD, are there any programs from the Puskesmas related to adolescent health? How is the participation of male and female students? (b) Are there UKS (School Health Unit) activities? How is the participation of male and female students? (c) Is there any learning material about health? anyone up to the practical stage outside the classroom and in students' everyday lives? 5. Are there students with disabilities? What type of disability? How do other students, teachers and school staff respond to the needs in question? 6. (a) Are there regular meetings with the parents? If so, what is usually discussed? Is there a discussion on child health? (b) What is the usual ratio of male and female parents who come? (c) How involved are parents in decision-making at school? (d) How much involvement do parents have in school decision-making regarding the health of children and adolescents? (e) Are there any suggestions from parents about the role of the school in looking after students? 7. Did you find cases of bullying in the form of body shaming among students? If so, how did you respond to it? 8. Do you agree to give excused absences for a female student having menstruation? 9. Are there any school obstacles in carrying out programs on (a) nutrition and (b) sensitization on gender equality (if any) for students at school?

	Male teachers	1. His position as a male teacher and its effect on the learning process (e.g., gender-related authority, power relations) 2. Understanding of gender and health issues 3. Health, nutrition, and gender teaching 4. Gender-related issues at school 5. Gender-based learning participation and representation 6. Challenges and barriers to teaching health, nutrition, and gender issues to adolescents at school	1. (a) As far as you know, do your students perceive you as a teacher who is fierce, disciplined, or close to students? (b) In your opinion, are students more afraid of male or female teachers? (c) For example, there is decision-making in class, for example, the election of student leader/coordinator, who is more dominant in giving an opinion? How far is the teacher involved? Which students are more dominant, are they girls or boys? (d) In your opinion, are male or female students more receptive to lessons? 2. (a) What is the first thing that comes to mind when you hear the word "gender"? (b) In your opinion, do the biological differences between men and women influence their behaviour or do you think it is more a result of social and cultural factors? 3. (a) Does the subject you teach have topics about health? If so, could you please explain those health-related topics? (b) Do the subjects you teach have topics on nutrition and/or food? If so, could you please explain those nutrition-related topics? (c) As a male teacher, do you provide knowledge about women's reproductive health (menstruation, pregnancy and related matters) to your students? To all students or only to female students? 4. (a) Based on your observation, who gets sick more often, is it male or female? (b) Do you have any related data? © What diseases and/or signs of illness are currently being suffered by many students here? (d) Are there any male or female students suffering from these diseases and/or signs and symptoms of the disease? 5. (a) What is the proportion of girls and boys in the class? (b) What is the comparison between the activeness of male and female students in the class? (c) What is the comparison of the ability to master the lesson (e.g., based on the obtained marks) of male and female students in the class? (d) What is the gender of the class president in your class? What is the proportion of class managerial, e.g., predominantly male students? 6. (a) Do the students like and easily accept the learning materials about health, nutrition and food and gender 7. Do you observed any differences in adolescent boys and girls in terms of: eating pattern, physical activity, and autonomy? (b) What are the obstacles in providing health, nutrition-food and gender materials to students?

	Female teachers	1. Her position as a female teacher and its effect on the learning process (e.g., gender-related authority, power relations) 2. Understanding of gender and health issues 3. Health, nutrition, and gender teaching 4. Gender-related issues at school 5. Gender-based learning participation and representation 6. Challenges and barriers to teaching health, nutrition, and gender issues to adolescents at school	1. (a) As far as you know, do your students perceive you as a teacher who is fierce, disciplined, or close to students? (b) In your opinion, are students more afraid of male or female teachers? (c) For example, there is decision-making in class, for example, the election of student leader/coordinator, who is more dominant in giving an opinion? How far is the teacher involved? Which students are more dominant, are they girls or boys? (d) In your opinion, are male or female students more receptive to lessons? 2. (a) What is the first thing that comes to mind when you hear the word "gender"? (b) In your opinion, are there biological differences between men and women that influence differences in behaviour and personality between the two, or are these differences caused by social and cultural factors? 3. (a) Does the subject you teach have topics about health? If so, could you please explain those health-related topics? (b) Do the subjects you teach have topics on nutrition and/or food? If so, could you please explain those nutrition-related topics? (c) As a female teacher, do you provide knowledge about women's reproductive health (menstruation, pregnancy and related matters) to your students? To all students or only to female students? 4. (a) Based on your observation, who gets sick more often, is it male or female? (b) Do you have any related data? (c) What diseases and/or signs of illness are currently being suffered by many students here? (d) Are there any male or female students suffering from these diseases and/or signs and symptoms of the disease? 5. (a) What is the proportion of girls and boys in the class? (b) What is the comparison between the activeness of male and female students in the class? (c) What is the comparison of the ability to master the lesson (e.g., based on the obtained marks) of male and female students in the class? (d) What is the gender of the class president in your class? What is the proportion of class managerial, e.g., predominantly male students? 6. (a) Do the students like and easily accept the learning materials about health, nutrition and food and gender 7. Do you observed any differences in adolescent boys and girls in terms of: eating pattern, physical activity, and autonomy?? (b) What are the obstacles in providing health, nutrition-food and gender materials to students?

Community and women's organisations	1. Traditional organisation (Lembaga adat) 2. Religious organisations (NU, Muhammadiyah, PGI, Catholic, Hindu, Buddha, Confucianism) 3. Family Planning Association (PKBI) 4. NGOs/CSOs focusing on women empowerment	1. Gender issues in society 2. Gender-based representation and participation on decision making, traditional/ custom activities (kegiatan adat), or other community programs 3. Child issues in society 4. Role and involvement in malnutrition alleviation programs 5. Programs on gender justice, child empowerment, and malnutrition 6. Collaboration with government 7. Challenges and barriers to delivering gender-responsive nutrition and health service/ programs for adolescents	1. Why is it important to understand gender? How do you understand gender equality? 2. Do you see any forms of gender inequality in the community? What roles your organization can do to overcome these problems? 3. How is the involvement/participation in decision-making for women and girls in the community? 4. (a) Is there a role for youth groups/organizations in society? please specify (b) Are there differences in the treatment (discrimination) of girls and boys? (c) Are teenagers able to speak in the family and community in your environment? 5. (a) Are there specific religious or customary regulations/norms/values related to health and nutrition issues for adolescents? (b) If so, how are the implementation, monitoring, and evaluation? (c) Who develops and oversees the regulations? (d) What are the roles of religious and community leaders here? (e) What are your contributions/roles in health and nutrition issues for adolescents? 6. Are there specific programs on gender justice, child empowerment, and malnutrition? If so, do they use local foods/resources to do so? 7. When and how can multisectoral collaboration be carried out regarding health and nutrition for adolescents? 8. What are the most challenges and barriers related to gender-responsive nutrition and health service/ programs for adolescents? *Before KII and FGD, please ask informants about demographic questions (such as age, gender, education level, employment status, annual household income, marital and family status, etc)*

Adolescents	Non-binary students (Will be interviewed separately if inviting them into the FGD is unfeasible)	1. Understanding of gender 2. Gender issues at school 3. Understanding of child rights 4. Health concept and knowledge 5. Mental health experience 6. Understanding of nutrition and healthy foods 7. Understanding of reproductive health rights 8. Masculinity and femininity concepts 9. Participation in school activities 10. Internet and literacy about health and gender justice	1. Why is it important to understand gender? How do you understand gender equality? What are the expectations of parents and society for girls and boys? 2. Are there any different treatments, rules, or demands between male and female in the society, family, or school? (e.g., certain activities for specific gender, society common rules, etc) ? 3. What are the most common rights a child has in communities/schools? Have you got these rights? Please explain your answer. 4. Do you know about youth health? What do you think about youth health (such as SRHR) education for youth: Why is it important? How well is the information/education provided? In your opinion, to whom do teenagers seek answers/help/opinions when they have questions/problems about health? 5. Have you experienced mental health issues? If so, where did you seek help/treatment? 6. What do you know about nutrition? In your opinion, what are healthy foods? How do you perceive healthy foods? 7. What do you know about reproductive health rights? 8. In your opinion, how should girls and boys act? What should girls and boys look like? 9. Have you ever been involved in activities related to youth health at school? Has the teacher ever discussed youth health (e.g., anaemia, prevention of child marriage, etc.)? Please explain your answer. 10. Have you ever gotten information about health and gender on the internet or social media? Do you feel the level of knowledge and awareness on health issues is similar for girls and boys? Explain *Before KII and FGD, please ask informants about demographic questions (such as age, gender, education level, employment status, annual household income, marital and family status, etc)*

	Out-of-school adolescents: • Adolescent boys and girls • Non-binary adolescents • Adolescents with disability (Will be interviewed separately if inviting them into the FGD is unfeasible)	1. Age and family status 2. Reason for leaving school 3. Daily and social activities 4. Access to health services, nutrition and healthy foods, and education/ learning activities 5. Health and well-being concepts 6. Gender role 7. Emotions (e.g., shame, self-confidence) 8. Wishes and hopes	1. What are the reasons students drop out? Please explain. 2. What are your current activities? 3. What do you think about health programs for youth: Why is it important? Have you ever received a health or nutrition program (for example giving iron tablets? Did you benefit from the program? Did you feel the health care provider was respectful and responsive to your needs and concerns? Please explain 4. What are the most challenges and barriers to get nutrition and health service/programs for adolescents? Are there any differences based on gender? 5. How do you perceive health and well-being? 6. In your opinion, how should girls and boys act? What should girls and boys look like? 7. How do you see your current situation? Do you have any wishes or expectation for your future? *Before KII and FGD, please ask informants about demographic questions (such as age, gender, education level, employment status, annual household income, marital and family status, etc)*

FGD

Category	Criteria	Keywords	Questions
Student	Male students	1. Relationship with parents (mother and father), and siblings (brother, sister, non-binary) 2. Participation within the household/family 3. Access to food and related resources 4. Gender concept (exploring their understanding) 5. Masculinity and womanhood concepts 6. Gender issues at school 7. Participation in the gender justice movement 8. Health and well-being concepts, including reproductive health, nutrition, and healthy foods 9. Health, reproductive health, and related rights 10. Interaction with the community 11. Activities at school in general 12. Activities at school related to health and gender 13. School services related to health and gender 14. Gender-based participation and representation in school activities 15. Understanding of child rights	*Before KII and FGD, please ask informants about demographic questions (such as age, gender, education level, etc)* 1. How many children out of how many siblings? Could you please state the gender of each of your siblings? 2. (c) Do you often suggest opinions in the family? If so, what is the common response, e.g., accepted or rejected? (d) What suggestions have you ever heard and made in your family? 3. Do you usually have your meals at home or outside? Who provides and determines the menu for your family's meals? 4. (a) What is the first thing that comes to mind when you hear the word "gender"? (b) Have you ever heard of the concept of gender equality? (C) How do you learn gender? 5. What do you think about women who become a leader? In the class or group discussion settings, who do you think deserves responsibility for decision-making, i.e., male or female students? Why? (b) In your opinion, does the school environment provide sufficient portions in providing equal opportunities for women and men to express opinions and thoughts about learning and activities at school? 6. How do you define ideal body image and a healthy man/boy? 7. (a) In your opinion, what should we do to live a healthy life? (b) Do you think women or girls have different characteristics of being healthy? (c) Could you please explain about balanced nutrition for teenagers? 8. What do you know about menstruation and why do women menstruate? What do you know about nocturnal emission and why do boys experience that? Do you think that female students having periods or menstruation can be given special treatment? Have you ever observed that kind of special treatment at school or in your family? 9. (a) What do you know about: (a) anaemia and malnutrition ? (b) Where did you find out about this? (d) What are the causes of anaemia? (e) What is the impact of anaemia on reproductive health? (f) How do we prevent anaemia? 10. (a) After school, what are your activities? (b) Are you involved in youth community in your area (e.g., Karang Taruna) or extracurricular activity? (c) If so, could you please state the extent of your involvement? (d) Are you involved in an organization dealing with health and gender issues in schools (e.g., Student Organizations or Scouts, particularly in the Health Sector)? (e) Could you please tell me about this experience?

		16. Access to health services, including reproductive health 17. Access to information on health and gender, including information from the internet	11. (a) What kind of health- and gender-related services have you experienced? (b) Are there any health and gender-related services or activities in your surrounding area, including school? (c) In your opinion, are those health services sufficient to meet the needs of adolescent boys and girls? 12. In general, how is the number of female students compared to male students in your school? 13. (a) Could you please describe what you know about children's rights? (b) In your opinion, have these rights been fulfilled by the school and/or the environment around you? 14. (a) What health and gender information did you get recently? (b) What health and gender information do you remember the most? (c) Where did you get this information from?
	Female students	1. Relationship with parents (mother and father), and siblings (brother, sister, non-binary) 2. Participation within the household/ family 3. Access to food and related resources 4. Gender concept (exploring their understanding) 5. Masculinity and womanhood concepts 6. Gender issues at school 7. Participation in the gender justice movement 8. Health and well-being concepts, including reproductive health, nutrition, and healthy foods 9. Health, reproductive health, and related rights 10. Interaction with the community 11. Activities at school in general 12. Activities at school related to health and gender	*Before KII and FGD, please ask informants about demographic questions (such as age, gender, education level, etc)* 1. How many children out of how many siblings? Could you please state the gender of each of your siblings? 2. (c) Do you often suggest opinions in the family? If so, what is the common response, e.g., accepted or rejected? (d) What suggestions have you ever heard and made in your family? 3. Do you usually have your meals at home or outside? Who provides and determines the menu for your family's meals? 4. (a) What is the first thing that comes to mind when you hear the word "gender"? (b) Have you ever heard of the concept of gender equality? (c) how do you learn gender? 5. What do you think about women who become a leader? In the class or group discussion settings, who do you think deserves responsibility for decision-making, I.e., male or female students? Why? (b) in your opinion, does the school environment provide sufficient portions in providing equal opportunities for women and men to express opinions and thoughts about learning and activities at school? 6. How do you define ideal body image and healthy woman/girl? 7. (a) In your opinion, what should we do to live a healthy life? (b) do you think men or boys have different characteristics of being healthy (c) Could you please explain about balanced nutrition for teenagers? 8. What do you know about menstruation and why do women menstruate? What do you know about nocturnal emission and why do boys experience that? Do you think female students having periods or menstruation can be given special treatment? Have you ever observed that kind of special treatment at school or in your family?

		13. School services related to health and gender 14. Gender-based participation and representation in school activities 15. Understanding of child rights 16. Access to health services , including reproductive health 17. Access to information on health and gender, including information from the internet	9. (a) what do you know about: sperm, egg, fertilization and pregnancy, anemia, fetal development and birth? (b) where did you find out about this? (c) what are the causes of anemia? (d) what is the impact of anemia on reproductive health? (e) How do we prevent anemia) 10. (a) After school, what are your activities? (b) Are you involved in youth community in your area (e.g., Karang Taruna) or extracurricular activities? (c) If so, could you please state the extent of your involvement? (d) Are your involvement in an organization dealing with health and gender issues in schools (e.g., Student Organizations or Scouts, particularly in the Health Sector)? (e) Could you please tell me about this experience? 11. (a) What kind of health and gender related services have you experienced? (b) are there any health and gender related services or activities in your surrounding area, including school? (c) in your opinion, are those health services sufficients to meet the needs of adolescent boys and girls 12. In general, are there more female students than male students at your school? 13. (a) Could you please describe what you know about children's rights? (b) In your opinion, have these rights been fulfilled by the school and/or the environment around you? 14. (a) What health and gender information did you get recently? (b) What health and gender information do you remember the most? (c) Where did you get this information from?

Household	Husband/father	1. Gender norms and roles (traditional and current roles, impact on physical autonomy, diet/nutrition, etc.) 2. Masculinity 3. Health, reproductive health, and related rights 4. Position and participation within the community 5. Access to local resources (community and health/nutrition services) 6. Nutrition knowledge 7. Access to health services and information 8. Health insurance 9. Cultural and religious norms 10. Expectations towards the country and government	1. (a) What are the responsibilities of each family member to the family? (b) How is the labor distribution or division among family members? 2. What makes you be considered the head of the family? As the head of the family, what rights and responsibilities do you have in the family? 3. Do you feel to have extra burdens because of your role as the head of the family? 4. (a) From your perspective, how should a male family head act? (b) Who is/are the main caregiver(s) in the household? (c) How much do you usually involve your wife in decision-making and managing the household? 5. (a) What do you think about the health rights (incl. reproductive health) of your son/daughter? (b) What do you do to fulfill their health rights? 6. (a) How do you participate in the community? (b) Are men and boys supportive of programs that promote gender equality? (c) Do men and boys participate in health-related activities? 7. (a) How do you and your family usually access food and daily necessities? (b) Who in the household makes decisions about food, e.g., purchase, preparation, distribution? 8. How do you understand anaemia and malnutrition as a health as well as a gender problem? 9. (a) Through which channels do members of the household access information about health and nutrition services? (b) Is the information provided understandable and relevant to the motivations and aspirations of the user? 10. (a) Who in the household makes decisions around care-seeking or spending related to health, education, and nutrition services? (b) Who (women, men, boys and girls) is involved in providing care? (c) How do you pay for health and nutrition services (e.g., health insurance, out-of-pocket)? 11. What kind of food-, gender- and health-related religious norms and cultural traditions applied to your family? 12. Do you have specific expectations towards the government in terms of health and nutrition?

	Female head of household	1. Gender norms and roles 2. Womanhood 3. Health, reproductive health, and related rights 4. Position and participation within the community 5. Access to local resources 6. Nutrition knowledge 7. Access to health services and information 8. Health insurance 9. Cultural and religious norms 10. Expectations towards the country and government	1. What makes you be considered the head of family? 2. As the head of the family, what are your rights and responsibilities in the family? 3. Do you feel to have extra burdens because of your role as the head of the family? 4. Do you think with you being as the head of the family, your family live in better condition? In what way? 5. As the head of the family, do you receive invitation from the government to participate in any programs or attend community gatherings or conferences? 6. (a) What are the responsibilities of each family member to the family? (b) How is the distribution and division of labors among the family members? 7. (a) From your perspective, how should a female family head act? (b) Who is/are the main caregiver(s) in the household? 8. (a) What do you think about the health rights (incl. reproductive health) of your son/daughter? (b) What do you do to fulfill their health rights? 9. (a) How do you participate in the community? (b) Are women and girls supportive of programs that promote gender equality? (c) Do women and girls participate in health-related activities? 10. (a) How do you and your family usually access food and daily necessities? (b) Who in the household makes decisions about food, e.g., purchase, preparation, and distribution? 11. How do you understand anaemia and malnutrition as a health as well as a gender problem? 12. (a) Through which channels do members of the household access information about health and nutrition services? (b) Is the information provided understandable and relevant to the motivations and aspirations of the user? 13. (a) Who in the household makes decisions around care-seeking or spending related to health, education, and nutrition services? (b) Who (women, men, boys and girls) is involved in providing care? (c) How do you pay for health and nutrition services (e.g., health insurance, out-of-pocket)? 14. What kind of food-, gender- and health-related religious norms and cultural traditions applied to your family? 15. Do you have specific expectations towards the government in terms of health and nutrition?

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