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Optimizing Youth Participation in Maternal and Child Health Issues in Wonosobo Regency: Human-Centered Design-Based Policy Analysis

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Abstract
Maternal and child health (MCH) is a strategic problem in national health development that is crucial to raishing the standart of living for coming generations. Despite the implementation of numerous program aimed at lowering stunting, infant mortality (IMR) and maternal mortality (MMR), regional issues are still complicated, especially regarding youth participation in promoting the health agenda. Using a Human Centered Design (HCD) approach, this project aims to analyze youth participation in MCH issue and develop policy options based on local requirements. In February 2023, 38 people from variety of groups (youth, pregnant women, heatth works, religious leaders, and community members) participated in an HCD based Forum Dengar Pendapat (FDP) in Wonosobo regency. The data were analyzed using thematic analysis and validated using member checking and source triangulatin. The results of the study revealed five main strategic issues: high rates of child marriage, low knowledge of youth about reproductive health, suboptimal implementation of Respectful Maternity Care, limited access to health insurance, and minimal involvement of community leaders in child health issues. Through the use of the Youth Participation Theory, it was found that youth participation in Wonosobo is still at the symbolic to pluralistic level, but shows potential for improvement towards youth-adult partnership through collaboration mechanisms and policy design for youth. The integration of Youth Participation Theory and HCD in this study contributes theoretically to the development of a transformative participatory health policy model, in which youth a role as co-designers and agents of change in the formulation of public policy. These findings also have practical implications for local governments to strengthen the capacity of youth and create more meaningful spaces for participation, in order to accelerate improvements in maternal and child health at the local level.
Keywords: Maternal and Child Health, Human Centered Design, Youth Participation Theory, Public Policy

INTRODUCTION

Improving maternal and child health is essential for creating a high-quality future generation. The quality of maternal health services during pregnancy, childbirth, and postpartum has a direct impact on child growth and development, including nutrition, intelligence, and physical resilience (Black et al., 2013). Therefore, maternal and child health development is not only a medical issue but also a strategic agenda for sustainable development (Clark et al., 2020).

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The Indonesian government has made this sector a top priority in its national policy. This can be seen in the 2020-2024 National Medium-Term Development Plan (RPJMN), which sets the acceleration of reducing maternal and infant mortality as one of the national priority programs. In Indonesia, the issue of stunting is also a major concern for the government. The commitment to accelerate the reduction of stunting is manifested through the issuance of Presidential Regulation No. 72 of 2021 concerning the Acceleration of Stunting Reduction , with the target of reducing the prevalence of stunting in Indonesia to below 14% by 2024.

However, various challenges are still faced at the regional level, one of which is in Wonosobo Regency. Data from the Wonosobo Regency Health Office shows that as of September 2022, there were 12 cases of maternal deaths, with the main cause being preeclampsia/eclampsia at 19% occurring during the postpartum period (10 cases out of 12 cases). Meanwhile, in August 2022, there were 79 cases of infant mortality. Of these infant deaths, about 71% occurred at 0-6 days of age (prenatal period), with the dominant causes being asphyxia (29%) and low birth weight (24%). In addition, Wonosobo also still faces high stunting rates. Based on data from the Community-Based Nutrition Recording and Reporting System (EPPGBM) during the simultaneous weighing in August 2022, the prevalence of stunting reached 14.7% or 8,132 toddlers.

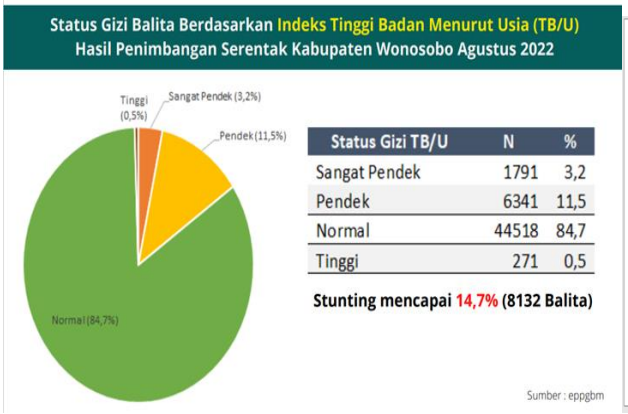

Figure 1.1 Nutritional Status of Children Under Five
Source: Wonosobo Regency Health Office (2023)

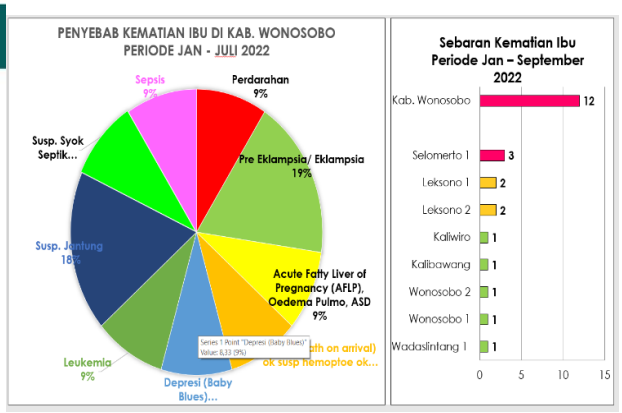

Figure 1.2 Maternal Mortality Rate in Wonosobo in 2022
Source: Wonosobo Regency Health Office (2023)

The high maternal and infant mortality rates (MMR/IMR) and stunting prevalence clearly show that maternal and child health issues cannot be separated from upstream factors related to the social and reproductive conditions of youth, such as child marriage and poor youth health status. Child marriage has a high negative impact on health risks because it can increase the risk of pregnancy complications, premature birth, death during childbirth, and babies born with low birth weight (UNICEF, 2005; Godha et al, 2013; Nour, 2009). In addition, women who marry at a young age tend to have limited access to education, reproductive health services, and adequate nutritional information, which

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ultimately contributes to a cycle of poverty and malnutrition across generations (Raj et al., 2010). In Wonosobo Regency, based on data from the Wonosobo Regency Office of Population Control and Family Planning, Women's Empowerment and Child Protection (DPPKBPPPA), there were 479 child marriages in 2021.

Meanwhile, youth, especially youth girls, still face nutritional and anemia problems that can affect the quality of future pregnancies. According to 2018 Riskesdas data, the prevalence of anemia among youth reached 32%, or 3 (three) to 4 (four) out of every 10 youth suffer from anemia. Therefore, youth participation in maternal and child health (MCH) issues is very important, especially in preparing their health and nutritional status to support the improvement of maternal and newborn health in the future. This condition emphasizes the importance of integrative efforts between maternal and child health policies and youth empowerment to break the chain of social health at the local level.

Based on this background, the research question is how to optimize the role of youth in supporting the improvement of maternal and child health quality in Wonosobo Regency based on needs. This study aims to analyze youth participation in MCH issues, particularly in efforts to prevent stunting, reduce maternal and infant mortality rates, and prevent child marriage, so that policies and strategies can be formulated to improve the quality of health for youth, mothers, and children in Wonosobo.

To formulate effective and need based interventions, this research employs a HCD approach. HCD underscores active engagement of stakeholder groups as principal agents, rather than secondary objects of intervention. HCD is grounded on the experiences and needs of the targeted group in crafting solutions for MCH (Holeman & Kane, 2020). While HCD is a new strategy in health interventions, the application of human centered research techniques like *participatory action research* and *trials of improved practice* has opened the door to HCD in health policy. The use of HCD has increased since 2016 (Kang et al, 2025). This aligns with low and middle income countries focus on local capacity and local programs development (Bazzano, 2020). Some studies show that HCD has the ability to identify and overcome contextual obstacles in MCH (Nijagal et al, 2021; Ackerman et al, 2025). A systematic review by Landeiro, et al (2025) also points out HCD ability to enhance users experience of services and enhance fairness in maternal health.

Wong et al. (2010), say that Youth Participation Theory explains the mechanism through which young individuals in the community are empowered social agents in health decision making. Also, this model confirms the understanding that participation is a continuum of empowerment and goes beyond token involvement. Five participatory models that cover the continuum from passive to transformational involvement. These models range from vassal to autonomous. Whereas HCD approach favors the notion that the human, in this case, a young person ought to be the central actor in the solution co-design process. To develop youth-led participatory policies in MCH. The combination of

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HCD and the Youth Participation Theory strengthens our understanding of youth needs, experiences, and aspirations. Youth Participation Theory and HCD integrations offer a framework for creating more responsive and inclusive health policy.

While Youth Participation Theory prioritizes participation phases that progress from symbolic to transformative (Wong et al., 2010), HCD methodology places greater emphasis on empathy, iterative processes, and co-development of solutions (Holeman & Kane, 2020). When both these methods work together, participatory policies can be developed that not only respond to the needs of the community but also shift the power relations between young individuals and decision-makers (Fakoya et al, 2022; Wilkinson et al, 2022).

There are currently few studies on the use of HCD, particularly those that emphasize youth participation in MCH. The majority of earlier research has concentrated more on the application of HCD for medical technology development or health care innovation than on the creation of social policies that involve youth (Bazzano et al, 2020; Johnson, 2021). This has led to a lack of understanding about how the HCD strategy might be modified to strengthen the responsibilities that youth contribute in locally promoting MCH policies. As a result, this study aims to help develop a needs-based youth participation model locally, which can be used as a foundation for developing cooperative initiatives between youth and local governments to enhance of maternal and child health policies.

METHOD

This study was carried out by inviting the stakeholders to a *Forum Dengar Pendapat* (FDP) using an HCD based approach to address maternal and child health issues in Wonosobo regency, Central Java, and held in February 2023. This activity involved 38 participants, consisting of 9 youth, 9 pregnant women, 7 health workers, 7 religious leaders and community leaders, and 6 representatives of community and civil society organizations. The participants were then sorted into focus groups in accordance with their respective backgrounds. The underlying belief of this exercise was to collect the experience, perception, and feedback of each group of stakeholders to develop recommendations towards strengthening MCH programs and policies in Wonosobo. Even with a small number of participants, their diversified backgrounds created a chance to gain a more in-depth insight into the various experiences and perspectives at the local level.

The HCD process implemented in the FDP consists of three key stages: (1) problem identification and analysis, (2) solution ideation, and (3) development of recommendation (Kang et al, 2025). In the identification stage, participants immerse themselves in the perspective, challenges, needs, and aspirations with an empathetic approach, generating meaningful insights and diverse solution options. During the ideation phase, participants formulate preliminary recommendations and gather feedback

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from relevant stakeholders. The final stage involves refining these recommendation through cross group discussions to achieve a shared consensus.

The data were analyzed using a thematic analysis (Braun & Clarke, 2006). Participants' talk findings were reduced, coded, and categorized into different underlying themes. To ensure the validity of the findings, validation was carried out through member checking by confirming the interpretation results with representatives from each participants group (Nowell, 2017). In addition, sourch triangulation was also used by comparing the results from various groups according to their respective background, providing a more in-depth understanding and increasing the credibility of the data (Patton, 2015).

RESULTS AND DISCUSSION

The Dynamics of Youth Participation in Maternal and Child Health Issues in Wonosobo Regency

The results of the HCD-based FDP in Wonosobo show that there are five main strategic issues that emerged from the experiences and challenges of participants in the context of MCH. These issues include high rates of child marriage, low of knowledge of youth about reproductive health, suboptimal respectful maternity care, limited access to health insurance, and low levels of community participation and involvement in efforts to improve MCH.

1. Child Marriage

Child marriage in Wonosobo is an outstanding issue. Based on data DPPKBPPPA, even in 2018 -2021 decreased, the reported is still quite high. There were 2.109 cases in 2018 and then the number dropped slightly further to 2.018 in 2019. It fell to 968 cases in 2020, down to just 479 of cases reported last year. Although there is a downward trend in the numbers, the data confirms that the practice of child marriage still occurs and requires more optimal and sustainable prevention efforts.

One of the main factors contributing to the high rate of child marriage is unwanted pregnancies, as well as parents' lack of understanding and awareness of the health and social risks of child marriage. According to Fan & Koski (2022), women who marry before the age of 18 are more likely to give birth at a young age, which in turn increases the risks for both the mother and the baby. In addition, Urquia et al (2022) show that child marriage increases the number of babies born with low birth weight and prematurely.

Preventive efforts have actually been made by local governments through the *Marriage Age Maturity* program, which includes premarital education, reproductive health counseling, and case assistance for youth. However, the effectiveness of this program is still limited because most interventions are still top-down and normative awareness-oriented, not yet fully involving youth as key actors in prevention and increasing parental awareness. A study by Zulu, et al (2022) shows that effective

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strategies for reducing child marriage rates include involving youth as agents of change, strong community support, and changing social norms.

In line with this, the National Strategy for the Prevention of Child Marriage 2020-2024 developed by Bappenas also emphasizes the importance of a community-based approach and education for parents and youth to change social norms that are permissive of child marriage practices (Bappenas, 2020). Therefore, Wonosobo needs to develop innovative and participatory prevention policy models, positioning youth not only as beneficiaries but as subjects and designers of solutions to reproductive health and social challenges in their communities.

2. Low Knowledge of Youth about Reproductive Health

Youth in Wonosobo still have limited understanding of reproductive health. Although various reproductive health awareness activities have been carried out by the DPPKBPPPA and the Health Office, the approach used tends to be informative rather than participatory. Youth are often only involved as participants in activities, while their participation or opinions are not accommodated. This gap indicates that the knowledge conveyed does not get fully inculcated in the behavior and consciousness of youth. Indeed, as stated by Chandra Mouli et al (2019) reproductive health education should adopt a proactive approach of the youth, community engagement and incorporation of gender concerns and observer norms that shape health action.

In addition, the low level of knowledge and awareness among youth girls regarding the importance of regularly consuming Iron-Folic Acid Tablets (IFAT) is one of the main challenges in anemia prevention efforts. Adherence to IFAT consumption among youth. Secondly, low knowledge and awareness among girls of the adolescent age on the need to eat IFAT regularly are the primary challenge in efforts to prevent anemia. Compliance of IFAT consumption among high school students was related to information, motivation and support from the school and family environment (Yulianti et al., 2023). Anaemia prevalence among girls in youth is also one of the risk factors that can cause stunting on children (Indonesian Ministry of Health, 2022). This makes anemia prevention an important strategy in reducing the prevalence of stunting.

Furthermore, the WHO (2023) explains that the lack of access to comprehensive reproductive health information at the school and community levels makes youth vulnerable to risky behaviors, such as early marriage and unwanted pregnancies. Therefore, it is important to develop reproductive health education mechanisms that are contextual to the social lives of youth. At the local level, the lack of a monitoring system in the IFAT distribution program without consistent evaluation weakens the effectiveness of the interventions carried out.

To overcome this problem, more structured support is needed through the strengthening of the Generasi Berencana (GenRe) forum at the Regency level and the Pusat Informasi dan Konseling Remaja (PIK-R) at the village level. These two platforms

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have the potential to become public dialogue spaces that encourage youth not only as recipients of information, but also as agents of change in promoting the Youth Reproductive Health (Triad KRR), namely sexuality education, HIV/AIDS prevention, and the dangers of drugs, alcohol, and other addictive substances. This is useful to improve feelings of belonging, solidarity and trust between youth towards community health workers These processes have been found to be effective in other studies (Chandra Mouli & Plessons 2025).

3. The Implementation of Respectful Maternity Care Practices Remains Suboptimal

Efforts the Respectful Maternity Care (RMC) principles has emerged as a crucial strategy to enhance quality of maternal and newborn care services. RMC focuses on care that includes the dignity, autonomy, and rights of pregnant women during labour and birth and postpartum. In Wonosobo, the application of RMC principles implemented in system and policy that is christalized in an annual program management called as health center acreditation. There are also public satisfaction surveys regarding the service system at the Community Health Centers (Puskesmas) which function as a measure to assess that community's demand and expectation of quality.

Nevertheless, the application of RMC in primary care is still not at its best. Some potential participants, particularly with a background of a pregnant mother, conveyed that health facilities and primary health care infrastructures are still lacking and limited. These limitations are the absence of USG machines at the Puskesmas, understaffing, and in some community health centers, waiting rooms are, and in some community health centers, waiting rooms are stuffy, uncomfortable, and poorly ventilated. These facility limitations not only influence the pregnant woman's comfort in accessing the service, but also the quality of the maternal experience that they receive.

According to the WHO (2016), the principles of RMC is an element in the provision of positive experience to mothers during pregnancy and childbearing that impacts the uptake and compliance of antenatal (ANC) care visits. Freedman et al. (2014) also points that health worker scarcity and inadequate health facilities, combined with high workload, constitute primary barriers in the provision of RMC in developing countries. Bohren et al. (2021) identified diverse RMC violation, such as neglect, poor communication, and emotional unresponsiveness of care givers in low resource settings.

Barrier to implementing RMC in Wonosobo Regency indicate that improving service quality cannot rely exclusively on the initiative from the Puskesmas, but rather calls for intersectoral collaboration coupled with enduring policies. An effective approach for this is maximizing village fund expenditure towards the enhancement of financial support to the local health worker supply, the purchase of maternal and child health (MCH) equipment, and the development of infrastructure at the community level. This is congruent with the assertion of Kruk et al. (2018) that investing in the quality of primary services is essential in lowering maternal and child mortality in middle-income countries.

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4. National Health Insurance

Jaminan Jaminan Kesehatan Nasional (JKN) as National Health Insurance Program in Indonesia aims to provide all citizens access to quality and fair health services. This includes the independent BPJS Kesehatan membership and subsidized premium assistance for vulnerable and poor groups (PBI). Subsidized vulnerable and poor groups under Premium Assistance have assured coverage. Yet, inefficiencies of JKN in access to health services are still evident and there are still uninsured pregnant women underserved existing in the FDP. This confirms JKN's poorly distributed information and access inequities to services for vulnerable groups yet to be registered under health insurance.

Having health insurance greatly helps in reaching the goals to lower the MMR and IMR. Wulandari et al. (2020) explains that having health insurance greatly increases the odds of obtaining antenatal care (ANC) and accessing delivery services within health facilities. This finding is similar to that of Kazibwe et al. (2024) who states that universal health insurance coverage increases the odds of facility-based childbirth.

Regardless, barriers like insufficient socialization, complex administrative processes, and the unlevel distribution of information cause some pregnant women to remain uncovered by the JKN scheme. Therefore, additional assistance in the form of the village fund allocation for supporting the maternal and child health program is required. As a result, it is necessary to consider the JKN not only as a technical health financing policy, but also as a means to alleviate social disparities, especially among mothers and children in rural areas.

5. Knowledge and Involvement of Religious and Community Leaders in Maternal and Child Health Issues

Maternal and child health (MCH) is highly interrelated with non-medical factors, such as social, cultural, and religious aspects, that influence the behavior of the community. FDP results indicated that in Wonosobo, discrimination against "*unideal*" pregnancies is still prevalent, like unplanned pregnancies, pregnancies at an advanced age and pregnancies that are too close together. Being stigmatized socially makes the mothers hesitant to go for a check-up during pregnancy so the risk of pregnancy complications and maternal mortality becomes higher. UNFPA (2020) emphasizes that stigma against pregnancies that deviate from social norms is one of the main barriers for women in accessing safe and quality maternal health services.

Also, the splitting of roles within the family concerning MCH issues is still not equal. Women are still the ones who take care of the home, but parents/in-laws seem to have more influence in making decisions related to MCH, such as the kind of food to be eaten and going for a pregnancy check-up by USG. This is especially the case in the remote areas where it is still the parents/in-laws who decide. Story and Burgard (2012) indicate that the household decision-making structure has a strong impact on the behavior

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of the maternal health service seeking. Women with more freedom of choice will more likely be active in going to health facilities for services.

Misconceptions of the medical services are also a barrier. For example, there is a perception that USG only to find out the sex of the baby and not to monitor the health of the mother and the child. Misconceptions of maternal health technology can reduce the use of routine check-ups and intensify health dangers for children and mothers (Ayalew, et al, 2021). This shows the importance of community-level education in improving health literacy.

In the Indonesian social environment, religious leaders and community leaders are strategically placed as opinion leaders who are capable of influencing community norms, values, and behavior. Kachoria's (2022), shows that the utilization of religious leaders in disseminating reproductive health information can increase acceptance of MCH services within the community because health messages conveyed through a value and religion-based strategy become more acceptable. Utomo et al (2009) aver that religious leaders serve an important role in health promotion that is influential in changing social norms relating to reproductive health and preventing child marriage.

One more problem is that the incorporation of technology in Comprehensive Sexuality Education (CSE) has not reached the village level yet. It is therefore necessary to involve all segments of society, including religious and community leaders, so that they can contribute to their role in the advancement of CSE in a more extensive and productive manner. Therefore, the empowerment of religious and community leaders holds the master key to expanding the scope of culturally appropriate and locally respected KIA education. A participatory model involving religious leaders, health workers, and youth at the village level can create a more inclusive, participatory, and sustainable KIA education system.

The following table shows the results of problem identification and ideation:

Table 1
Problem Identification and Ideation

Problem Classification	**Government priorities/programs**	**Interventions already in place**	**Support needed**	**Community Engagement Strategies**
Child Marriage	Raising the minimum age for marriage	Pre-marital education, case assistance	1. Education for parents 2. Education for youth	1. Optimization of PIK R / Youth Health Posts in Villages 2. Involvement of Religious and Community Leaders

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Anemia	Education in schools (UKS)	Distribution of iron tablets	1. Checking and monitoring HB levels 2. Optimizing UKS members for education	1. Involving UKS members and schools 2. Involving the Student Council
Respectful Maternity Care	Health Center Accreditation	Conducting community satisfaction surveys and implementing improvements based on feedback	1. Medical equipment and personnel for ultrasound examinations 2. Comfortable waiting rooms for pregnant women and children 3. Adequate ventilation	Coordination between stakeholders such as Community Health Centers, Health Offices, and Regional Development Planning Agencies
Reproductive Health	Maternal and Child Health	Socialization about reproductive health, education on emergency contraception	Education through the Genre Forum (Triad KRR Sexuality, Child Marriage, HIV/AIDS Prevention, and Drug Abuse)/Youth Organizations	Involving youth in peer education through capacity building for youth
National Health Insurance	National Health Insurance	BPJS Health membership, either independently or through PBI	All members of the community, especially pregnant women, women in labor, postpartum women, and children, can access health services without financial barriers	With the abolition of the Maternity Insurance (Jampersal) policy, it is necessary to have updated DTKS data so that all pregnant women can access national health insurance.

After going through the problem identification and ideation stages, the next step is to formulate policy recommendations, which are then submitted to policy makers through the DPPKBPPPA. The following are the policy recommendations that have been formulated:

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1. The importance of increasing commitment and collaboration between regional organizations such as BAPPEDA, DPPKBPPA, the Health Office, DPUPR, and the Education Office in efforts to accelerate the reduction of MMR and IMR and prevent stunting. Cross-sectoral collaboration is key so that policies are not implemented sectorally, but are integrated with the regional development agenda.
2. Encourage the DPPKBPPPA to activate and optimize PIK-Remaja or Posyandu Remaja in villages. These two platforms can serve as a space for actualization, education, and interactive learning media for youth in understanding reproductive health issues and stunting prevention.
3. Utilize social media and other health promotion methods as effective educational tools for youth, which can be done through collaboration between the Health Office and the DPPKBPPPA by involving teen influencers, GenRe Ambassadors, and PIK-R. This digital-based communication strategy can reach a wider audience of youth with a more participatory communication style that is in line with media trends.
4. Education for youth on the impact of child marriage at the village level by the DPPKBPPPA with the involvement of GenRe Ambassadors. A values-based approach and local figures need to be integrated to increase community acceptance.
5. Optimizing Unit Kesehatan Sekolah (UKS) as centers for youth education in providing iron tablets, checking and monitoring hemoglobin levels, and providing nutrition counseling. This can be done through collaboration with the Health Office, Education Office, and schools by involving UKS and OSIS members.
6. Reproductive health awareness campaigns targeting villages, involving peers through GenRe forums, PIK-R, Posyandu Remaja (youth health posts) and UKS (school health units).

Then, after the policy recommendations were submitted, the DPPKBPPA responded with its commitment to integrate the recommendations into the Regional Action Plan for the Prevention of Child Marriage and Reduction of Stunting for the following year, as a strategic step to make program interventions more focused and sustainable.

HCD as a Framework for Strengthening Youth Participation in Policy Processes

FDP was implemented as a participatory mechanism to identify key issues and policy gaps in Maternal and Child Health (MCH), positioning youth as central actors in the formulation of needs-based solutions. Taking an HCD approach, there were four major phases in the FDP: introduction, inspiration, ideation, and recommendation (Kang et al, 2025). During the introductory phase, the youth representatives of the GenRe, KAPPA, Sekolah Partisipasi members, BEM UNSIQ, BEM FIKES, and PMII as youth organizations involved and receiving MCH program in Wonosobo were familiarized with the foundations of participatory dialogue and collaboration between youth and adult stakeholders, respecting opinions and establishing a mutual safe space (Zeldin, 2008).

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This aligns with the values of youth-adult partnerships, such as mutual respect, shared decision-making, and ensuring that every voice is heard. The concept of a "safe space" is to provide a place where participants feel safe to express themselves without fear of judgment or marginalization, as well as to promote open communication and trust-building between all involved (Our Voices, 2020).

The inspiration phase provided space for young persons to express their lived experiences, needs, and challenges on reproductive health, nutrition, and accessibility of health care services. In the ideation phase, later young persons actively co-designed emerging ideas and solutions with health workers, community and local stakeholders. The ideas were later converted in the recommendation phase into policy agendas that contained the views and aspirations of young persons. The FDP was therefore not only an advisory forum but also a social learning arena, in which the youth were transformed from program recipients to policy co-creators, with actual participation in the determination of the direction of public policy in their localities.

The FDP process demonstrates the use of HCD principles to strengthen genuine youth engagement in local governance policy-making. By taking an empathy-driven and iterative approach, the FDP facilitated intergenerational dialogue among youth, health workers, and local officials to create a safe platform for inclusive discussion on MCH issues. This direct engagement enabled youth not only to bring five their issues but also to develop analytical capacity, leadership, and social responsibility within the sphere of public policy (Fakoya, 2022).

Through the FDP process, the level of youth participation in Wonosobo can be identified using the five typology of youth participation (Wong, et al, 2010), consisting of (1) *vessel (manipulative participation),* where youth are only recipients of information or instructions without understanding the purpose of the activity, and their involvement is only as recipients of the program, (2) *symbolic (tokenistic participation),* where youth are involved in activities but do not have the opportunity to provide input or influence decisions, (3) *pluralistic (assigned but informed),* where youth have specific roles and understand their responsibilities, but the direction of the activities is still determined by adults, with collaboration between youth and adults in decision-making, (4) *independent (youth-led)*, where youth have autonomy in initiating and managing activities, with little or no intervention from adults, and (5) *autonomous/empowered (youth-adult partnership)*, which is the highest level, where youth and adults share roles equally in the planning, decision-making, and implementation of activities. This typology highlights strong youth engagement, which can only happen if young people are not merely implementers, but have agency, voice, and equal influence on the direction of policies and programs that affect their lives.

Youth participation in health issues in Wonosobo Regency has been at the symbolic to pluralistic phase, based on FDP's finding. Youths are mostly engaged as participants or technical executors of programs run by the local government in some

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activities such as the GenRe Forum, PIK-R, and Posyandu Remaja. Interventions such as socialization of reproductive health, stopping child marriage, or IFAT provision are implemented in a top-down manner where young people are never involved in planning and assessment activities. There is evidence to suggest that youth involvement is mainly instrumental, as a means to programmatic expansion, and not as an equal collaboration. Youth involvement in developing countries is typically constrained by hierarchical social norms and the dominance of older actors in policy decision making (Checkoway's, 2011).

Yet even a snapshot of such an emergent youth-adult collaboration process is apparent in campaigns like the GenRe, where young-adults start to appropriate campaign messages and outreach approaches. This is an indication of building youth agency and rearranging decision making authority in local health governance. This shift, as gradual as it is, suggests a potential threshold of departure for transformative participations entrenchment, where young people not only shape program implementation but also affect knowledge production and learning policy (Wong et al, 2010). It underscores the need to introduce systemic mechanisms to enable complete support and institutionization of sustainable youth participation, where HCD is the catalytic facilitator.

Through the FDP with an HCD, the dynamics of youth engagement are anchored on the fundamental that solutions for good policy should be designed based on the needs, aspirations, and real lived experiences of the users themselves (Kang et al, 2025, Holeman & Kane, 2020). The HCD process creates interactive spaces where youth feel free to reveal their fears, ideate, and test solutions together with adults. Here, HCD is not only a participatory instrument, but also a process of learning that bridges the divide between technocratic policy making and human centered problem solving (Wong et al, 2010). As a result, the FDP offers a concrete example of how HCD can support non-symbolic but transformative youth participation that positions the young person at the forefront as an empowered co-producer of local policy-making and agent of sustainable public governance transformation.

HCD requires progressive stages of engagement that reflect the continuum (Wong et al, 2010). Starting with inspiration (hearing young people's voices and compassion), continuing through ideation (collaborative creation and ideation ranking), and culminating in implementation (co-action and consideration). These stages reflect the way young people's engagement progresses from consultation to co-creation and collective custodianship, allowing more flexible and context-relevant policy making. The cyclical nature of HCD also provides room for feedback and learning, enabling youth to engage not only as informants but as active actors in continuous policy learning.

Theory of youth participation can be applied as conceptual framework and HCD applied as methodological framework to enable systematic improvement in level of participation. Cross-sector collaboration and youth empowerment are key in enabling youth to shift from symbolic to youth-adult partnership.

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Under decentralized administration, local governments have strategic authority to shape national health priorities according to the needs of communities. The application of HCD in policy-making processes at local government aligns with collaborative governance (Ansell & Gash, 2008) and co-production of public services (Brandsen & Honingh, 2018). Young people's participation through mechanisms of HCD thus not only improves health outcomes but also strengthens participatory governance at the local level.

The integration of these two approaches enables KIA policy development which is not only more inclusive and evidence based but also socially sustainable because it is developed together with the main beneficiaries who are co-designers of the policy process (Holeman and Kane, 2020). Moreover, the integration of Youth Participation Theory with HCD facilitates transformative participation, a mode of participation that not only strengthens one's own youth capacity but also reconfigures policymakers power relations with collectives of youth, in such a way that youth are included in the process of policy formulation, monitoring, and evaluation (Wong et al., 2010).

CONCLUSION

This study identified five strategic mother and child health issues in Wonosobo Regency were determined in this research: high rates of child marriage, suboptimal implementation of RMC, limited youth knowledge of reproductive health, restricted access to health insurance, and inadequate community involvement in maternal and child health matters. These findings point out that reduction of child and maternal mortality, stunting prevention, and family resilience construction must be rooted on a cross-sectoral, participatory, and community-responsive policy response. Such a conclusion is consistent with the national policy discourse focusing on youth involvement in local development planning (Nugroho, 2025). It also validates the growing conscience that participatory innovation at the local level of government is a necessary momentum for the sustainability and inclusiveness of policy implementation (Sambodo et al, 2023; Tresiana et al, 2023).

Through the application of the HCD appoach, this study places the target groups, particularly youth, pregnant women, religious leader, and local communities, in the core as the main actors in the problem defining and solution formulating process. The approach allows for policy to be planned technocratically as well as empowered to meet the social and cultural existence of the local population. Not only does this research produce policy recommendations, but it also contributes scientifically to advancing the field of community based participatory health policy by HCD as an alternative conceptual model for health policy design.

Conceptually, what is shown in this research is how the integration of Youth Participation Theory and HCD to a transformational youth participation model where the youth are not only pasif but also co-creators of the policy-making process. This synthesis enhances youth agency and reorients power dynamics between policymakers and youth towards a more participatory and inclusive policy process.

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Practical implications of this study are primarily connected to empowering the position and capacity of young people in advocacy for MCH policies. The local authorities should establish a forum or platform for active youth engagement down to the village level that accommodates their participation, where youth are not engaged symbolically but are placed as full fledged co-designers in planning, implementing, and monitoring health programs. Thus, policies at the local MCH level can be more adaptive, socially sustainable, and inclusive because they are created in a participatory manner that foresees youth as key initiators of change towards better MCH policy.

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