



Unmet need in fertile age couples based on PK-21 data at stunting locus in Tapin Regency

Adriana Palimbo^{1*}, Leny Marlana¹, Dwi Sogi Sri Redjeki², M.S.M.O. Siska Selvija Tambun³

¹Department of Midwifery, Sari Mulia University, Banjarmasin, Indonesia

²Department of English Language Education, Sari Mulia University, Banjarmasin, Indonesia

³Department of Industrial Engineering, Sari Mulia University, Banjarmasin, Indonesia

*Corresponding author: palimboadriana00@gmail.com

| ARTICLE INFO | ABSTRACT |
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| <p><i>Article history:</i> Received xxxx Accepted xxxx Publish xxxx</p> <p><i>Keywords:</i> Unmet need Family planning Fertile age couples Stunting loci Tapin Regency</p> | <p>Background: Unmet need for family planning remains a significant public health issue, particularly in regions with high population growth and stunting prevalence. Tapin Regency in South Kalimantan Province experiences challenges in achieving family planning targets, with unmet need contributing to elevated fertility rates and population growth.</p> <p>Objective: This study aims to analyze the unmet need for family planning among fertile age couples in stunting locus sub-districts of Tapin Regency, focusing on the distribution of unmet need for spacing and limiting, and identifying potential areas for targeted intervention.</p> <p>Method: A descriptive survey design was employed using secondary data from the PK-21 (Pendataan Keluarga 2021 [En: Family Census – 2021]) database provided by the National Population and Family Planning Board (BKKBN). The study analyzed data from 12 sub-districts identified as stunting loci in Tapin Regency. The data included total unmet need, unmet need for spacing, and unmet need for limiting, which were quantitatively processed and presented as percentages.</p> <p>Results: The analysis revealed that the total unmet need in Tapin Regency reached 9.5%. The unmet need for limiting (65.1%) was significantly higher than for spacing (34.8%). Among the sub-districts, Binuang recorded the highest total unmet need (19.2%), while South Candi Laras had the lowest (3.5%). Sub-districts with higher unmet need were found to have greater challenges in family planning program implementation, necessitating targeted interventions.</p> <p>Conclusion: Unmet need for limiting dominates the family planning challenges in Tapin Regency, particularly in sub-districts with high fertility rates. Addressing these unmet needs requires tailored strategies, including enhancing awareness, accessibility, and cultural sensitivity of family planning programs.</p> |

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1. Introduction

Indonesia faces significant population challenges, as its population continues to grow annually. The 2010 population census revealed that Indonesia's population reached approximately 237.6 million, surpassing the projected figure of 234.2 million by 3.4 million. Although efforts have been made to control population growth, with the growth rate



expected to decline to 1.1% in 2014 (Badan Kependudukan dan Keluarga Berencana Nasional - BKKBN, 2012; 2013), the average population growth rate over the past decade (2010–2020) remained at 1.25% per year (Badan Pusat Statistik - BPS, 2021). An advanced nation is often characterized by a lower population growth rate, emphasizing the need for effective population control strategies in Indonesia.

Unmet need for family planning is a critical issue, particularly in developing countries like Indonesia. Since 2000, an estimated 105.2 million married women globally have been classified as having unmet needs for family planning, with Indonesia contributing 4.4 million to this total. Alarmingly, one in ten Indonesian women of reproductive age who do not wish to conceive are not using contraception. Sejati (2021) highlighted disparities in unmet needs across Indonesia, with regions like Bali reporting the highest female labor force participation rate (67.7%) and North Sulawesi the lowest (41.7%). Additionally, the median age of first marriage in Indonesia was 21.8 years in 2017, with Central Kalimantan at 20.8 years and Jakarta at 23.9 years. These variations underscore the uneven distribution of unmet needs for family planning across the country.

Over the last two decades, Indonesia has made incremental progress in reducing unmet need for family planning, decreasing from 17% in 1991 to 11.4% in 2012. However, this rate remains above the target set by the 2015–2019 National Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional – RPJMN), which aimed to reduce unmet need to 9.91% by 2019. Instead, the rate increased to 12.1% in 2019, indicating that the RPJMN target was not met. Among fertile age couples not utilizing family planning services, 6.15% expressed a desire to postpone childbirth, while 6.55% did not wish to have additional children (BKKBN, 2016). These findings highlight the persistent need for robust cross-sector collaboration to address this issue effectively.

In South Kalimantan Province, the percentage of unmet need for family planning was reported at 8.4% in 2012 and 8.5% in 2017. However, in Tapin Regency, the unmet need was higher at 9.5%, as reported in the 2021 stunting data situation analysis (Pendataan Keluarga [En – Family Data Collection] 2021 – PK-21). Within this region, the unmet need for spacing constituted 34.8%, while the unmet need for limiting reached 65.1%. These figures reveal significant challenges in achieving the Sustainable Development Goals (SDGs), particularly Goal 5, which seeks to ensure universal access to sexual and reproductive health and rights.



This goal aligns with the Programme of Action from the International Conference on Population and Development and the Beijing Platform, which aimed to reduce unmet need for family planning to 9.9% by 2019 (Badan Perencanaan Pembangunan Nasional – BAPPENAS, 2020).

Given these challenges, this study aims to provide an overview of the unmet need for family planning among fertile age couples in the stunting locus sub-districts of Tapin Regency. By identifying the specific characteristics and distribution of unmet need in this area, the study seeks to inform targeted interventions and policy decisions to address family planning gaps and improve reproductive health outcomes.

2. Method

Research design

This study employs a descriptive survey design to examine the unmet need for family planning among fertile age couples in the stunting locus sub-districts of Tapin Regency. The descriptive survey approach allows for a comprehensive analysis of patterns and characteristics within the target population, focusing on unmet needs for family planning. The study is rooted in PK-21 data from the BKKBN, providing robust and reliable baseline information.

Data source

The primary data source for this research is the PK-21 data, retrieved from the official BKKBN web-based platform. This dataset encompasses critical demographic and family planning information, particularly focusing on fertile age couples and their family planning statuses. The data includes subcategories such as the total number of unmet needs, unmet needs for spacing, and unmet needs for limiting, offering a detailed breakdown of family planning challenges within the targeted sub-districts.

Data collection

Data collection involved accessing the PK-21 database, which aggregates information from fertility and family planning surveys conducted by BKKBN. The study focuses on 12 stunting locus sub-districts in Tapin Regency, identified as areas with a high prevalence of stunting. Fertile age couples were selected as the primary unit of analysis, and their family planning statuses were categorized based on unmet needs for spacing and limiting. The raw data were extracted in the form of absolute numbers, ensuring accuracy and



comprehensiveness.

Data Analysis

The raw data obtained from the PK-21 database were processed and analyzed quantitatively. Absolute numbers were converted into percentages to provide a clearer understanding of the distribution and prevalence of unmet needs among the target population. The analysis was conducted with a focus on the total unmet need, unmet need for spacing, and unmet need for limiting. Descriptive statistical methods were applied to generate an overview of family planning challenges in the stunting locus sub-districts. These findings were contextualized to highlight their implications for family planning interventions and stunting prevention efforts in Tapin Regency.

3. Results

Total unmet need distribution on Kabupaten Tapin

The analysis reveals variations in unmet need levels for family planning across 12 sub-districts designated as stunting loci in Tapin Regency. Overall, the unmet need rate reached 9.5%, with the highest levels observed in Binuang Sub-district (19.2%), followed by Bungur (12.3%), Piani (10.9%), and North Tapin (10.8%). On the other hand, the lowest unmet need rate was recorded in South Candi Laras Sub-district (3.5%), followed by Bakarangan (5.4%) and North Candi Laras (5.7%). Several sub-districts, such as Hatungun (6.5%) and Salam Babaris (6.6%), reported rates slightly below the regency average, while Lokpaikat (7.6%) and Central Tapin (7.7%) were marginally above the average.

These variations indicate differing challenges across sub-districts, with higher rates in certain areas requiring greater attention and targeted interventions. This data serves as a foundation for developing focused family planning strategies, particularly in regions with high unmet need levels. Further details on the distribution of unmet need across sub-districts are presented in Table 1.

Distribution of unmet need by spacing and limiting

The analysis of unmet need for family planning in Tapin Regency highlights a significant disparity between the unmet need for spacing and limiting. The overall percentage of unmet need for limiting (65.1%) is substantially higher than the unmet need for spacing (34.8%). Among the sub-districts, Piani stands out with the highest unmet need for limiting at 76.2%, followed by North Tapin and Lokpaikat, which also reported high levels. Interestingly, Piani,

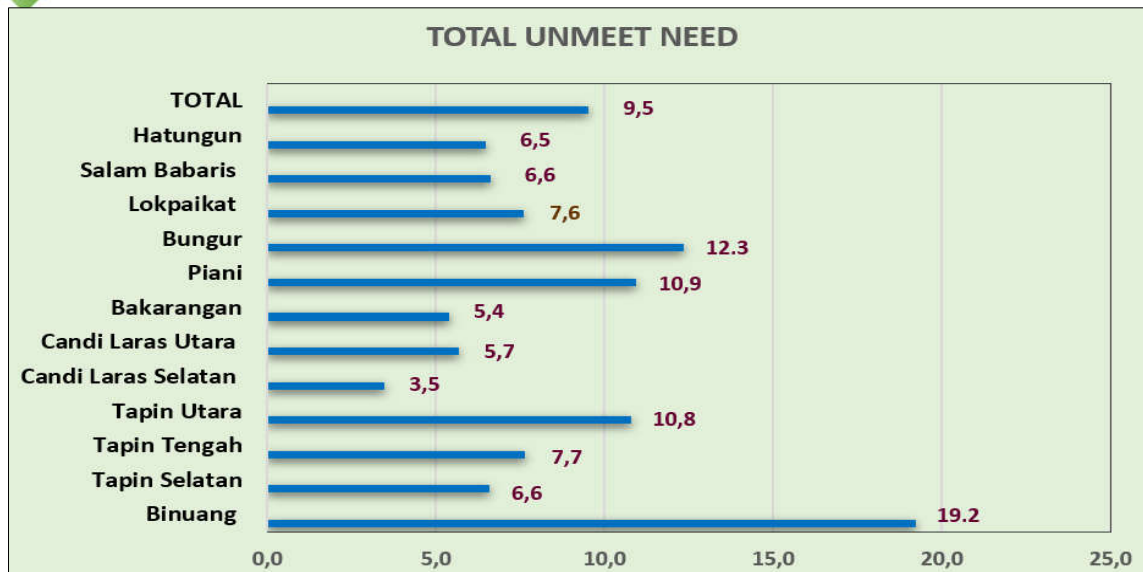


Figure 1. Percentages of unmet needs in each sub-district (BKKBN, 2022).

with the smallest number of families (1,109 households), exhibits the highest percentage of unmet need for limiting. In contrast, the unmet need for spacing shows a relatively lower distribution, with several sub-districts recording percentages below the regency average. The data distribution aligns with the hypothesis, as a higher percentage in one category correlates inversely with the other, reflecting the proportional accumulation of the unmet need frequency to 100%. These findings underscore the need for targeted strategies to address the higher unmet need for limiting while maintaining focus on spacing. Further details on the distribution of unmet need by category are presented in Figure 2.

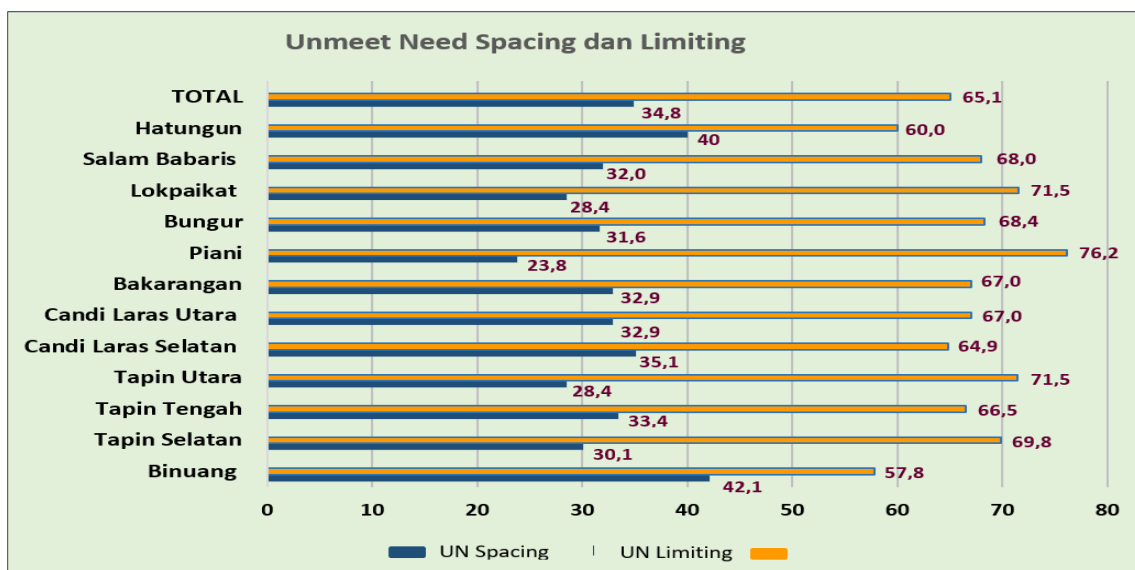


Figure 2. Unmet need for spacing and limiting in sub-districts (BKKBN, 2022)



4. Discussions

The population of Tapin Regency experienced a growth of 1.2% between 2020 (191,801 residents) and 2021 (189,475 residents), equating to an increase of 2,366 individuals. This growth corresponds to an average population density of 88 individuals per square kilometer. Such a figure is significant, particularly when adjusted to reflect the largest population segment, which is within the 5–9-year age group, represented at a 10.0 range point on the population pyramid. Comparatively, Indonesia's annual population growth rate is estimated at 0.96%, with an average annual increase of 2.89 million people during the 2017–2030 period (BAPPENAS, BPS, & UNFPA [United Nations Population Fund], 2013). This higher-than-average growth in Tapin Regency raises concerns regarding the potential for a population explosion by 2030, particularly in light of unmet family planning needs.

The elevated population growth in Tapin is primarily attributed to high birth rates, which present significant challenges for implementing effective family planning programs. Unmet needs among fertile couples—those who wish to limit or space pregnancies but are not using contraceptives—pose a substantial obstacle to birth rate control efforts. Addressing these unmet needs is critical to mitigating the risk of unchecked population growth and achieving sustainable population management in the region.

The distribution of total unmet need in Bungur sub-district is notably significant when compared to other sub-districts with a higher number of fertile couples, such as Tapin Utara, Tapin Selatan, Tapin Tengah, and Candi Laras Utara. This highlights disparities in the success of family planning initiatives, as the unmet need in Bungur reflects challenges in meeting the reproductive health needs of its population. Conversely, sub-districts with the lowest unmet need categories exhibit a direct proportionality to the number of fertile couples, suggesting a more effective implementation of family planning programs in those areas.

Zaluchu et al. (2022) report that unmet need prevalence can reach as high as 87.97% (7,623 cases), while only 12.03% (1,215 cases) of couples are adequately served. This significant disparity underscores the urgency of addressing gaps in reproductive health services. Increasing awareness of family planning programs is essential, as it helps to prevent unintended pregnancies, reduce abortion rates, and lower maternal and child mortality risks (Guure et al., 2019). Strengthening these programs not only promotes individual well-being but also contributes to broader public health outcomes and sustainable population growth



management.

Unmet needs among fertile couples remain a significant barrier to the successful implementation of family planning programs. Ratnaningsih (2018) highlights that unmet needs can lead to a population explosion due to their direct contribution to high Total Fertility Rates (TFR) and Total Birth Rates (TBR). This issue underscores the importance of revisiting the definition of unmet need, which refers to the proportion of fertile couples who are married or living together (sexually active) but do not wish to have additional children or want to space their pregnancies, yet are not using any form of contraception (Ministry of Health – Republic of Indonesia, 2014a; 2014b).

Addressing unmet needs is critical to achieving Sustainable Development Goals (SDGs), particularly the target of ensuring universal access to sexual and reproductive healthcare services. This includes expanding access to family planning resources, providing comprehensive education, and integrating reproductive health into national policies and programs. A reduction in unmet needs would directly contribute to lowering the TFR to two children per woman by 2030, aligning with global efforts to manage population growth and promote sustainable development. This shift is essential for improving maternal and child health outcomes and fostering equitable access to reproductive healthcare.

The family planning program is among the most strategic and effective interventions to reduce unwanted births and regulate birth spacing, thereby improving reproductive health and population management. However, not all women are compatible with available contraceptive methods, presenting a significant challenge to the program's implementation. Several factors contribute to the refusal of contraceptive use among fertile couples, including opposition to contraception, limited knowledge about methods or tools, financial barriers, and discomfort during use (Kemenko PMK, 2020). These challenges highlight the need for tailored approaches to address misconceptions, improve accessibility, and enhance comfort levels for users.

Bradley et al. (2012) categorize unmet need into two distinct groups: unmet need for spacing and unmet need for limiting. The differentiation between these categories lies in the nature of a pregnancy's intention. A pregnancy classified as *mistimed*—desired but not at the current time—falls under the unmet need for spacing, where the couple seeks to delay their next pregnancy. On the other hand, pregnancies classified as *unwanted*—not desired for



various reasons, such as having enough children, health concerns, or age—fall under the unmet need for limiting. These couples wish to end childbearing altogether.

For accurate identification of unmet needs, specific exclusions are necessary. Fertile age couples (FACs) who are identified as *infecund*—those who have been married for over 5 to 10 years without a pregnancy and are not using contraceptives—are excluded from unmet need analyses, as their reproductive potential is considered negligible. Similarly, FACs actively seeking to conceive are not included in the calculation of unmet needs for family planning. These distinctions ensure a focused analysis of the population segments most in need of family planning interventions, thereby enabling more effective policy and programmatic responses.

A deeper analysis reveals a clear pattern: women aged 35–49 years, those with a junior high school education or higher, and those whose husbands have lower education levels (below junior high school) are more likely to experience unmet need for limiting. This is further compounded for women residing in rural areas (Aditarina et al., 2022). The parity factor—or the number of children—also significantly influences unmet need. Studies conducted in Buleleng Regency show that women with four or more children are less likely to use contraception or to space pregnancies. A bivariate analysis by Mertasari et al. (2021) and Putri et al. (2021) confirmed that women who already have at least one child or more than four children are more prone to experiencing unmet need for family planning.

These findings underscore the critical need to address specific barriers faced by these high-risk groups. Tailored interventions focusing on raising awareness, improving access to contraception, and addressing educational and geographical disparities could help reduce unmet need for limiting. Additionally, integrating culturally sensitive family planning education and improving outreach in rural areas could bridge the gap, particularly for women with limited educational backgrounds and those facing systemic inequalities in accessing reproductive health services.

This study provides valuable insights into the unmet need for family planning among fertile couples in stunting locus sub-districts of Tapin Regency. However, it is not without limitations. First, the analysis is based on secondary data from the PK-21 database, which limits the ability to examine the influence of individual and household characteristics, such as socioeconomic status, cultural factors, and specific health conditions, on unmet need



outcomes. Second, the study lacks qualitative data to explore perceptions, attitudes, and barriers to contraceptive use among fertile couples, which could provide a deeper understanding of the issue. Third, as the study focuses on Tapin Regency, the findings may not be generalizable to other regions with different demographic and cultural contexts. Lastly, there is no longitudinal analysis to track changes in unmet need over time, which would offer insights into trends and the effectiveness of interventions.

Future studies should address these limitations by incorporating primary data collection to include individual and household-level variables, enabling a more comprehensive analysis of factors influencing unmet need. Mixed-method approaches combining quantitative surveys with qualitative interviews could provide richer insights into the sociocultural and behavioral aspects of contraceptive use. Expanding the study to include multiple regions would improve the generalizability of findings and allow for cross-regional comparisons. Additionally, conducting longitudinal studies could help monitor trends in unmet need and evaluate the long-term impact of family planning programs. Finally, integrating geospatial analysis could identify specific areas within regions that require targeted interventions, ensuring that resources are efficiently allocated to address unmet need disparities.

5. Conclusion

In general, this study describes the highest unmet need for family planning in high populations with a number of families or couples of fertile age and population density in a region or district. Likewise, unmet need spacing and unmet need limiting, the largest in area is unmet need limiting and is also directly proportional to number of unmet need spacing. The limitation of this study lies in not being linked to sample characteristic factors due to limited data available.

6. Conflict of interest

All authors declare no conflict of interest.

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