

Moderate Replacement Fertility: Tranquility Dimension Variables of Yogyakarta Special Region, Indonesia in 2023

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ARTICLE INFO

Article History:

Received: March 11, 2025

Revision: July 23, 2025

Accepted: July 28, 2025

Keywords:

Tranquility

Fertility

Yogyakarta

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ABSTRACT

This study examines life tranquility in the context of moderate replacement fertility levels in the Special Region of Yogyakarta (DIY) in 2023. The region's diverse social, cultural, and economic characteristics significantly influence fertility trends and family dynamics. Areas like Sleman and Bantul display higher family proportions, reflecting stable fertility levels, while Yogyakarta City faces challenges in maintaining population growth due to lower fertility rates, influenced by urbanization and economic pressures. This urban-rural divide underscores the complex relationship between fertility patterns and socio-economic factors. Despite increasing birth rates in some areas, challenges persist in understanding fertility behaviors, particularly in relation to access to education, healthcare, and family policies. These factors can either support or hinder efforts to achieve sustainable population growth and well-being. This study explores the connections between moderate fertility rates, life tranquility, and socio-economic influences in DIY. It also examines how education, healthcare access, and family planning policies impact family well-being and fertility decisions. The research aims to provide policy solutions to enhance the quality of life for families across the region. By understanding the socio-economic determinants of fertility trends, this study offers insights into urban-rural differences and informs policy design to address fertility changes and promote stable family dynamics.

INTRODUCTION

This study analyzes the tranquility dimension in the context of moderate replacement fertility levels in the Special Region of Yogyakarta (DIY) in 2023. DIY has diverse social, cultural, and economic characteristics that influence fertility trends and family dynamics in each region. According to the data, areas like Sleman and Bantul show more families, which may reflect more stable or moderate fertility levels. In contrast, regions with a lower proportion of families, such as Yogyakarta City, may face challenges in maintaining population growth if their fertility rates fall below the replacement level. Urbanization, shifting family norms, or economic pressures in urban areas often influence this.

However, despite an increase in birth rates in some regions, challenges in understanding fertility patterns persist, especially regarding the factors influencing the tranquility of life, such as access to education, healthcare, and family policies. The tranquility of life, influenced by religiosity, provides access to social facilities, an important issue that needs to be explained in the context of more urbanized regions than rural ones. This study explores the relationship between moderate fertility rates and life tranquility with socio-economic variables in DIY, offering solutions to managing policies that support family well-being more effectively.

This research is expected to fill a gap in the literature regarding the relationship between fertility, life tranquility, and public

policy, particularly in the context of differences between urban and rural areas. By identifying the factors influencing fertility changes, such as urbanization and religiosity levels, this study aims to provide new insights into social and family policy design. The solutions offered will focus on efforts to equalize access to social, healthcare, and educational services in regions with lower fertility rates and integrate life tranquility-based policies in more urbanized areas.

The practical contribution of this research can be used by policymakers to design inclusive family-focused policies, considering each region's social and economic variables. For example, in areas with low fertility like Yogyakarta City, it is important to introduce policies that support more stable family formation through family education programs or more affordable child care facilities. Meanwhile, in areas like Sleman and Bantul, policies that strengthen family-oriented services focused on life tranquility will be essential in supporting more prosperous and sustainable family well-being.

Urbanization, socio-economic changes, and shifting family norms have significantly impacted fertility rates and family dynamics, particularly in urbanized areas. In the context of Indonesia, the Special Region of Yogyakarta (DIY) provides a unique case study due to its diverse social, cultural, and economic characteristics that influence fertility trends and family well-being. As DIY continues to experience rapid urbanization, with areas like Yogyakarta City presenting lower fertility rates, the implications for population growth, family stability, and life tranquility must be examined. This study explores the dynamics of moderate replacement fertility levels in DIY, focusing on the impact of urbanization, family policies, and socio-economic variables on life tranquility.

Research on fertility rates has primarily focused on rural areas, with most studies showing the direct impact of socio-economic factors on fertility in rural communities (Chicoyo, 2016). However, urban areas like Yogyakarta City, which

have witnessed a reduction in fertility rates below the replacement level, present a unique challenge. These challenges include not only concerns about population growth but also about maintaining life's tranquility. Factors such as access to education, healthcare, and the availability of family-oriented policies play a significant role in determining the quality of life and overall family well-being (Arifin & Ananta, 2016; Darki & Wibowo, 2023).

In regions like Sleman and Bantul, where moderate fertility levels persist, family dynamics are likely more stable, yet the tranquility of life remains influenced by socio-economic factors (Arifin & Ananta, 2016; Tan et al., 2022). Previous studies have examined the link between fertility and socio-economic factors, but the role of urbanization and life tranquility, especially in urbanized regions, remains underexplored (Mohd Ali et al., 2025). This research aims to fill this gap by analyzing the interplay between moderate fertility rates and life tranquility, emphasizing urban-rural differences in DIY. Specifically, it seeks to uncover how socio-economic variables—such as income, education, access to healthcare, and religiosity—affect fertility levels and life tranquility in this diverse region.

This study is novel in that it focuses on a regional context, DIY, where fertility rates and life tranquility intersect with urbanization in ways not fully addressed in the current literature. While previous studies have explored urbanization's impact on fertility and family well-being, they often fail to comprehensively understand how life tranquility factors such as access to social services, healthcare, and family policies contribute to fertility patterns in urban settings (Duminy et al., 2021; Bongaarts & Hodgson, 2022). Furthermore, most research has concentrated on rural areas or national averages, with limited attention to the unique characteristics of regions like DIY, where there is a marked difference between urban and rural fertility levels.

The innovative aspect of this research lies in its focus on life tranquility as a moderating factor between fertility rates and

socio-economic conditions. While factors such as income and education are widely studied, the integration of life tranquility—shaped by religiosity, family distribution, and social infrastructure—provides a new lens through which fertility patterns can be understood (Götmark & Andersson, 2020; Kulu & Washbrook, 2014). The study fills a critical gap in understanding the factors influencing fertility patterns and proposes solutions for more effective policy interventions tailored to urban and rural regions.

RESEARCH METHODS

The methods section provides an overview of the research design used to analyze secondary data from the Family Registration and Update by BKKBN 2023. This study aims to understand family distribution in Yogyakarta, identify factors influencing fertility, and explore the dimension of social tranquility related to family characteristics in each region. The main components of this research include research design, population and sample, research instruments, research procedures, data collection, and data analysis. This study employs a descriptive quantitative approach using secondary data analysis. This design is chosen because the study aims to describe family distribution patterns and related factors influencing fertility rates and social tranquility based on existing data. It allows for descriptive statistical analysis to provide a clear picture of family and fertility trends in each region.

The population in this study includes all families recorded in the Family Registration and Update by BKKBN 2023 in the Special Region of Yogyakarta. The sample consists of data from five regions in Yogyakarta: Kulon Progo, Bantul, Gunung Kidul, Sleman, and Kota Yogyakarta. This

data includes information on the number of families, age distribution, family size, and the status of possessing essential documents such as birth certificates and marriage certificates. The region selection was done purposively to represent areas with both urban and rural characteristics. The instrument used is secondary data obtained from BKKBN, which includes information related to the number of families, marriage certificate ownership, birth certificate ownership, and data on children's health and education. The instrument's validity is ensured as the data is sourced from a reliable official institution. The data's reliability is also high, as the data collection was carried out systematically and consistently across the regions.

The research procedure begins with collecting secondary data from BKKBN, including information relevant to the study. After obtaining the data, the next step is data processing and analysis. The data will be analyzed based on regional categories (Kulon Progo, Bantul, Gunung Kidul, Sleman, and Kota Yogyakarta) and related variables such as fertility rates, the ownership of essential documents, and awareness of social services like health insurance. This process will also involve comparative analysis between urban and rural areas. Data analysis will be performed using descriptive statistical analysis techniques. Data will be analyzed based on frequency distribution and percentages to illustrate trends in family and fertility patterns across the regions. The analysis will also use comparative techniques between regions to observe family distribution patterns and the factors influencing these differences, such as urbanization levels, ownership of essential documents, and awareness of social services.

RESULTS AND DISCUSSION

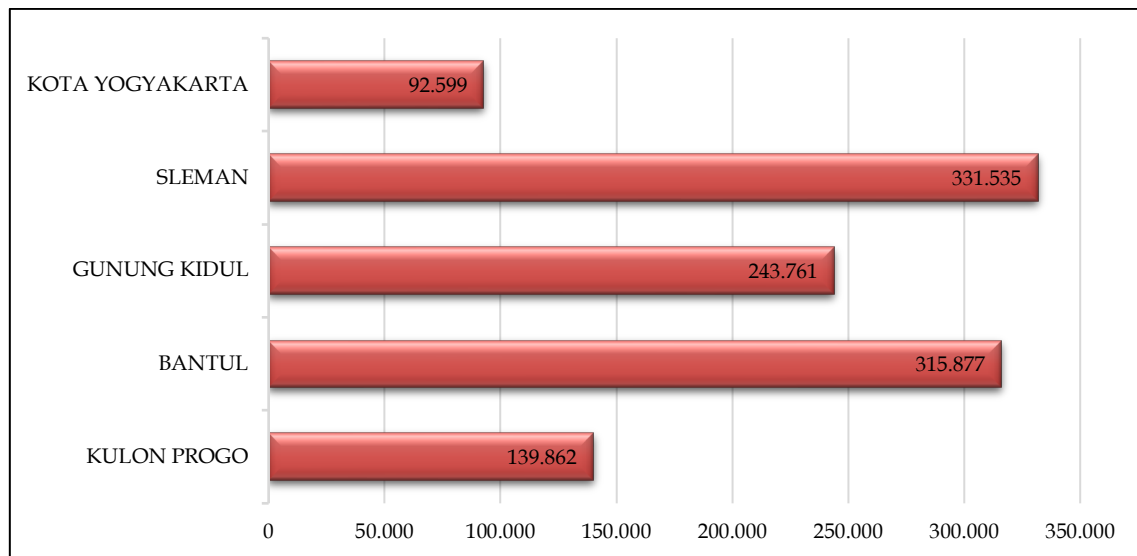


Figure 1. Number of families (Source: Family Data Collection and Update by BKKBN, 2023)

The "Number of Families" pie chart illustrates the distribution of families across five regions: Kulon Progo, Bantul, Gunung Kidul, Sleman, and Kota Yogyakarta. Sleman has the highest proportion of families, accounting for 30% of the total, followed by Bantul with 28%, Gunung Kidul with 22%, Kulon Progo with 12%, and Kota Yogyakarta with the smallest share at 8%. This data can provide insights into fertility trends when analyzed alongside family size and fertility rates in these regions. Regions with a higher proportion of families, such as Sleman and Bantul, may contribute more significantly to population growth if their fertility rates align with or exceed the moderate replacement fertility level (approximately 2.1 children per woman). These regions may also reflect greater access to resources, cultural norms, or socio-economic factors that support family formation and child-rearing.

In contrast, regions with a smaller share of families, such as Kota Yogyakarta, may face challenges sustaining population growth if fertility rates fall below replacement levels. This could be influenced by urbanization, shifts toward smaller family norms, or economic pressures.

Sleman has the highest proportion of families (30%), showing dominance in the number of families compared to other regions. Bantul ranks second with 28%, closely following Sleman. This indicates that Bantul and Sleman are the primary centers of family concentration in Yogyakarta. Gunung Kidul has 22% of families, placing it third. This proportion shows that Gunung Kidul has many families, though fewer than Sleman and Bantul. Kulon Progo and Yogyakarta City have the smallest proportions of families, at 12% and 8%, respectively. Being an urban area, Yogyakarta City may have fewer families due to the tendency for smaller households or apartments not occupied by large families.

In terms of Fertility and Family Distribution, Sleman and Bantul (High Proportion of Families), the higher proportion of families in Sleman (30%) and Bantul (28%) may reflect moderate fertility rates and better socio-economic conditions. Regions with better access to healthcare, education, and employment tend to have lower fertility rates than rural areas, leading to smaller but more stable family units (Bongaarts & Guilmoto, 2015). Thus, the

high number of families in these regions does not necessarily indicate high fertility rates but results from urban migration and economic opportunities. Gunung Kidul (22%) and Kulon Progo (12%): These more rural regions may exhibit higher fertility rates than urban areas like Yogyakarta City. Studies indicate that rural communities often have higher fertility due to limited access to family planning services and socio-cultural norms that encourage larger family sizes (Casterline & Sinding, 2000). However, despite potentially higher fertility rates, the lower population density in these regions results in an overall smaller proportion of families. Yogyakarta City (8%): The low proportion of families in Yogyakarta City is likely linked to urban fertility patterns, where fertility rates are typically lower. Urban areas often exhibit delayed marriage and childbirth due to education, career priorities, and housing constraints (Lesthaeghe, 2014). As a result, family sizes tend to be smaller, leading to a lower share of families in the city.

These findings support the theory that urbanization and economic facilities influence family distribution (Johnston et al., 2002). Sleman, as an educational and financial center, may attract more families than the more rural Kulon Progo or Gunung Kidul. This data can be used to understand regional population distribution theory, particularly in the context of urban and rural differences. The larger number of families in Bantul and Sleman may reflect better access to education, employment, and public facilities than other regions. Yogyakarta City has the smallest number of families (8%). This supports the concept that urban areas are often dominated by individuals living alone or small families, as evidenced by studies (Hugo et al., 2003).

The government can focus infrastructure development in regions with high family concentrations, such as Sleman and Bantul. For instance, improving access to education, healthcare, and transportation

in these two regions. With many families in Sleman, more affordable and family-friendly housing can be developed to meet the community's needs. Such areas as Kulon Progo and Gunung Kidul require special attention to increase economic attractiveness and reduce disparities. Programs such as MSME empowerment and basic infrastructure development can be implemented in these regions. With a low percentage of families, Yogyakarta City can focus on developing facilities that support individuals or young couples, such as small apartments and co-working spaces.

With rural characteristics, Gunung Kidul and Kulon Progo could benefit from strengthened family planning initiatives to manage fertility rates and improve maternal health. Expanding healthcare access, especially reproductive health services, could help stabilize population growth. In Sleman and Bantul, the government can integrate family-friendly policies with urban planning, such as housing subsidies for families and improved access to childcare facilities. This will support families while accommodating fertility changes caused by urbanization. Fertility rates in rural areas like Gunung Kidul may also be tied to economic conditions. Previous studies show that empowering rural women through education and entrepreneurship programs could delay childbirth and result in smaller family sizes (Bongaarts & Guilmoto, 2015).

These findings demonstrate a strong link between family distribution, urbanization levels, and access to public facilities. For example, population distribution theory supports the idea that Sleman and Bantul have high family concentrations because of their strategic economic and geographic locations. Practically, this understanding can be used to design region-based development policies, such as improving development in Gunung Kidul and Kulon Progo to achieve regional equity.

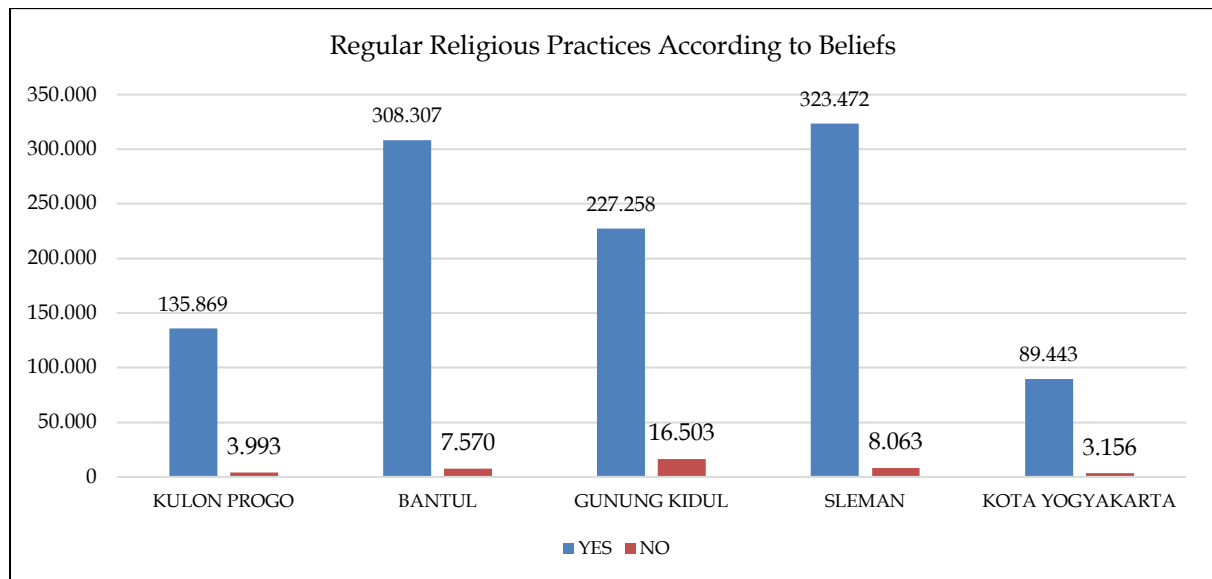


Figure 2. Performing worship (Source: Family Data Collection and Update by BKKBN, 2023)

The bar chart depicts the number of people in five regions-Kulon Progo, Bantul, Gunung Kidul, Sleman, and Kota Yogyakarta- who perform religious practices regularly ("YES") and those who do not ("NO"). The majority in all regions practice their faith consistently, with Sleman and Bantul recording the highest numbers, followed by Gunung Kidul, Kulon Progo, and Kota Yogyakarta. This data can be related to fertility trends, as religious adherence often influences family and reproductive decisions. Regions with a higher prevalence of regular spiritual practice (e.g., Sleman and Bantul) might exhibit stronger adherence to traditional values supporting marriage and larger families, positively affecting fertility rates. On the other hand, regions with a smaller population performing religious practices (e.g., Kota Yogyakarta) might align more with modern or secular views, potentially favoring smaller family sizes and resulting in lower fertility rates.

These observations suggest that religiosity could play a role in maintaining fertility levels near or above the replacement rate, especially in regions with high participation in religious practices. Most individuals regularly engage in spiritual

practices in all areas, as indicated by the dominance of "YES" responses. This reflects a high religiosity or commitment to faith across the Yogyakarta region. Sleman and Bantul have the highest number of individuals regularly practicing religion, exceeding 300,000 respondents. This may be related to their larger populations and better access to religious institutions and community support. Gunung Kidul ranks third with around 250,000 individuals, reflecting significant adherence in this rural area. Kulon Progo has fewer individuals regularly practicing religion (<150,000), likely reflecting its smaller population than Sleman and Bantul. Yogyakarta City recorded the lowest number (<100,000 respondents) of people regularly practicing religion, potentially influenced by urban characteristics that tend to be more secular.

The "NO" responses remain consistently low across all regions, indicating that only a small proportion of individuals do not regularly engage in religious practices. These numbers are slightly higher in urban areas such as Yogyakarta City and Sleman, possibly reflecting greater diversity in belief systems or more secular tendencies. The high religiosity in regions such as Sleman, Bantul,

and Gunung Kidul can strengthen traditional family values, including higher fertility rates and larger family sizes. Research indicates that religiosity often correlates with pro-family attitudes and a preference for larger families (McQuillan, 2004). In Gunung Kidul, where rural norms are more dominant, religious practices may be linked to cultural traditions emphasizing family obligations and collective worship. In contrast, urban areas like Yogyakarta City, with lower religiosity levels, may reflect a shift toward smaller family sizes and delayed childbirth, which is in line with urban fertility trends (Lesthaeghe, 2014).

The lower number of individuals practicing religion in Yogyakarta City may reflect the influence of urbanization and secularization. Urban environments often provide greater exposure to diverse worldviews, leading to declining religious adherence or regular practices (Bruce, 2011). This aligns with trends of smaller family sizes and more individualistic lifestyles in urban areas. This data highlights the role of religion as a form of social and cultural capital in rural and semi-urban regions like Bantul, Sleman, and Gunung Kidul. Religious participation strengthens community bonds and encourages collective activities, including child-rearing and family cohesion (Oberle, 2016). In urban areas like Yogyakarta City, where individualism and secular lifestyles are more prevalent, religion may play a more minor role, leading to different family dynamics and smaller households.

High religiosity in rural areas supports theories suggesting that cultural and religious values slow fertility transitions (Bongaarts & Guil moto, 2015). Regions with

high religiosity, such as Gunung Kidul and Bantul, may experience slower declines in fertility rates compared to urban areas like Yogyakarta City. In regions such as Sleman, Bantul, and Gunung Kidul, policymakers could leverage high religiosity to implement community-based programs promoting education, family planning, and health initiatives through religious institutions. In Yogyakarta City, where religiosity appears lower, programs focusing on more diverse approaches could be used to reach secular and multi-faith populations. For example, integrating interfaith dialogue with family support programs could accommodate the unique demographic profile of the city.

This data suggests the need for tailored approaches to align rural-urban differences in religious adherence and their implications for social policies. Religious institutions can be crucial in disseminating information on maternal health, family planning, and economic empowerment in rural areas. These efforts may need to incorporate non-religious platforms in urban areas to reach broader audiences. This data reinforces the link between religiosity, family dynamics, and fertility patterns. The high religiosity in Bantul, Sleman, and Gunung Kidul indicates that religion-based initiatives can effectively influence family-oriented policies in these regions. For example, religious institutions can support pro-family campaigns in rural areas while addressing modern issues such as reproductive health. In more urbanized Yogyakarta, where secularization is more dominant, government programs may need to be more inclusive, recognizing diverse lifestyles and belief systems.

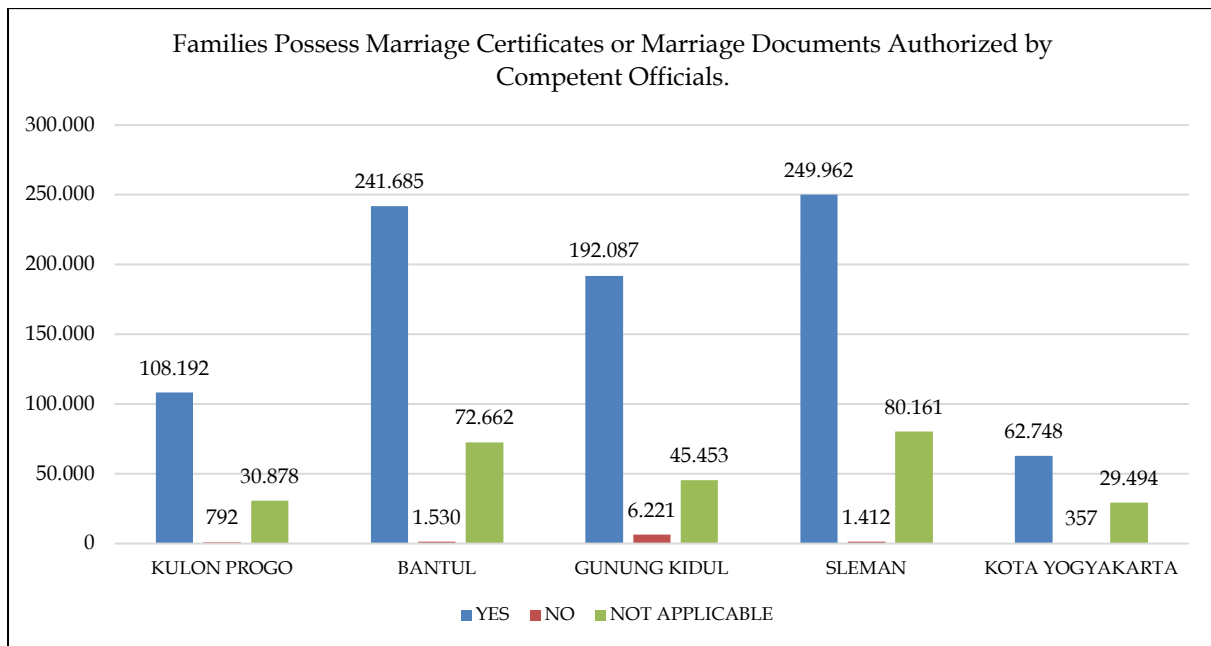


Figure 3. Having a marriage certificate
 (Source: Family Data Collection and Update by BKKBN, 2023)

The bar chart illustrates the number of families in five regions-Kulon Progo, Bantul, Gunung Kidul, Sleman, and Kota Yogyakarta- who possess marriage certificates or marriage documents authorized by competent officials ("YES"), those who do not have such documents ("NO"), and cases where this status is "NOT APPLICABLE." The chart shows that most families in all regions possess authorized marriage certificates, with Sleman and Bantul recording the highest numbers. In contrast, the proportions of families without such documents ("NO") are minimal across all regions, particularly in Gunung Kidul and Sleman. The "NOT APPLICABLE" category, representing families for whom this requirement does not apply, shows moderate variation, with Kota Yogyakarta and Kulon Progo having higher proportions in this category.

This data has implications for family stability and legal recognition of marriages, which can influence demographic trends, including fertility rates. Regions with higher proportions of families possessing authorized marriage documents (e.g.,

Sleman and Bantul) may reflect more stable family structures, potentially associated with higher fertility rates. Conversely, regions with higher "NOT APPLICABLE" or "NO" proportions might encounter challenges in ensuring family stability or may represent more diverse family structures, potentially influencing lower fertility trends. Most families in all regions possess marriage certificates, indicating widespread compliance with marriage registration laws. Sleman and Bantul recorded the highest numbers, each exceeding 250,000 families. Gunung Kidul follows with over 200,000 families possessing marriage documents. Kulon Progo and Yogyakarta City recorded smaller numbers, which were consistent with their smaller populations. A small proportion of families in all regions do not have marriage certificates. This issue is slightly more pronounced in Kulon Progo, Bantul, and Gunung Kidul. Factors like lack of access to legal resources, economic barriers, or traditional cultural practices may contribute to this. The "NOT APPLICABLE" category includes families or individuals for whom

marriage registration is irrelevant (e.g., unmarried individuals or families living together without formal marriage). Higher percentages in Kulon Progo, Bantul, and Yogyakarta City may reflect diverse family structures, urbanization, or changing social norms, especially in Yogyakarta City, where alternative family arrangements may be more common.

The high percentage of families with marriage certificates reflects the successful dissemination of legal requirements and access to registration facilities in urban areas like Sleman and Bantul. However, rural areas such as Kulon Progo and Gunung Kidul may require additional outreach programs to ensure equitable compliance. Families without marriage certificates may be influenced by cultural practices, such as customary marriages that are not officially registered. These practices are more common in rural areas, where traditional customs may carry greater influence than formal legal systems (Jones, 2010). In Yogyakarta City, the higher percentage in the "NOT APPLICABLE" category may indicate urbanization-driven changes, such as an increase in cohabiting couples, single-parent households, or delayed marriages. Urban areas often exhibit more diverse family dynamics due to greater exposure to modern and alternative lifestyles (Lesthaeghe, 2014).

Regions like Kulon Progo and Gunung Kidul, where more families lack

certificates, could benefit from targeted campaigns promoting the importance of marriage registration. Bringing legal services closer to rural communities can help overcome logistical barriers. Engaging trusted local community leaders can encourage formal marriage registration while respecting traditional practices. In Yogyakarta City, policies need to address the growing diversity of family structures. Examples include legal recognition and support for cohabiting couples or single parents to ensure their access to social benefits. Across all regions, programs educating families about marriage registration's legal and social benefits can reduce the "NO" category. These benefits include inheritance rights, legal protection, and access to government services.

These findings highlight the interplay between cultural, legal, and social factors in marriage registration practices: In rural areas, strong cultural traditions require culturally sensitive interventions to enhance compliance with marriage registration laws. In urban areas, the rise of alternative family arrangements underscores the need for more inclusive policies to accommodate societal changes. This insight can guide the formulation of policies that respect regional differences while promoting universal access to legal protections associated with formal marriage registration.

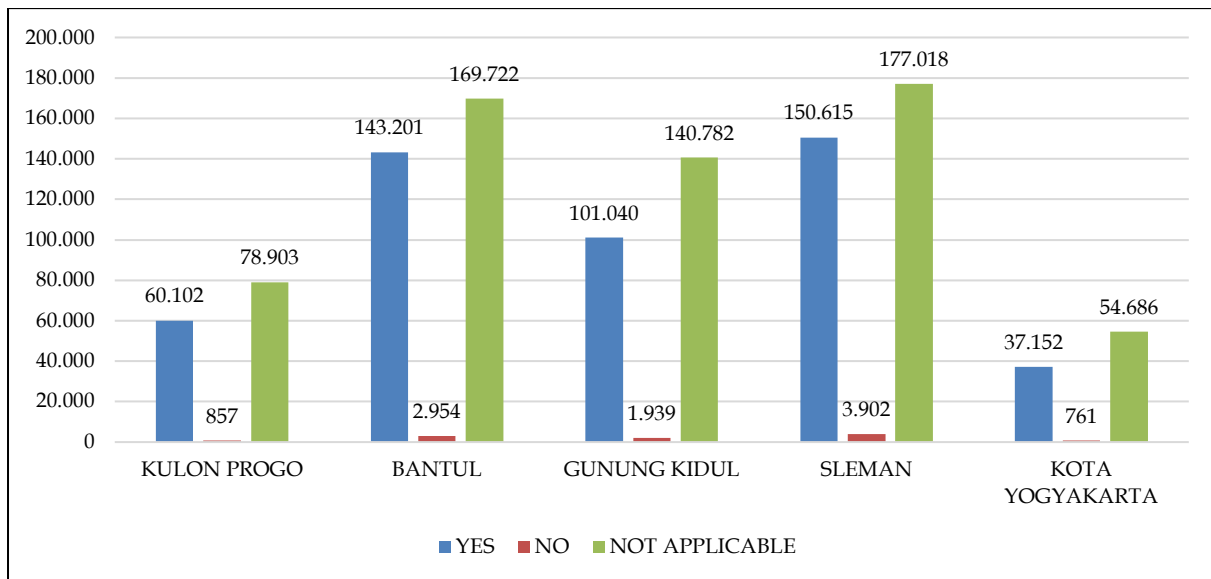


Figure 4. Having a birth certificate
 (Source: Family Data Collection and Update by BKKBN, 2023)

The bar chart illustrates the number of children aged 0-17 years in families across five regions-Kulon Progo, Bantul, Gunung Kidul, Sleman, and Yogyakarta City-categorized based on whether they possess a birth certificate validated by an authorized official ("YES"), do not possess such a document ("NO"), or if the category is "NOT APPLICABLE" ("NOT APPLICABLE"). The chart shows that the "NOT APPLICABLE" category has the highest proportion in most regions, particularly in Bantul and Sleman. However, many children possess a valid birth certificate ("YES"), with Bantul and Sleman leading in this category. The number of children without such a document ("NO") is minimal across all regions, indicating that cases of unregistered births are relatively low. This data has significant implications for child welfare, legal identity, and access to public services, which heavily depend on birth registration. Regions with a higher proportion of "YES" are likely to ensure better access to education, healthcare, and social protection for children, as these services often require official identification. Conversely, unregistered children ("NO") may face challenges accessing these services, impacting their development and well-

being. Further analysis could explore the factors influencing birth registration in these regions, including administrative efficiency, awareness levels, and socio-economic conditions, to address gaps and ensure universal registration.

The bar chart above displays data on birth certificate ownership for children aged 0-17 years in five regions: Kulon Progo, Bantul, Gunung Kidul, Sleman, and Yogyakarta City. The data is categorized into three groups: YES (children who possess a birth certificate), NO (children who do not possess a birth certificate), and NOT APPLICABLE (families or individuals without children in this age range). The following is the analysis: Sleman and Bantul show the highest number of children with birth certificates, each with approximately 150,000 children. Gunung Kidul follows with around 100,000 children possessing birth certificates. Kulon Progo and Yogyakarta City report the lowest numbers of children with birth certificates, reflecting smaller populations. The number of children without birth certificates is consistently low across all regions but slightly higher in Kulon Progo, Gunung Kidul, and Bantul. This suggests barriers in the registration

process in rural areas, such as a lack of awareness, logistical challenges, or economic constraints. Most families fall into this category, especially in Yogyakarta City, Sleman, and Bantul, likely reflecting families without children aged 0-17 years, such as households with older members or individuals without children. This could be due to lifestyles favoring smaller families or delayed childbearing in urban areas like Yogyakarta City. The high percentage of children with birth certificates in Sleman and Bantul reflects strong legal compliance, likely due to better access to registration facilities and higher awareness levels. In rural areas like Kulon Progo and Gunung Kidul, challenges such as transportation, lack of information, or traditional practices may hinder registration. The large "NOT APPLICABLE" category in urban areas like Yogyakarta City indicates the impact of urbanization, where family structures are more diverse, with fewer households having children under 17 years old. This could be due to lifestyle changes, such as smaller families, delayed childbearing, or increased single-person households.

Kulon Progo and Gunung Kidul can leverage targeted programs to increase birth certificate ownership. Strategies that can be

implemented include mobile registration units and awareness campaigns to highlight the importance of birth registration and its benefits for children. Collaboration with community leaders and local governments can help address logistical and cultural barriers. In Yogyakarta City, efforts can focus on addressing specific urban challenges, such as raising awareness among young, unmarried, or cohabiting parents about the importance of early birth registration. Across all regions, initiatives to educate parents about the benefits of birth certificates, such as access to education, healthcare, and legal protection, can further reduce the "NO" category. Birth certificates are crucial for ensuring children have access to social services, legal identity, and protection from exploitation. Regions with lower registration rates require targeted interventions to guarantee these rights. Bridging the gap between rural and urban areas requires addressing logistical barriers and socio-cultural norms that may not prioritize official documentation. These findings emphasize the need for region-specific strategies to ensure every child has a birth certificate and the rights and opportunities that come with it.

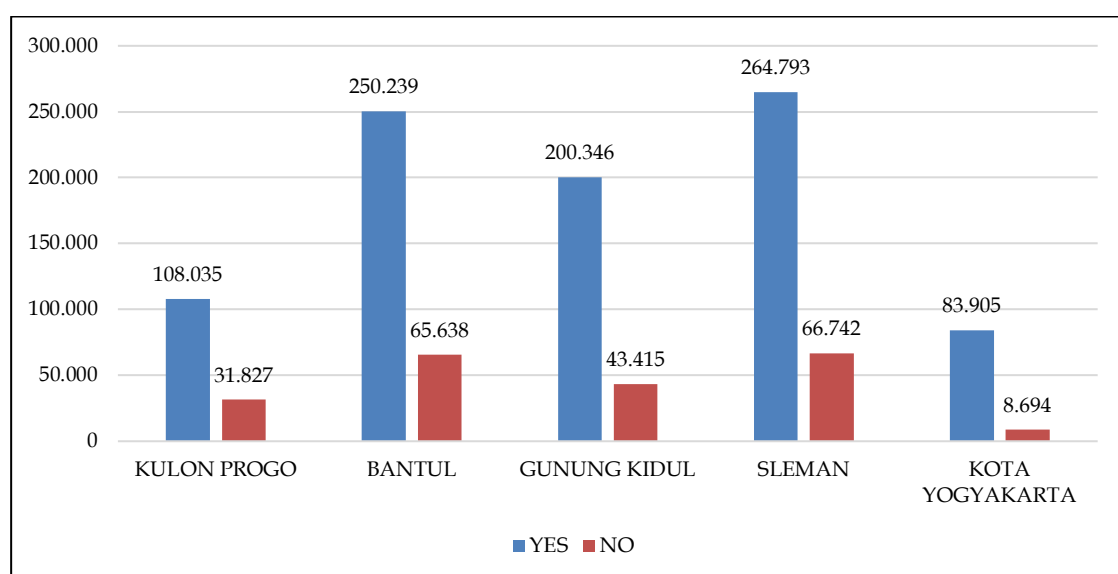


Figure 5. Having a health insurance card
(Source: Family Data Collection and Update by BKKBN, 2023)

The graph above shows the number of households with health insurance from government and private sources in five regions: Kulon Progo, Bantul, Gunung Kidul, Sleman, and Yogyakarta City. The data is divided into two categories: households where all members have health insurance (marked in blue) and households with members who do not have health insurance (marked in orange). The results indicate that most households in each region have full health insurance coverage. Sleman has the highest number with 264,793 households having health insurance, followed by Bantul (250,239), Gunung Kidul (200,346), Kulon Progo (108,035), and Yogyakarta City (83,905). On the other hand, the number of households with uninsured members varies, with the highest number in Sleman (66,742), followed by Bantul (65,638), Gunung Kidul (43,415), Kulon Progo (31,827), and the lowest in Yogyakarta City (8,694). This trend suggests that health insurance coverage is relatively high in these areas, with the proportion of households without full coverage being relatively small compared to those with insurance. This could be attributed to the effectiveness of the national health insurance program implemented by the government or other factors such as public awareness of the importance of health insurance. However, gaps still need to be addressed, especially in Sleman and Bantul, which have a relatively high number of uninsured households. This may indicate specific barriers to access or compliance with health insurance schemes. Therefore, public health policies should consider strategies to ensure more equitable coverage, such as further socialization or simplifying the health insurance registration process.

Overall, most households in each region have health insurance. The highest percentage of insurance ownership is seen in Sleman (about 79% have insurance), followed by Bantul (around 79%) and Gunung Kidul (about 82%). Kulon Progo has

a lower ownership rate (around 77%), while Yogyakarta City shows the highest ownership rate, with over 90% of households having insurance. With 264,793 in Sleman and 250,239 in Bantul, these two regions have the highest number of households with health insurance. This can be linked to better access to healthcare services and higher public awareness of the importance of health insurance. Although Yogyakarta City has the highest percentage of insurance ownership, its absolute number is much lower than in other regions. This could be due to a smaller population than regions like Sleman or Bantul. Gunung Kidul (43,415) and Kulon Progo (31,827) have a significant number of households without insurance, which may reflect economic limitations or lower awareness of the benefits of health insurance.

From the perspective of social welfare theory (Gough, 1996; Bruce, 2011), health insurance ownership is a key indicator of the success of public health policies in creating equitable access. These data show that regions with higher urbanization and economic access (Sleman, Bantul) have higher insurance ownership rates, which is in line with the theory of healthcare service accessibility (Andersen, 1995). Additionally, the lower insurance ownership rates in Gunung Kidul and Kulon Progo can be linked to the health inequality theory, which states that economically disadvantaged groups often face barriers to obtaining health protection (Marmot, 2005). These findings suggest that the health insurance expansion program should focus on regions with low ownership rates, particularly Gunung Kidul and Kulon Progo. Strategies that could be applied include: increasing education and socialization about the importance of health insurance, especially in areas with still high "NO" rates; providing subsidies or financial assistance schemes for families without insurance due to economic constraints; and improving access to healthcare services in regions with low ownership rates to ensure

that people see the tangible benefits of having insurance. From a health policy perspective, this data confirms that access and public awareness are the main factors in health insurance ownership. These findings support the theory that regions with better healthcare infrastructure and more stable economies tend to have higher insurance ownership rates. Therefore, increasing awareness and access in areas with lower ownership rates could help reduce disparities in health protection across the DIY region.

CONCLUSION

This study identified the patterns of family distribution and factors influencing fertility rates in five regions of the Special Region of Yogyakarta: Sleman, Bantul, Gunung Kidul, Kulon Progo, and Yogyakarta City. The analysis revealed that regions like Sleman and Bantul have more families than others. This reflects the influence of urbanization and access to better socio-economic facilities, which support family growth despite moderate fertility rates.

Additionally, religiosity played a significant role in determining fertility patterns. Regions with higher religious engagement, such as Bantul and Sleman, tended to have higher fertility rates than Yogyakarta City, which is more urban and secular. Other factors, such as the possession of marriage and birth certificates, also highlighted the importance of legal aspects in family structure. However, there were variations in compliance across different regions. This study reveals that economic, social, and cultural factors, including access to healthcare, education, and religious practices, significantly influence family dynamics and fertility rates in Yogyakarta.

REFERENCE LIST

Andersen, R. M. (1995). Revisiting the Behavioral Model and Access to Medical Care: Does it Matter? *Journal*

of Health and Social Behavior, 36(1), 1. <https://doi.org/10.2307/2137284>

Arifin, E. N., & Ananta, A. (2016). Erratum: Chapter 20 The Past Three Population Censuses: A Deepening Ageing Population in Indonesia. In *Contemporary Demographic Transformations in China, India and Indonesia* (pp. E1–E1). Springer International Publishing. https://doi.org/10.1007/978-3-319-24783-0_23

Bongaarts, J., & Guilmo, C. Z. (2015). How Many More Missing Women? Excess Female Mortality and Prenatal Sex Selection, 1970–2050. *Population and Development Review*, 41(2), 241–269. <https://doi.org/10.1111/j.1728-4457.2015.00046.x>

Bongaarts, J., & Hodgson, D. (2022). Socio-Economic Determinants of Fertility (pp. 51–62). https://doi.org/10.1007/978-3-031-11840-1_4

Bruce, S. (2011). Secularization Elsewhere. In *Secularization* (pp. 177–201). Oxford University Press. <https://doi.org/10.1093/acprof:osobl/9780199654123.003.0009>

Casterline, J. B., & Sinding, S. W. (2000). Unmet Need for Family Planning in Developing Countries and Implications for Population Policy. *Population and Development Review*, 26(4), 691–723. <https://doi.org/10.1111/j.1728-4457.2000.00691.x>

Chicoyo, C. (2016). Socio–Cultural Factors Influencing Fertility in MOROGORO District, Tanzania. *IOSR Journal of Humanities and Social Science*, 21(07), 25–41. <https://doi.org/10.9790/0837-02107032541>

Darki, N. W. Y. A., & Wibowo, A. (2023). Faktor yang Mempengaruhi Tingkat Fertilitas di Indonesia: Review Literatur. *Media Gizi Kemas*, 12(1), 530–536. <https://doi.org/10.20473/mgk.v12i1.2023.530-536>

Duminy, J., Cleland, J., Harpham, T., Montgomery, M. R., Parnell, S., &

- Speizer, I. S. (2021). Urban Family Planning in Low- and Middle-Income Countries: A Critical Scoping Review. *Frontiers in Global Women's Health*, 2. <https://doi.org/10.3389/fgwh.2021.749636>
- Götmarm, F., & Andersson, M. (2020). Human fertility in relation to education, economy, religion, contraception, and family planning programs. *BMC Public Health*, 20(1), 265. <https://doi.org/10.1186/s12889-020-8331-7>
- Gough, I. (1996). Social assistance in Southern Europe. *South European Society and Politics*, 1(1), 1-23. <https://doi.org/10.1080/13608749608454714>
- Hugo, G., Champion, A., & Lattes, A. (2003). Toward a New Conceptualization of Settlements for Demography. *Population and Development Review*, 29(2), 277-297. <https://doi.org/10.1111/j.1728-4457.2003.00277.x>
- Johnston, R., Forrest, J., & Poulsen, M. (2002). Are there Ethnic Enclaves/Ghettos in English Cities? *Urban Studies*, 39(4), 591-618. <https://doi.org/10.1080/00420980220119480>
- Jones, G. (2010). Changing Marriage Patterns in Asia. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1716533>
- Kulu, H., & Washbrook, E. (2014). Residential context, migration and fertility in a modern urban society. *Advances in Life Course Research*, 21, 168-182. <https://doi.org/10.1016/j.alcr.2014.01.001>
- Lesthaeghe, R. (2014). The second demographic transition: A concise overview of its development. *Proceedings of the National Academy of Sciences*, 111(51), 18112-18115. <https://doi.org/10.1073/pnas.1420441111>
- Marmot, M. (2005). Social determinants of health inequalities. *The Lancet*, 365(9464), 1099-1104. [https://doi.org/10.1016/S0140-6736\(05\)71146-6](https://doi.org/10.1016/S0140-6736(05)71146-6)
- McQuillan, K. (2004). When Does Religion Influence Fertility? *Population and Development Review*, 30(1), 25-56. <https://doi.org/10.1111/j.1728-4457.2004.00002.x>
- Mohd Ali, A. S., Junaini, S. N., Masron, T., Kimura, Y., & Ahmad, A. (2025). Urbanization and aging in ASEAN: A comparative demographic analysis from 1970 to 2023. *Malaysian Journal of Society and Space*, 21(2). <https://doi.org/10.17576/geo-2025-2102-03>
- Oberle, M. (2016). Robert D. Putnam: Bowling Alone. The Collapse and Revival of American Community, New York: Simon and Schuster 2000, 541 S. In *Klassiker der Sozialwissenschaften* (pp. 408-411). Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-13213-2_95
- Tan, K., Li, N. P., Meltzer, A. L., Chin, J. L. J., Tan, L. K. L., Lim, A. J., Neuberg, S. L., & van Vugt, M. (2022). Effects of economic uncertainty and socioeconomic status on reproductive timing: A life history approach. *Current Research in Ecological and Social Psychology*, 3, 100040. <https://doi.org/10.1016/j.cresp.2022.100040>