

The Detrimental Impact of Low Birth Rates on Malaysia's Accelerated Transition to an Aged Society

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Abstract

As Malaysia transitions towards becoming an ageing society, it faces numerous challenges that require comprehensive and strategic responses. The rapid demographic shift with a significant rise in the number of people over 65 brings about paradigm changes in various aspects of society. As Malaysia experiences this rapid increase in its elderly population driven by a low birth rate, it faces significant challenges in various sectors. The method used in this paper is concept mapping which allow the authors to analyze the existing literature towards finding a pattern of variables. Existing research highlights that low birth rates in Malaysia are influenced by income levels, demographic shifts, and climatic conditions. These factors collectively contribute to the increasing proportion of elderly individuals. This study identifies six key issues related to Malaysia's ageing population, focusing on healthcare needs, financial security, social isolation, caregiver support, infrastructure and policy implications and then proposes strategic responses to address these challenges.

Keywords: Elderly, Low Birth Rate, Healthcare Needs, Financial Security, Caregiver Support

Introduction

As Malaysia becomes an aged society, it faces numerous challenges that require comprehensive and strategic responses. The population is rapidly changing, with a significant rise in the number of those 65 and older (Turesson et al., 2018). This is having a dramatic impact on many facets of society. Six critical issues are associated with Malaysia's ageing population, focusing on healthcare needs, financial security, social isolation, caregiver support, infrastructure and policy implications. One of the most pressing issues is the

increased demand for healthcare services. Due to their increased vulnerability to chronic conditions, including diabetes, hypertension, and cardiovascular diseases, older persons require an efficient healthcare system that can offer specialized care (Schofield et al., 2010). The cost of healthcare can be prohibitive, particularly for low-income families, leading to unmet healthcare needs among the elderly. To address this, Malaysia must enhance its healthcare infrastructure, ensuring that medical services are both accessible and affordable for all senior citizens.

Financial insecurity is another significant challenge for Malaysia's elderly population. Many older adults have inadequate retirement savings, leaving them vulnerable to poverty and financial exploitation (Schroder & Marianti, 2006). The lack of comprehensive retirement planning exacerbates this issue, highlighting the need for improved financial literacy and support systems. Initiatives such as financial literacy workshops and estate planning seminars can empower the elderly to manage their finances better and protect themselves from fraud (Batizani, 2024). Social isolation and loneliness are common issues among the elderly, often resulting from diminished social networks and physical mobility limitations (Shankar et al., 2017). Mental health issues, including anxiety and depression, may result from this. Creating age-friendly environments that foster social inclusion is vital for mitigating these effects. Community centres, lifelong learning programs, and social engagement activities can provide the elderly with opportunities to connect with others and lead fulfilling lives.

Caregivers play a crucial role in supporting the elderly, yet they often face significant challenges due to lacking training and resources. Providing adequate support and training for caregivers is essential to ensure the well-being of both the caregivers and the elderly they look after (Otis-Green & Suarez, 2012). Programs that offer specialized training in areas such as dementia care are particularly beneficial. Enhanced support for caregivers can also help alleviate the emotional and physical burden associated with caregiving. The physical environment must be adjusted to meet the needs of an ageing population. This entails making public areas, transit, and housing safer and more accessible. Age-friendly infrastructure ensures the elderly can move around safely and participate fully in community life. Policies prioritising the development of such infrastructure are crucial for creating inclusive societies.

Effective policy and legislative measures are essential to address the multifaceted challenges of an ageing population. The Malaysian government must create and carry out all-encompassing plans that address social assistance, healthcare, financial stability, and active ageing programs (Radduan & Mohmad Fazli, 2017). The goal of these measures should be to guarantee the elderly's incorporation into society and to improve their quality of life. Malaysia's ageing population presents significant challenges that require coordinated efforts across various sectors. By addressing healthcare needs, ensuring financial security, combating social isolation, supporting caregivers, improving infrastructure, and implementing effective policies, Malaysia can create an environment where the elderly population can thrive. The proactive steps taken today will determine the well-being and quality of life of the elderly in the future, making it imperative to act with urgency and commitment.

Literature Review*Low Birth Rate*

One of the reasons for the growing elderly population is the low birth rate. Low birth rates are also referred to as low fertility rates. They are common in underdeveloped nations and are often linked to high rates of maternal and perinatal deaths (Nargund, 2009). Malaysia also experiencing low birth rates even though Malaysia is a developing country with better healthcare infrastructure. This drop is largely due to factors like urbanization, rising living costs, delayed marriages, and changing lifestyle choices (Peng, 2020; Zulkefly et al., 2023). According to the World Bank (2020), the total number of children per woman in the year of childbearing for each designated year is the definition of the total fertility rate. The birth rate is important in society. If the birth rate decreases, it is a sign of the population and an increase in the ageing population. Furthermore, the replacement fertility rate is the population's fertility rate with zero growth rate (Rindfuss & Choe, 2016). Every woman must give birth to at least two children in each family for there to be a population.

Demographic

Demographic factors such as age are the reason for the decline in birth rates. An ageing population poses challenges related to health care, social support and overall well-being. The composition of elderly individuals and their living conditions play an important role in determining their quality of life and overall well-being. The arrangement of the elderly or with whom they live is an important component of the well-being of the elderly and is part of family support (Knodel & Ofstedal, 2002). The elderly's pattern of living will provide insight into their overall well-being and quality of life (Du & Guo, 2000). Furthermore, according to Dupont (1997), uncontrolled international migration will bring about several social, economic, and political problems in addition to challenges to national security. The demographic issues discussed in this study underscore the importance of proactive policy measures to address changing population dynamics.

Income

Income is a significant factor influencing a country's birth rate, directly affecting individuals' quality of life and their reproductive choices. On one hand, higher income levels improve access to essential resources such as quality healthcare, highly nutritious food, and cleaner living environments, which can positively impact the birth rate by enhancing overall health and reducing child and maternal mortality. Improved economic conditions enable families to afford better medical services, which contribute to higher survival rates for both mothers and infants, thus potentially increasing the number of children a family might have. However, the relationship between income and fertility is complex and often paradoxical. As income reaches higher levels, there is a notable decline in fertility rates. This phenomenon is primarily attributed to increased educational and employment opportunities, particularly for women, which encourage family planning and delay childbearing. Higher-income levels are often associated with greater education and career development investments, leading individuals to prioritize personal and professional goals over larger family sizes. This shift results in a lower fertility rate as people opt to have fewer children. The significant attention that this inverse relationship between income per capita and the fertility rate has attracted was brought to light by Idris, Habibullah & Din (2018). Their findings suggest that although economic prosperity can lead to a higher standard of living, it also promotes a family-size-reduction mindset. Thus, income plays a dual role in influencing birth rates: initially fostering

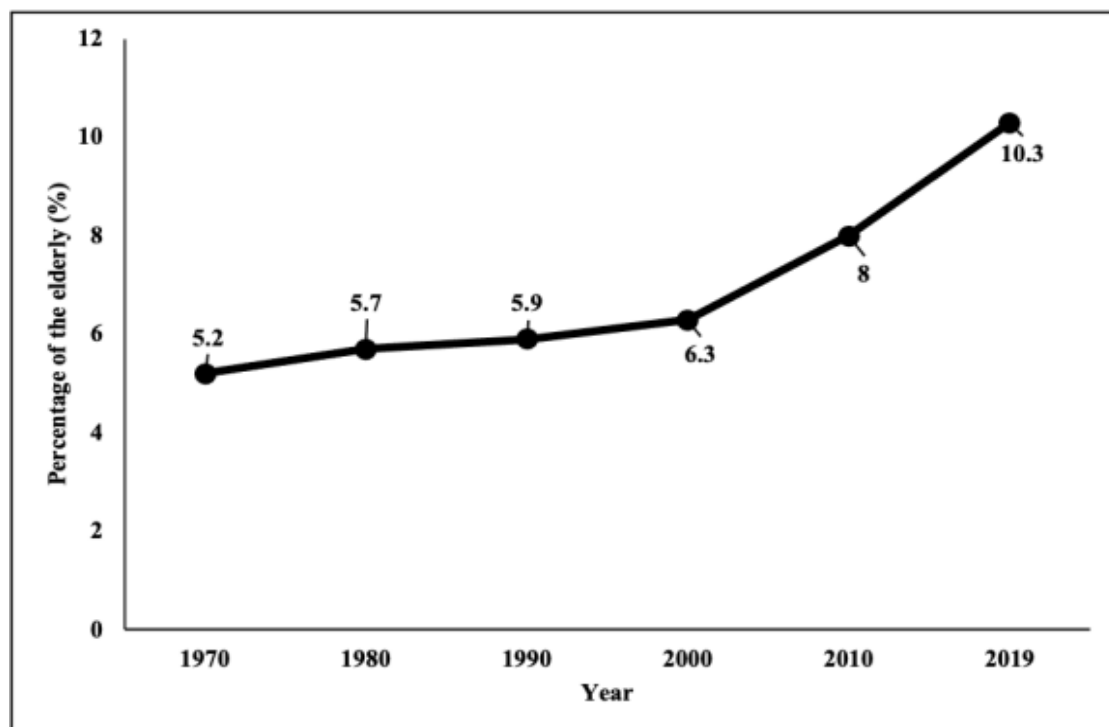
conditions conducive to higher fertility but ultimately contributing to its decline as individuals achieve greater economic and social stability.

High Temperature

High temperatures can result in a decrease in the likelihood of pregnancies due to various factors, such as heightened fatigue and susceptibility to heat-related illnesses (Nybo, Rasmussen & Sawka, 2014). In addition, there might be a decrease in female sperm count and quality (Mao, Feng & Yang 2017), negative effects on female reproductive health (Sorensen et al., 2018), and a fall in female sexual desire (Wilde, Apouey & Jung, 2017). Thus, abstaining from or postponing pregnancy during hot weather spells may result in fewer babies delivered about nine months after the heat exposure incident. Resuming fertility efforts right away could lead to a rise in the number of babies delivered about ten months after the heat exposure incident, demonstrating a delayed pregnancy effect. Should the pregnancy be shorter than predicted, the number of babies due in the following months can also be shorter. For example, if the length of the pregnancy is cut by one month, babies that were supposed to be born one month later would be born that month. As such, there can be a rise in the number of babies born in one month, followed by a fall in the next.

Statistical and Empirical data

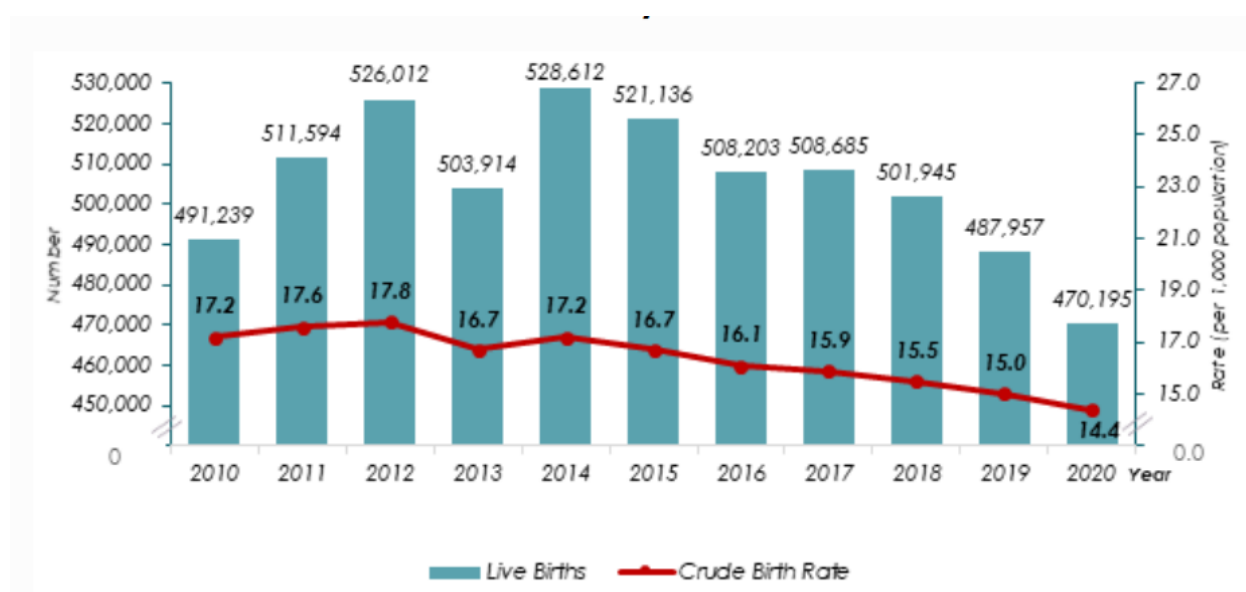
The ageing issue is one of the major problems that our country is facing right now. An estimation has been established that the number of Malaysian people around 60 years and above is approximately 1.4 million, and it will still increase to 3.3 million by the end of 2020 year (Mafauzy, 2000). Based on Figure 1, the estimation of the record population based on 1970,1990 and 2000 shows a percentage increase of 5.2 per cent,5.7 per cent, and 6.3 per cent. Based on the record trend from 1970, it is expected that the percentage of the population will be increasing by approximately 9.7 percent.



(Source: Zainal Abidin, Muhamad Fadzil & Nadia, 2020)

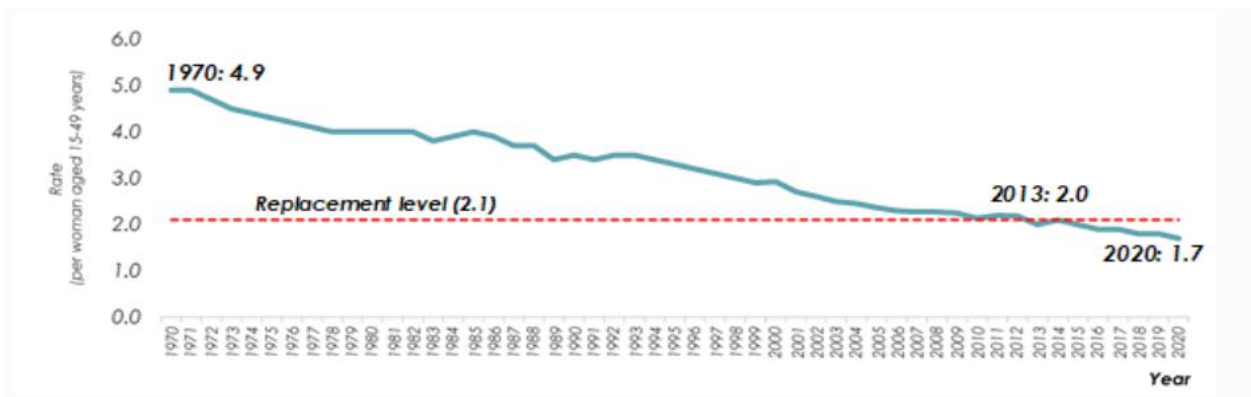
Figure 1: The Population Percentage of Elderly in Malaysia from 1970 Until 2019

This trend is due to many factors contributing to Malaysia's ageing issue. One of the factors that cause this problem is the low birth rate or fertility rate (Md Nor & Ghazali, 2021). Many aspects need to be considered as to why the low birth rate in Malaysia is decreasing. This is because of the socioeconomic status of the individual's background in terms of education, healthcare, and employment. The low birth rate is considered a common problem that other countries also face. According to the Department of Statistics Malaysia (2021), the trend of live births in Malaysia has decreased from 2010 until 2020. In 2010, the number of live births per year was 491 329 compared to 2020, when the number of live births per year was 470 195, as shown in Figure 2. From 470,195 live births in 2020, 243,617 were male, which was 51.8 per cent of the total. In the meantime, 226,578 (48.2 per cent) female kids were born. In 2020, there were 14.5 male and 14.3 female births per thousand population, a decrease from 15.1 male and 14.9 female births per thousand population in 2019. A popular demographic indicator used to determine the average number of children a woman will have throughout her reproductive years is Malaysia's fertility rate per year, as shown in Figure 3. (i.e. Age 15–49 years). Over the past 40 years, Malaysia's fertility, as measured by Total Fertility Rate (TFR), has substantially declined, from 4.9 children per woman of reproductive age in 1970 to 1.7 in 2020. Between 1970 and 2012, the national TFR stayed above the replacement level of 2.1, indicating that the average number of children produced by a woman during her reproductive lifetime has been sufficient to replace both her and her partner. However, the TFR started to decline below the replacement level in 2013.



(Source: Department of Statistics Malaysia, 2021)

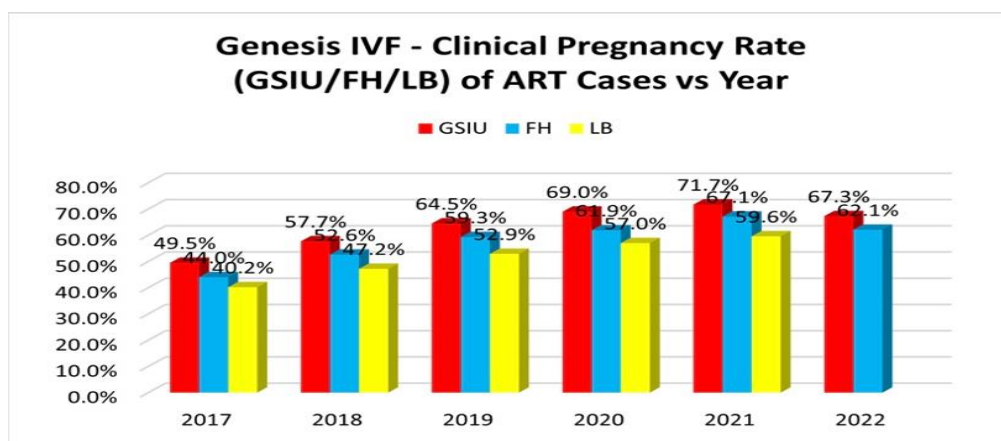
Figure 2: Trend of Total Number Live Birth Rate and Crude Birth Rate Per Year Starting From 2010 Until 2020



(Source: Department of Statistics Malaysia, 2021)

Figure 3: Trend of the Total Fertility Rate From 2010 Until 2020

The United States has been found to decrease sharply in the young generation because of improving education and income (Singh, Darroch & Frost, 2001). From the events, it is proven that young people are focused more on their job career rather than building a family. Countries with limited resources typically have higher fertility rates, while high rates of maternal and neonatal deaths lead birth rates to drop. Children are expected to work as labourers and take care of their elderly parents in developing nations. These nations have higher fertility rates because women are less educated and lack access to contraception (Nargund, 2009). Some other European countries, like the United Kingdom, also stated that one of the reasons why the low fertility rate happens is because of a lack of medical treatment that focuses on fertility treatment. Because during that time, the country is focusing on other important healthcare issues that are more concerning, like cancer (Verberg et al., 2009). In Malaysia, according to the Genesis IVF and Women Specialist Center (2023), the fertility treatment percentage increased from 2017 until 2021, where the live birth in 2017 was 40.2 per cent and in 2021 was 59.6 per cent, as shown in Figure 4.



(Source: Genesis IVF & Women Specialist Center, 2023)

Figure 4: Trend percentage of GSIU: Successful Implantation, FH: Fetal Heart, LB: Live Birth for 2017 until 2021

Based on Figure 4, it is proven that there are some specialists or NGOs that are involved in focusing on fertility treatment to make sure that the number of young generations keeps increasing instead of the older generation. In Malaysia, the age gap is huge where usually the elderly group is less healthy compared to the young group. The elderly group was one of the

groups that easily got any infection that could lead to chronic treatment (Arokiasamy, 1997). This is very concerning because the elderly usually are the ones responsible for the countries operating in terms of infrastructure or the economic sector. Many higher ranks usually are from the elderly group because they are usually the most experienced and have served much longer in that company (Eisma et al., 2004). When they already reached a point where they are not able to complete daily active work, they need to pension at their company. This will make the company's people become less and the output decrease (Shahid, 2014).

The major factor in why the production of young newborn children in Malaysia is the postponement of marriage or the intention to stay a single life and not look for a significant one (Ibrahim & Hassan, 2009). The primary influencing factor has been the shift in educational policies, which has led to an increase in the percentage of Malay people, particularly women finishing high school and enrolling in universities. One major problem is the migration of Malay women to the cities to take advantage of the job market provided by newly established enterprises and factories. These two elements, education and employment, remain pertinent when discussing marriage postponement nowadays (Cargan, 1981). Thus, the low birth rate in Malaysia is influenced by a combination of rural-urban differences in maternal health, socioeconomic factors, changing social attitudes, and insufficient government support. Addressing these challenges will require targeted interventions to improve maternal nutrition, support working parents, and promote positive attitudes towards marriage and parenthood (Kaur et al., 2019).

Therefore, past studies illustrate a clear demographic shift in Malaysia which highlighting the increase in the elderly population alongside a decreasing birth rate. The recorded population percentage of the elderly has steadily risen since 1970, which is projected to continue growing, largely driven by declining fertility rates as shown in Figure 1. This decline is linked to factors such as socioeconomic conditions, access to education, and changing lifestyles. The drop in live births and Total Fertility Rate (TFR) as shown in Figures 2 and 3 is consistent with global trends, where economic development, education, and career prioritization lead to delayed family planning and fewer children. Meanwhile, improvements in fertility treatments as shown in Figure 4 show efforts to address the issue. However, they have not yet reversed the broader trend. This demographic imbalance is concerning, as the increasing elderly population poses challenges for workforce sustainability and healthcare systems in the future.

Methodology

This concept paper which used a concept mapping technique investigates the detrimental impact of low birth rates on Malaysia's accelerated transition to an aged society through a desktop study and secondary data analysis. The study draws on existing demographic data, government reports, and previous research to identify trends and assess the factors contributing to Malaysia's rapidly growing elderly population. The analysis focuses on key issues such as declining birth rates, income levels, and social infrastructure. By synthesizing this information, the study highlights six critical areas which are healthcare needs, financial security, social isolation, caregiver support, infrastructure, and policy implications that require strategic responses. This method allows for a comprehensive understanding of the problem using existing literature and data, providing a solid foundation for proposing

effective policy recommendations regarding to accelerated transition to an aged society because of low birth rate in Malaysia.

Ageing Dynamics in Respond to Low Birth Rate

A comprehensive strategy incorporating social support networks, economic stability, and successful policies is necessary to address the complex issue of low birth rates (Basten, Rotkirch & Sobotka 2022). In fact, as a developing nation, Malaysia can take inspiration from successful countries like France, Sweden and Germany who have demonstrated well-designed measures within a comprehensive model that can influence birth rates and promote sustainable demographic growth to a flourishing extent. One of the factors for which a proactive model should be designed revolves around maternity care. Poor maternity care contributes to low birth rates, which discourages parents from having more children, and the primary concern is about safety and inadequate support during pregnancy and childbirth (Larson, 2007).

Therefore, the potential scientific model that will be suggested encompasses the amalgamation of various elements by considering scientific practicality and reasonings, including factors such as demographics, income, and temperature. First and foremost, as this is a safe, efficient, and economical choice for medically low-risk women, midwifery-led birth centre care should be developed, and the funding should be allocated through the Malaysian Parliament (Stapleton, Osborne & Illuzzi, 2013). The main idea of this center is to offer excellent maternal and infant care which can be a figurative stand to address low birth rates nationwide.

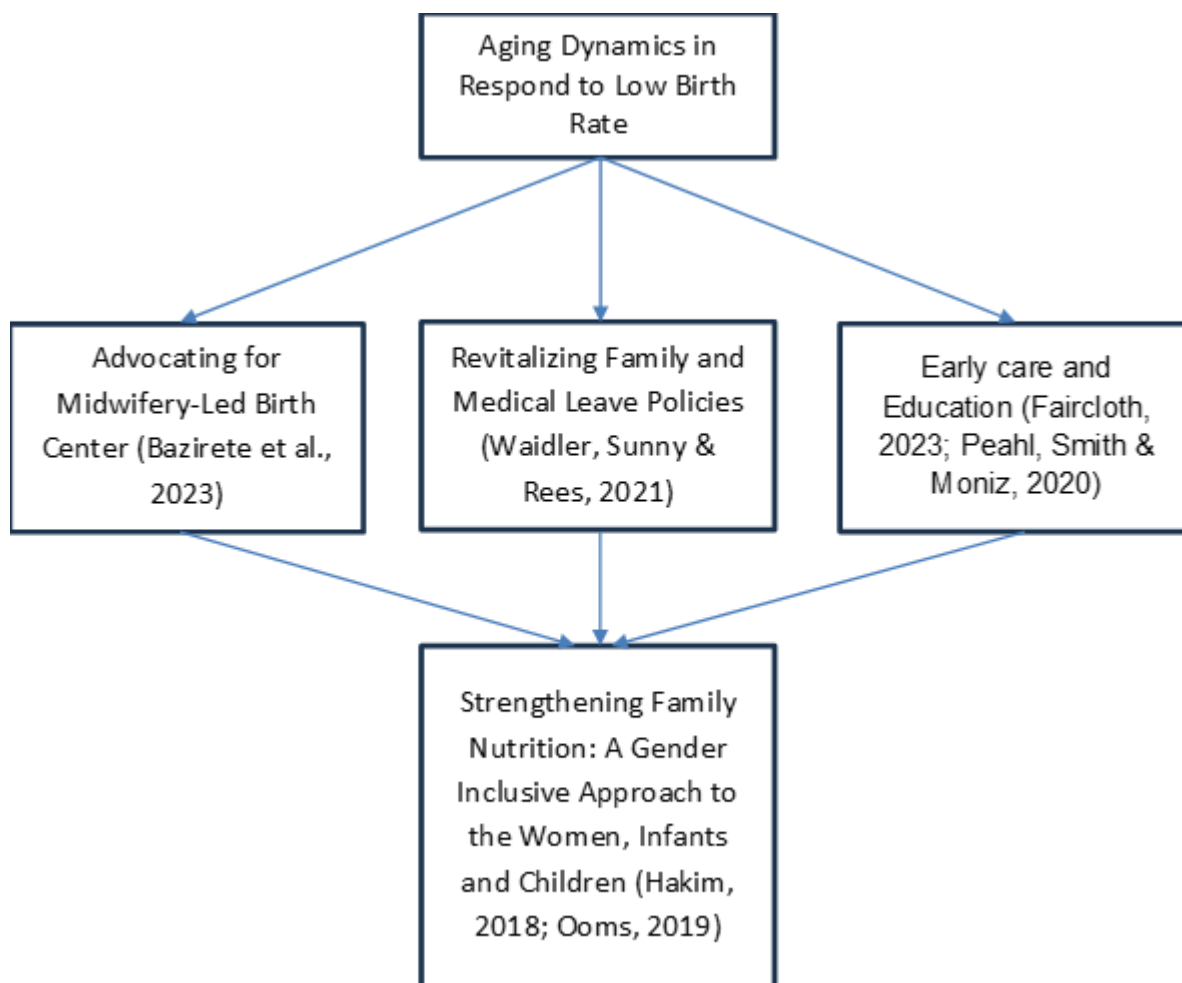


Figure 5: The Proposed Dynamic Framework Towards Ageing Dynamics in Respond to Low Birth Rate

It shows an approximately 95% success rate from midwifery-led birth center care, which depicts the effectiveness and safety of the center. The high satisfaction and low transfer rates, with a higher percentage of women giving birth in planned birth centers, tremendously support the model's viability. Therefore, to implement this model, policymakers should support establishing and equitably funding midwifery-led birth centers (Bazirete et al., 2023). On the bigger picture, the funding should include financial incentives, parental leave, and access to competent reproductive health services. Consistent optimization of this model would enhance birth rates and improve the quality of cost-effectiveness of maternity care.

Ways Forward

As the previous important pages have discussed in depth, the significant challenges caused by the low birth rate. It is crucial to suggest or construct comprehensive approaches that can be implemented to minimize the low birth rate in Malaysia. The low birth rate must not be dismissed as a transient that comes out seasonally (Lincoln & Short, 1980). However, it must be handled with detailed and careful steps that have profound impacts. Good, well-planned strategies may help the government achieve its goals and achievements for the country. It is imperative to devise well-planned strategies that align with governmental objectives (Priyambodo & Hasanah, 2021). This country still needs a younger population to ensure

sustained prosperity (Odoh & Innocent, 2014). The strategies will consider social, economic, and cultural factors (Fuertes et al., 2020).

Firstly, the government should prioritize implementing family-friendly policies that support parents and encourage them to have children (Waidler, Sunny & Rees, 2021). This action can be taken by introducing tangible policies that aid families. The most important policy that should be enacted is the introduction of paid parental leave (Dahl et al., 2016). In modern reality, it is common for both parents to be engaged in work due to increased prices of goods and services (Hakim, 2018). And it will increase household expenses subsequently when having children. This incentive will ease the financial burden on the parents, and they will have ample time to raise and nurture their children (Heinrich, 2014). It can also strengthen the family bond, which will increase happiness. A rise in happiness would be highly encouraged by parents to have more children (Grover & Helliwell, 2019). They will have the motivation to have children without compromising their careers. This will promote a healthier work-life balance. It is also important to provide financial support, such as cash bonuses for each child born and subsidies for education (Spéder, Murinkó & Oláh, 2020). It is also good to have the government grant parents tax breaks (Penne et al., 2020). Financial worries related to having children might be lessened with the help of these incentives. The government can efficiently address the core causes of low birth rates while promoting a family-friendly atmosphere. By doing this, Malaysia may foster a more promising future that is enhanced by dynamic families and a steady population increase.

Next, non-government organizations can launch public awareness campaigns nationwide that encompass both rural and urban areas without bias (Matsuoka & Rocha, 2021). Public awareness campaigns promote positive attitudes towards parenthood and dispel common misconceptions surrounding family life (Cameron et al., 2020). These campaigns should address the benefits of having children. According to Nelson et al (2016), in comparison to nonparents, parents reported greater positive emotional experiences and significance in the moment, in addition to having better levels of overall well-being. Further, fathers were said to be significantly happier than their counterparts who were childless. Public awareness campaigns are crucial to changing the way society views parenthood. Resolving misunderstandings and promoting optimistic views of family life can help create a cultural revolution that values parents (Holden, 2019). These actions can eliminate the fear of being a parent. The fear may come from eeriness about the cost of raising the children or balancing work and family life (Hacker, 2019). These campaigns aim to instil confidence in prospective parents. The campaigns also must highlight the joy and rewards of raising a family (Ooms, 2019). These programs are meant to encourage people to welcome parenting with hope and vigour. Public awareness campaigns help create a supportive atmosphere conducive to the growth and flourishing of families by cultivating a culture that honours and celebrates parents.

Furthermore, the low birth rate can be solved by developing the education and healthcare sectors (Nove et al., 2021). Education will give everyone in this country valuable knowledge (Madani, 2019). One of the most valuable pieces of knowledge is about starting or expanding the family, which includes parenthood and early childhood care (Faircloth, 2023). The implications and responsibilities of starting a family in the meantime are crucial and fundamental knowledge to be learned (Darling-Hammond et al., 2020). It is also

important to have adequate knowledge of prenatal and postnatal care (Beraki et al, 2020). Maintaining a healthy pregnancy is one of the best ways to promote a safe delivery (Altman et al., 2020). Early and regular prenatal care increases the chance of a healthy pregnancy (Peahl, Smith & Moniz, 2020). Thus, it shows the importance of reproductive health and family planning. Investment in high-quality healthcare will boost the birth rate by covering fertility treatment (Doepke, 2023). It is crucial to support couples struggling with infertility. Reproductive technologies, such as in vitro fertilization (IVF), are required to help these couples achieve the targeted family size (Sharma et al., 2021). The government may foster an atmosphere that supports and facilitates family expansion by improving healthcare and education. A greater birth rate and a healthier population can be ensured with the support of extensive family planning education and comprehensive healthcare services, which include fertility treatments.

Additionally, long-term planning and collaboration between government agencies, private sector stakeholders, non-profit organizations, and academic institutions are needed to strengthen the earlier strategies (Pyanov et al., 2021). Every agency can contribute by sharing their data and research findings to effectively minimize the low birth rate. To tackle the complex interplay of causes contributing to low birth rates, thorough planning and coordination are necessary. The data will be used for critical analysis and the establishment of strict monitoring systems (Zhang et al., 2019). The data will be utilized to track demographic trends of the birth rate nationwide over time. Any sign of a decline in the birth rate will be detected early, could be addressed with faster action, and can be resolved immediately. In addition, this system can also evaluate the effectiveness of policy in raising birth. All those actions can lead to making data-informed decisions for continuous improvement (Webber & Zheng, 2020). It ensures that strategies are adjusted and optimized based on real-time insights (Raji et al., 2024). It is also vital to involve stakeholders from many industries to promote communication, exchange best practices, and gather resources for coordinated approaches to population-related problems.

Lastly, community and cultural support play an important role in increasing the birth rate in this country (Götmark & Andersson, 2020). It is important to build a community support network at all residences. The community must foster strong support for parents by running social works that attract young parents, specifically through counselling and parenting classes (Sanders, 2019). This work can be done through social work or volunteer programs. It is essential to create a supportive environment for families. Counselling sessions can help parents navigate the challenges of raising children (Lévesque et al., 2020). The community can also organize workshops or seminars encouraging parents to participate in childcare (Bektas et al., 2021). Communities may have a major impact on family well-being by establishing a supportive culture and offering useful tools. This will encourage higher birth rates and contribute to the demographic sustainability of the country.

In summary, it is all about the concerted efforts and proper execution done by all parties involved that led to the success of increasing the birth rate. Malaysia can attempt to reverse the trend of dropping birth rates and ensure a sustainable population growth trajectory for the future by putting into practice a comprehensive set of initiatives that address the social, economic, and cultural variables impacting birth rates. By implementing family-friendly policies, investing in education and healthcare, promoting public awareness,

providing community support, and engaging in long-term planning and collaboration, societies can work towards sustainable demographic dynamics and ensure the well-being of future generations. It is important to have a strong spirit to achieve this mission for a prosperous future.

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