

ISSN: 2321-1520 E-ISSN: 2583-3537

# EXPLORING THE ECONOMIC AND SOCIAL IMPLICATIONS OF CELIBACY SYNDROME: SOCIETAL TRENDS AND THEIR IMPACT IN JAPAN

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# Abstract

This study investigates the complex impact of celibacy syndrome on social and economic aspects in Japan, where there has been a noticeable reduction in interest and engagement in romantic relationships and sexual activities, particularly among the younger generation. To meet the objective of this study, descriptive research design has been used. The data has been collected from secondary sources like national reports on fertility survey of Japan, news articles, and statista database, published research articles and research papers. In conclusion, the impact of celibacy syndrome in Japan extends across individuals, society, business, and the economy, showcasing a nuanced interplay of both positive and challenging consequences. While financial autonomy, personal transformation, and a focus on learning emerge as positive individual outcomes, there are concerns regarding social withdrawal, loneliness, and potential mental health challenges. Societal impacts include shifts in cultural norms and challenges to social cohesion. In the business realm, a highly dedicated workforce may be a positive outcome, but demographic challenges and changes in consumer behavior pose economic risks. This study can be further extended by collecting first hand data and experience from the individuals to support with empirical evidences.

Keywords: Japan, Celibacy, Social, Economic, Business, Relationship.

# **INTRODUCTION**

Celibacy syndrome refers to a phenomena observed in various nations, particularly Japan, where there is a drop in the younger population's interest and participation in romantic relationships and sexual activities. Various factors have been attributed to this trend, including social and economic pressures, high levels of stress, and shifting societal norms. According to some experts, the rise of technology and virtual connections may also contribute to a loss in face-to-face relationships. It's a complicated topic with several potential explanations, and academics are still investigating and debating the aspects at play.

Throughout history, numerous situations and societies have practiced celibacy. It serves several purposes and can help kin groups survive and thrive. Celibacy is viewed as a measure of social control and prevention of clerical sexual abuse in the Catholic Church, while it may also contribute to a lack of social cohesion and intimacy among priests, rendering them more vulnerable to abuse. Hikikomori, a phenomenon of social withdrawal primarily observed in young people, has been linked to advances in information technology and decreased socialisation, highlighting the impact of societal changes on celibacy - like behaviours. Celibacy practice varies across cultures and religious traditions, reflecting different worldviews, social values, and understandings of the physical body.

Authors	Year	Major Findings	
Saito et al.	2012	Program had positive effect on Loneliness, subjective well-being. Tailor-made programs utilizing community resources are effective	
Kuroda et al.	2015	Depressive symptoms are associated with social engagement. Eating alone is a key risk factor for Depressive symptoms.	

# LITERATURE REVIEW

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Macedo et al.	2017	Hikikomori is not considered a disorder yet. Further documentation of cases is needed for psychiatric nosology.		
Ejiri et al.	2018	participation in social activities prevents social isolation. Elderly men in urban areas are more likely to be Socially isolated		
Kato et al.	2019	Hikikomori is a severe form of social withdrawal. Hikikomori is a global issue with negative impacts.		
Oshio & Kan	2019	Social participation can prevent the onset of certain non-communicable diseases (NCDs) among middle-aged adults. Personal interactions are a key aspect of social participation for later health outcomes.		
Sakurai et al.	2019	Co-existence of Social isolation and homebound status increases the risk of all- cause mortality. Active and socially integrated lifestyle in later life plays a major role in maintaining a healthy status.		
Yuko et al.	2020	Social isolation is negatively related to healthy diet. Loneliness is positively associated with smoking habits.		
Saito et al.	2021	Social isolation has a higher negative impact on the health of older adults in Japan compared to England. Less frequent contact with close ties is attributed to a higher number of premature deaths in Japan compared to England.		
Mitsutake et al.	2021	Socially isolated and homebound older adults are Less likely to regularly utilize medical care. Co-existing social isolation and homebound status increase medical expenditure in the year before death.		
Noguchi et al.	2021	Social isolation is associated with depression onset in both England and Japan. Addressing social isolation is important for older adults' mental health.		
Shimokihara et al.	2021	Decreases in frequency of cooking, shopping, and eating out were significantly associated with decreased socialization. Findings may inform policy making for support in daily life for adults over 60 undergoing social distancing.		
Yokoro et al.	2023	Poor Social networks and social isolation are related to reduced dietary variety among community-dwelling older adults. Association between Social networks and dietary variety observed in young-old adults, women, and those living with someone.		

ISSN: 2321-1520 E-ISSN: 2583-3537

The impact of celibacy syndrome on social and economic aspects in Japan is a complex issue. The introduction of Western values and individualism after World War II has led to changes in the traditional social structure of Japan (Kawashima, 2022). Studies have connected social isolation to poor health outcomes and greater mortality rates, especially among older persons, which has raised serious concerns (Saito et al., 2021). The COVID-19 pandemic has brought attention to how important social bonds and a sense of community and belonging are in Japanese society (Zorin, 2020). Furthermore, there exist instances of profound social detachment, such hikikomori, in which people retreat from society and endure profound loneliness (Yamaguchi, 2020). The wellbeing of older individuals in Japan depends on addressing social isolation and encouraging healthy lifestyle choices, such as social engagement and a balanced diet (Yager & Dagan, 2020). Overall, singleness attitudes and social isolation have important implications for individual mental and physical health and the fabric of Japanese society

From the literature, it is discovered that there may be a dearth of in-depth and up to date research in various vital domain names. The existing studies do not accurately reflect lengthy-term styles and adjustments in celibacy syndrome, making it tough to gain an intensive know-how of its evolution over time. Furthermore, research that check out the complicated versions inside the have an effect on throughout various demographic companies, locations, and socioeconomic backgrounds are lacking. An interdisciplinary approach incorporating topics such as psychology, economics, and public health remains untapped, restricting a comprehensive understanding of the issue. There aren't many studies that compare to other nations, therefore universal and cultural components go undiscovered. Moreover, there is a dearth of qualitative research documenting individuals' lived experiences within the context of celibacy syndrome and less exploration of its possible impact on mental health. Lastly, a little-researched topic is the impact of celibacy syndrome on businesses and work environments, specifically on corporate responses and the development of workplace policies. To obtain a more comprehensive and nuanced understanding of the diverse impacts of celibacy syndrome on individuals and Japanese society at large, it is imperative to close these gaps.

# METHODOLOGY

The main objective of this study is to identify the economic and social effects of celibacy syndromes in Japan. To meet this objective the descriptive research design has been used. The data has been collected from secondary



#### ISSN: 2321-1520 E-ISSN: 2583-3537

sources like national reports on fertility survey of Japan, news articles, and statista database, published research articles and research papers. The collected data and information has been presented with the researchers' interpretation and opinion in this article. The potential impact of celibacy syndromes on individual, society, business, and economy have been discussed in this article.

# **DISCUSSION AND INTERPRETATION**

Table 1:	Birth	Rate	in	Japan
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Year	Births (Per 1000 People)
2020	7.301
2021	7.205
2022	7.109
2023	7.013

(Source: https://www.macrotrends.net/countries/JPN/japan/birth-rate/)

Table 1 presents the birth rate in Japan from 2020 to 2023, indicating the number of births per 1000 people in each respective year. Regarding celibacy syndrome, a falling birth rate could be a sign of how the condition affects family structure and reproductive practises in Japanese culture. A steady decline in the birth rate over time indicates that fewer people are becoming parents, which is consistent with the idea that celibacy syndrome— which is defined as a reduction in romantic relationships and marriages—may be a factor in postponing family planning or a decreased desire to become parents. This table is intended to be a demographic indicator that shows how the population's family structures and reproductive decisions may be affected by shifting cultural views towards partnerships. The decreasing birth rate emphasises how crucial it is to look into the causes of celibacy syndrome and its wider social ramifications.

Table 2: Virginity Rate in Japan	Table 2:	Virginity	Rate in Japan
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Voor	V	irginity Rate (No He	terosexual Experienc	e)
Year	Men	Women	Men	Women
18 to 39 years	20% (1992)	21.7% (1992)	25.8% (2015)	24.6% (2015)
30 to 34 years	8.8% (1987)	6.2% (1987)	12.7% (2015)	11.9% (2015)
35 to 39 years	5.5% (1992)	4% (1992)	9.5% (2015)	8.9% (2015)

(Source: https://www.insider.com/the-number-of-adult-virgins-in-japan-seems-to-be-rising-2019-4)

Table 2 presents data on the rates of virginity in Japan. It includes the proportion of men and women in each age group who say they have never experienced heterosexuality. These data points provide insight into the evolving sexual experiences and behaviours of the Japanese people within the framework of celibacy syndrome. The data presented in the table suggests a noteworthy rise in the rates of virginity for different age groups and genders, with the younger age group of 18 to 39 years exhibiting the highest rates. The increasing trend indicates that a sizable fraction of people in this group are not engaging in heterosexual interactions. This is consistent with the concept of celibacy syndrome, with decreased enjoyment and participation in romantic relationships and sexual activity Data reveal changes in living standards and sexual behavior, reported by a larger percentage of individuals not having any sexual experience etc. Understanding virginity rates that may be indicative of adjacent aspects of individual lifestyles provides valuable insights into the larger implications of singleness characteristics and contributes to a more general understanding of social dynamics in Japan.

	Table 3: Gender Ratio in Japan
Year	Gender Ratio -Value (Males per 100 Females)
2,018	94.79
2,019	94.83
2,020	94.85
2,021	94.86

(Source: https://www.globaldata.com/data-insights/macroeconomic/the-gender-ratio-of-japan-325541/) Table 3 presents sex ratios expressed as number of males per 100 females in Japan from 2018 to 2021. For the syndrome of celibacy, sex ratio is a demographic indicator with various factors of relationships and marriage Example may influence. The stable and consistent sex ratio in the indicated age range indicates that there is no significant imbalance in male populations compared to females. This may suggest that there isn't a significant demographic shift in the overall gender composition as a result of the noted alterations in romantic relationships

and sexual behaviours in the context of celibacy syndrome. It's important to remember, though, that although the



## ISSN: 2321-1520 E-ISSN: 2583-3537

gender ratio doesn't alter much, celibacy syndrome can show up in other ways, like variations in the frequency of romantic relationships, marriage rates, and birth rates. Celibacy syndrome's social effects in Japan can be better understood by looking at a variety of demographic variables, such as those pertaining to partnerships and family formation.

Voor	Age - First	Marriage
Year	Husband	Wife
1995	28.5	26.3
2005	29.8	28.0
2015	31.1	29.4
2016	31.1	29.4
2017	31.1	29.4
2018	31.1	29.4
2019	31.2	29.6

Table 4: The Age of Husband and	d Wife on First Marriage in Japan
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(Source: https://www.nippon.com/en/japan-data/h00759/)

Table 4 provides information on the age at first marriage of couples in Japan from 1995 to 2019. In terms of singleness characteristics, this age range can provide insights into changes in romantic relationships and marital patterns in Japanese society. The data show that the average age at first marriage has increased steadily over the years. Age at first marriage is consistent with views of singleness characteristics that tend to require later entry into romantic relationships and marriage. Increasing age at first marriage may indicate a variety of social factors, including changing attitudes toward relationships, focusing on education and employment prior to marriage, and personal development lead. Understanding age at first marriage is important for understanding the broader implications of singleness, as it reflects changing social norms and expectations regarding romantic relationships and family formation in Japan.

	Table 5: Marriage Rate in Japan				
Year	Number of Marriages Per 1000 Inhabitants				
2010	5.5				
2013	5.3				
2014	5.1				
2015	5.1				
2016	5.0				
2017	4.9				
2018	4.7				
2019	4.8				
2020	4.3				
2021	4.1				
2022	4.1				

(Source:https://www.statista.com/statistics/1249856/japan-marriage-rate/)

Table 5 shows the marriage rate in Japan, represented by the number of marriages per 1000 population, for the period 2010 to 2022. Among the most common characteristics of singleness is a decreasing tendency to enter into marriage is presented, this table provides insight into the dynamics of changing marriage in Japanese society. The decline in the number of marriages in a particular age range indicates a significant decline in the number of marriages relative to the population. This trend is consistent with the concept of celibacy syndrome, which refers to decreased interest in or engagement in normal romantic relationships that lead to marriage Several factors may contribute to this decline in marriage rates, a they include changing social norms, economic considerations, focus on personal development, practice of long-term marriage making or choosing to do so, which accounts for the observed decline in the number of marriages. Understanding marriage rates is important to assess the impact of singleness characteristics on family formation and Japanese social structure. The declining trend in marriage reflects broader changes in relationship structure and highlights the need to examine the underlying factors that affect individuals' decisions to enter into normal romantic relationships.



### ISSN: 2321-1520 E-ISSN: 2583-3537

# **Potential Effect: Social and Economic**

Table 6: Impact of Celibacy Syndrome on Individuals, Society, Business, and Economy in Japan

		on Individuals, Society		
Aspect	Impact on Individuals	Impact on Society	Impact on Business	Impact on Economy
Social Withdrawal (Hikikomori)	Negative impact with potential increase in social withdrawal cases.	May contribute to challenges in community engagement and social cohesion.	Could lead to a decline in employee collaboration and team dynamics.	May strain social welfare systems and healthcare resources.
Financial Autonomy	Positive impact, providing individuals with financial independence.	May influence economic patterns as spending and saving behaviors change.	May lead to a workforce with a strong focus on professional goals.	Could impact consumer-driven sectors and influence market trends.
Loneliness and Isolation	Negative impact on mental well- being due to potential loneliness.	Could result in societal challenges as social connections weaken.	May influence workplace dynamics and employee satisfaction.	Could contribute to increased healthcare costs and social challenges.
Aging Individuals	May lead to an older population as individuals delay or forgo marriage.	Contributes to an aging society with potential economic consequences.	Impacts workforce demographics and may require strategies for knowledge transfer.	Affects pension systems and requires adjustments in healthcare provision.
Mental Health	Varied impact, potential for mental health challenges in isolation.	May strain mental health services and support systems.	Could influence employee well- being and necessitate mental health initiatives.	May lead to increased demand for mental health services and resources.
Physical Health	Varied impact, potential for health benefits due to reduced stress.	May influence healthcare resources and preventive care.	Could impact productivity positively with healthier employees.	Potential decrease in healthcare costs due to a healthier population.
Personal Transformation	Positive impact, fostering personal growth and development.	May lead to shifts in cultural values and expectations.	May contribute to a highly dedicated and focused workforce.	Could lead to a workforce with a strong emphasis on personal and professional growth.
Focus on Learning	Positive impact, encouraging continuous learning and skill development.	May contribute to a culture of knowledge and intellectual pursuit.	May result in an innovative and adaptable workforce.	Could positively impact innovation and competitiveness.
Spiritual Development	Positive impact for those seeking spiritual growth.	May contribute to a society with an emphasis on spiritual values.	May influence workplace culture positively with an emphasis on holistic development.	Varied impact on the economy, depending on the influence of spiritual values.
Cultural Shifts	Varied impact, potential for shifts in cultural norms and values.	May lead to cultural evolution and reevaluation of societal expectations.	Could result in changes in business practices and workplace culture.	May influence economic structures as cultural values impact spending and lifestyle choices.



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Government Policies	May require policy adjustments to address potential societal challenges.	May necessitate policy changes to support shifting demographics.	May influence business regulations and policies.	Government policies may need to adapt to economic changes and challenges.
Innovation and Creativity	Varied impact, potential for increased creativity and innovation.	May contribute to a society with a focus on creativity and new ideas.	Could lead to a more innovative and adaptable business environment.	May positively impact economic growth through increased innovation.
Consumer Behavior Changes	May influence individual spending patterns and consumption choices.	May lead to changes in market demands and trends.	Could impact business strategies and marketing approaches.	May result in shifts in economic sectors and market dynamics.
Entrepreneurship and Innovation	May encourage entrepreneurial pursuits and a focus on innovation.	May contribute to a culture of entrepreneurship and creative ventures.	Could lead to the emergence of innovative businesses and startups.	May positively impact economic growth through entrepreneurial activities.
Boom in Care Economy	May lead to increased demand for care-related services.	Could result in economic opportunities in the care and healthcare sector.	May influence business opportunities in the care and wellness industries.	May contribute to economic growth in the care-related sectors.
Global Competitiveness	May impact global competitiveness positively through a skilled and focused workforce.	May influence global perceptions of societal values and priorities.	Could enhance the global competitiveness of businesses.	May positively impact the global standing of the economy.

#### **ISSN:** 2321-1520 **E-ISSN:** 2583-3537

On an individual level, the celibacy trend may be contributing to a sense of isolation and loneliness among some individuals, as the pursuit of personal and professional goals takes precedence over forming traditional romantic relationships. The emphasis on career advancement and economic stability, coupled with societal expectations and high living costs, has led many to prioritize work over personal relationships. This may result in a generation that experiences challenges in building and maintaining social connections, potentially impacting emotional wellbeing. On a societal level, Japan is grappling with demographic challenges, including declining birth rates and an aging population. The celibacy trend could further exacerbate these issues, leading to concerns about the sustainability of the workforce and the future social and economic landscape. The shift in social norms, where individuals are choosing to remain single or delay marriage, challenges traditional family structures and calls for a re-evaluation of societal values. The Japanese government and social institutions may need to adapt policies to address the consequences of changing relationship dynamics, such as developing initiatives to support work-life balance, providing social support for those who choose celibacy, and fostering a more inclusive understanding of diverse lifestyles. Overall, the impact of celibacy syndrome in Japan underscores the intricate interplay between cultural expectations, economic factors, and individual choices, shaping the fabric of both personal lives and the broader societal landscape.

The impact of celibacy syndrome on businesses in Japan is a multifaceted phenomenon that reflects changing societal norms and individual lifestyle choices. As the younger generation in Japan increasingly embraces celibacy, prioritizing personal and professional pursuits over traditional romantic relationships, businesses are witnessing shifts in employee behavior and priorities. On the positive side, the trend may contribute to a workforce that is highly dedicated and focused on career advancement. Employees who are not engaged in family responsibilities may demonstrate higher levels of commitment to their professional roles, potentially leading to increased productivity and efficiency. However, there are potential challenges for businesses to navigate. The decline in marriage rates and family formation could exacerbate Japan's demographic challenges, leading to a shrinking labor force and increased pressure on businesses to adapt to a changing population structure. Additionally, the celibacy trend may impact workplace dynamics, as the social and emotional support traditionally



## ISSN: 2321-1520 E-ISSN: 2583-3537

derived from family life may be sought within the professional sphere. Companies may need to address the wellbeing of employees by promoting work-life balance, fostering a supportive work environment, and recognizing the diverse personal choices of their workforce. Overall, the impact of celibacy syndrome on businesses in Japan underscores the need for organizations to be attuned to the evolving values and priorities of their employees and to implement strategies that accommodate the changing dynamics of the workforce.

The impact of celibacy syndrome on the economy in Japan is a complex interplay of demographic shifts, changing consumer behaviors, and societal dynamics. As more individuals in Japan choose celibacy, focusing on personal and professional pursuits over traditional family life, there are both positive and challenging implications for the economy. On the positive side, a workforce that is dedicated to career advancement may contribute to increased productivity and innovation. Individuals not burdened by family responsibilities may have the flexibility to devote more time and energy to their professional roles. However, the decline in marriage rates and family formation also poses economic challenges. A shrinking population and an aging demographic can lead to a reduced labor force, impacting various sectors and industries. The lower birth rates associated with celibacy syndrome may contribute to a decreased consumer base, affecting markets such as real estate, childcare, and education. Moreover, the economic structure, which often relies on the support of family units, may need to adapt to accommodate a more individual-centric lifestyle. Policymakers and businesses in Japan face the task of addressing these demographic challenges by implementing measures to support work-life balance, providing incentives for family formation, and adapting economic strategies to align with the changing dynamics of a society experiencing the celibacy trend.

# CONCLUSION

The study reveals a multifaceted and evolving phenomenon with significant implications for various aspects of Japanese life. It is found that there is decrease in birth rate, decrease in marriage rate, increasing virginity rate, more women over men in gender ratio, increasing age of first marriage are observed as the indicators of celibacy syndromes in Japan. In conclusion, the impact of celibacy syndrome in Japan extends across individuals, society, business, and the economy, showcasing a nuanced interplay of both positive and challenging consequences. While financial autonomy, personal transformation, and a focus on learning emerge as positive individual outcomes, there are concerns regarding social withdrawal, loneliness, and potential mental health challenges. Societal impacts include shifts in cultural norms and challenges to social cohesion. In the business realm, a highly dedicated workforce may be a positive outcome, but demographic challenges and changes in consumer behaviour pose economic risks. The aging population, strained healthcare resources, and the need for policy adjustments underscore the complex economic landscape influenced by the celibacy trend. Ultimately, the varied impacts necessitate a holistic approach, with businesses, policymakers, and society adapting to changing values and priorities for a balanced and sustainable future. This study is more relied on literature, published data, and researchers opinion this limits the scope of study. Therefore this study can be extended by collecting first hand data and experience from the individuals to support with empirical evidences.

# REFERENCES

- 1. Delakorda Kawashima, T. (2022). The Relationless Japanese Society and the Practices of Belonging during the COVID-19 Pandemic. *Asian Studies*, *10*(1), 45–68. https://doi.org/10.4312/as.2022.10.1.45-68
- Ejiri, M., Kawai, H., Fujiwara, Y., Ihara, K., Hirano, H., Kojima, M., & Obuchi, S. (2018). Predictors of social isolation among older people living in urban area: a prospective study. [Nihon Koshu Eisei Zasshi] Japanese Journal of Public Health, 65(3), 125-133.
- 3. Kato, T. A., Kanba, S., & Teo, A. R. (2019). Hikikomori: multidimensional understanding, assessment, and future international perspectives. *Psychiatry and clinical neurosciences*, 73(8), 427-440.
- 4. Kuroda, A., Tanaka, T., Hirano, H., Ohara, Y., Kikutani, T., Furuya, H., ... & Iijima, K. (2015). Eating alone as social disengagement is strongly associated with depressive symptoms in Japanese community-dwelling older adults. *Journal of the American Medical Directors Association*, *16*(7), 578-585.
- 5. Macedo, P., Pimenta, V., Alves, M., Uria, A. S. R., & Salgado, H. (2017). Hikikomori goes global: a Portuguese case. *European Psychiatry*, *41*(S1), S514-S514.
- 6. Mitsutake, S., Koike, T., Ishizaki, T., Sakurai, R., Yasunaga, M., Nishi, M., ... & Fujiwara, Y. (2021). Influence of co-existing social isolation and homebound status on medical care utilization and expenditure among older adults in Japan. *Archives of Gerontology and Geriatrics*, *93*, 104286.
- 7. Noguchi, T., Saito, M., Aida, J., Cable, N., Tsuji, T., Koyama, S., ... & Kondo, K. (2021). Association between social isolation and depression onset among older adults: a cross-national longitudinal study in England and Japan. *BMJ open*, *11*(3), e045834.



#### ISSN: 2321-1520 E-ISSN: 2583-3537

- 8. Oshio, T., & Kan, M. (2019). Preventive impact of social participation on the onset of non-communicable diseases among middle-aged adults: A 10-wave hazards-model analysis in Japan. *Preventive medicine*, *118*, 272-278.
- 9. Sharma, P. (2023). Impact of celibacy syndrome on individuals and society in Japan. *International Journal of Research Culture Society*, 7(31), 125. https://doi.org/10.2017/IJRCS/WSRC-2023/017
- 10. Saito, M., Aida, J., Cable, N., Zaninotto, P., Ikeda, T., Tsuji, T., ... & Kondo, K. (2021). Cross-national comparison of social isolation and mortality among older adults: A 10-year follow-up study in Japan and England. *Geriatrics & gerontology international*, 21(2), 209-214.
- 11. Saito, T., Kai, I., & Takizawa, A. (2012). Effects of a program to prevent social isolation on loneliness, depression, and subjective well-being of older adults: a randomized trial among older migrants in Japan. *Archives of gerontology and geriatrics*, 55(3), 539-547.
- 12. Sakurai, R., Yasunaga, M., Nishi, M., Fukaya, T., Hasebe, M., Murayama, Y., ... & Fujiwara, Y. (2019). Coexistence of social isolation and homebound status increase the risk of all-cause mortality. *International psychogeriatrics*, *31*(5), 703-711.
- 13. Shimokihara, S., Maruta, M., Hidaka, Y., Akasaki, Y., Tokuda, K., Han, G., ... & Tabira, T. (2021). Relationship of decrease in frequency of socialization to daily life, social life, and physical function in community-dwelling adults aged 60 and over after the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, *18*(5), 2573.
- 14. Yager, J., & Dagan, Y. (2020). Response to Letter Regarding the Dagan and Yager Article. *The Journal of Nervous and Mental Disease*, 208(11), 912.
- Yamaguchi, Y., Yamada, M., Hapsari, E. D., & Matsuo, H. (2020). The Influence of Social Isolation on the Preventive Behaviors for Non-Communicable Diseases in Community-Dwelling Older Adults in Japan. *International Journal of Environmental Research and Public Health*, 17(23), 8985. MDPI AG. Retrieved from http://dx.doi.org/10.3390/ijerph17238985
- 16. Yokoro, M., Otaki, N., Imamura, T., Tanino, N., & Fukuo, K. (2023). Association between social network and dietary variety among community-dwelling older adults. *Public Health Nutrition*, 1-9.
- 17. Zorin, N. (2020). Socio-cultural changes in Japan after the Second world war. Nauka. me, (4).
- 18. https://www.statista.com/statistics/1249856/japan-marriage-rate/
- 19. https://www.macrotrends.net/countries/JPN/japan/birthrate#:~:text=The%20birth%20rate%20for%20Japan,a%201.3%25%20decline%20from%202019.
- 20. https://www.insider.com/the-number-of-adult-virgins-in-japan-seems-to-be-rising-2019-4
- 21. https://medicalxpress.com/news/2019-04-national-virginity-japan-adults-30s.html
- 22. https://www.washingtonpost.com/news/worldviews/wp/2016/09/16/japan-has-a-worrying-number-of-virgins-government-finds/
- 23. https://www.nippon.com/en/japan-data/h01440/
- 24. https://www.globaldata.com/data-insights/macroeconomic/the-gender-ratio-of-japan-325541/