Understanding the Landscape of Childlessness in the U.S.: A Data-Driven Exploration (1972-2022)*

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This paper investigates trends in childlessness in the United States from 1972 to 2022. Data from the General Social Survey (GSS) is analyzed to consider factors like age, gender, education, class, health condition, marital status and number of children. The analysis reveals a consistent rise in childlessness across various demographics, potentially linked to economic considerations, educational attainment, and shifting social norms. The paper explores the potential social and economic implications of this trend, highlighting the need for further research to navigate the complexities surrounding childlessness in today's society.

Table of contents

1 Introduction **2**

2 Data **3**

2.1 Source Data 3

2.1.1 Exploring Socioeconomic Class and Educational Attainment 4

2.1.2 Exploring Gender Differences 5

2.1.3 Exploring Health Conditions and Marital Status 5

2.2 Data Limitations 6

2.2.1 Incomplete Data for Certain Years 7

2.2.2 Generalizability of the GSS 7

2.2.3 Potential Measurement Errors 7

2.2.4 Limited Consideration of Gender Disparities 7

2.2.5 Decontextualized variables 7

*Code and data are available at: https://github.com/mehrnoush68/childlessness-in-america.git

3 Result **7**

4 Discussion **13**
4.1 Rising Childlessness: Patterns and Trends 13
4.2 Potential Explanations for Rising Childlessness 13
4.3 Societal Implications of Rising Childlessness 13
4.4 Weaknesses and next steps 13

5 Conclusion **14**

A Appendix **15**
A.1 Survey Questions from GSS 15

References **17**

1 Introduction

The American family landscape is undergoing a significant transformation, marked by a growing trend of childlessness. Traditionally viewed as a societal norm, having children now becomes a choice. This paper looks into this phenomenon by examining various datasets on factors such as age, gender, education, socioeconomic class, health conditions and marital status, and how they affect childbearing rates over the past 50 years.

Analyzing these factors offers a window into understanding not only the prevalence of childlessness within different segments of the population but also the potential drivers behind this trend. Existing research suggests a complex interplay of factors, including economic considerations, rising educational attainment, changing social norms related to career and family life, and individual preferences (Shapiro 2014).

This paper aims to unpack these factors and explore their impact on the rise of childlessness in America. By analyzing the data, we seek to answer crucial questions: What are some important factors contributing to this trend? How does childlessness manifest differently across demographic groups? Finally, what are the potential social, economic, and individual consequences of this new family structure in the United States? Understanding these dynamics is crucial in having an informed policy discussion and navigating the implications of childlessness in a rapidly changing world.

Structurally, in Introduction, our paper starts with a brief dissection of the nature of childlessness in America and the contributing factors. Subsequently, in Data and Result, we talk about the nature of the data obtained and analyze the results garnered from the data with suitable tables and charts. Next, Discussion provides further insights and future areas of study. Finally, Conclusion concludes and summarizes our main findings. To complete the paper, Appendix clarifies how each variable within each dataset is measured.

The graphs and tables in this paper were created in R Studio using R (R Core Team 2023) and the analysis in a Quarto document. The analysis was conducted with the use of the `ggplot` (Wickham 2016), `tiddyverse` (Wickham et al. 2019), `knitr` (Xie 2021), `readr` (Wickham, Hester, and Bryan 2024), `kableExtra` (Zhu, Travison, and Tsai 2024), `janitor` (Firke 2023) and `dyplr` (Wickham et al. 2023) packages.

2 Data

This paper uses a multifaceted approach, drawing on various datasets to understand the complexities of childlessness in the United States. One primary source is the General Social Survey (GSS), a long-running and highly respected survey conducted by the National Opinion Research Center (NORC) at the University of Chicago (NORC 2022), from 1972 to 2022.

2.1 Source Data

The 2022 iteration of the GSS, for the first time in its history, incorporated a combination of in-person, web self-administered, and phone interview methods. This expansion in data collection methods offers a potentially richer and more diverse sample. The GSS team is transparent about these limitations and welcomes feedback from the research community to continuously improve their methodology.

From the GSS, we utilize several key variables relevant to our analysis:

- Children: This variable captures the number of children ever born alive to the respondent, providing a direct measure of childlessness (having no children).
- Year: This variable allows us to analyze trends in childlessness over time, encompassing the chosen time frame for the survey.
- Age: This variable, categorized into relevant age groups (e.g., 18-34, 35-49, etc.), enables us to understand how childlessness manifests across different age demographics.

Table 1 demonstrates a clear trend of increasing childlessness across age groups over the selected years. As evident from the data, the percentage of individuals without children has steadily risen in all age groups, with the most significant increase observed in the younger age groups (18-34 and 35-49). This trend suggests a shift in childbearing patterns, with individuals potentially delaying or forgoing parenthood altogether.

Table 1: Childless Percentage of Population by Age Group and Selected Years

Age	1972	1980	1990	2000	2010	2022
18-34	46.07	49.54	56.80	54.59	56.74	65.76
35-49	8.00	7.79	13.46	19.25	23.08	19.22
50-64	12.74	13.30	8.21	11.68	14.11	15.32
65+	19.07	16.16	17.08	12.81	5.48	15.52

2.1.1 Exploring Socioeconomic Class and Educational Attainment

To gain a deeper understanding of the factors influencing these trends, we look into additional data sets from NORC (NORC (2022)) examining the relationship between childlessness and socioeconomic class Table 2 and educational attainment Table 3.

From the GSS, we utilize several key variables to enrich our analysis and explore the potential influence of various factors on childbearing decisions:

- Socioeconomic Class: Data on socioeconomic class, often measured by income or occupation, will be utilized to understand the impact of economic factors on childbearing choices.
- Educational Attainment: Data on educational attainment, such as the highest degree obtained, will be incorporated to explore the relationship between educational level and childbearing.

Table 2 reveals a potential link between socioeconomic class and childlessness. The data suggests that individuals in the lower and working classes exhibit higher percentages of childlessness compared to those in the middle and upper classes. This pattern might be attributed to various factors, such as financial constraints, job insecurity, or limited access to childcare resources experienced by individuals in lower socioeconomic classes.

Table 2: Childless Percentage of Population by Class Indentification and Selected Years

Class Identification	1972	1980	1990	2000	2010	2022
Lower class	17.16	13.08	25.27	25.82	27.06	34.46
Working class	21.83	24.35	28.15	26.31	27.90	31.44
Middle class	28.24	28.92	32.55	29.04	29.15	30.54
Upper class	20.24	36.02	12.64	28.92	24.73	27.87

Table 3 explores the association between educational attainment and childlessness. Interestingly, the data indicates a nuanced relationship. While individuals with higher educational

degrees (college+) display a slightly higher percentage of childlessness compared to those with lower degrees, the difference is not as substantial as observed with socioeconomic class. This suggests that educational attainment might play a complex role in childbearing decisions, potentially influenced by factors like career aspirations, financial considerations, and personal preferences.

Table 3: Childless Percentage of Population by Degree and Selected Years

Degree	1972	1980	1990	2000	2010	2022
College +	32.85	37.67	28.61	33.29	31.16	29.84
High school	28.15	28.10	34.74	26.55	29.78	34.56
Less than high school	16.97	16.65	19.87	21.70	15.85	22.90

2.1.2 Exploring Gender Differences

It is crucial to acknowledge potential gender disparities in childbearing experiences. A separate analysis examining childlessness by gender (presented in Table 4) aims to provide a comprehensive understanding by considering the unique experiences of men and women regarding childlessness. Data on gender is included from NORC (NORC 2022) to allow for this investigation.

Table 4: Childless Percentage of Population by Gender and Selected Years

Gender	1972	1980	1990	2000	2010	2022
Female	21.22	23.91	27.85	23.52	23.54	28.32
Male	27.10	29.36	31.33	32.38	33.14	34.50

2.1.3 Exploring Health Conditions and Marital Status

In addition, additional data sets from NORC (NORC 2022) were also leveraged to understand the context of childlessness in America from 1972-2022. Table 5 and Table 6 present an interesting connection between childlessness and health conditions and martial status.

From the GSS, we utilize several important variables relevant to our analysis:

- Health Conditions: This variable, measured by medical check-ups of individuals who have been surveyed, will be used to clarify the context behind the childlessness of those with varying health statuses.

- Marital Status: This variable enables us to see if marriage is a determining factor in childbearing decisions.

Table 5 uncovers the relationship between health conditions and childlessness. Intriguingly, those with 'excellent' and 'good' health are substantially more likely to be childless than those with 'fair' and 'poor' health. Several factors are attributable to this fact, but foremost, career, lifestyle differences and financial considerations might come into play. However, more data is needed to clarify the context of this trend, especially coupling it with variables like educational attainment or socioeconomic class. In addition, sampling bias might factor into this trend, where it's assumable that people with excellent health are often the younger population and those with less desirable health are older.

Table 5: Childless Percentage of Population by Health Conditions and Selected Years

Condition of health	1972	1980	1990	2000	2010	2022
Excellent	28.26	33.55	33.93	31.71	34.03	38.75
Good	25.01	27.50	27.78	27.80	29.04	30.11
Fair	19.61	16.36	31.86	24.43	21.91	30.07
Poor	12.27	10.93	18.45	14.37	31.02	20.40

Table 6 explores people's marital status and childlessness. Trends of childlessness vary with this dataset. Unsurprisingly, people who are never married have the highest percentage of childlessness. However, those who are divorced, widowed and separated have fluctuating percentages of childlessness, which is understandable due to the complex emotional nature of these marital statuses.

Table 6: Childless Percentage of Population by Marital Status and Selected Years

Marital status	1972	1980	1990	2000	2010	2022
Never married	96.73	91.58	84.65	75.64	69.40	72.53
Married	10.51	13.03	14.21	13.27	12.51	13.97
Separated	21.43	21.74	6.17	11.05	10.40	10.00
Divorced	19.47	16.00	18.43	21.00	15.07	15.14
Widowed	13.43	11.79	14.32	8.05	9.57	12.98

2.2 Data Limitations

While the data utilized in this paper provides valuable insights into childlessness in the United States, it is important to acknowledge some limitations:

2.2.1 Incomplete Data for Certain Years

While the General Social Survey provides valuable data on childlessness trends, there are gaps in data availability for certain years. This creates a limitation in our ability to present a completely continuous picture of trends across the entire 50-year time frame.

2.2.2 Generalizability of the GSS

The General Social Survey (GSS) is a valuable resource but may not be entirely representative of the entire U.S. population. Sampling bias and potential non-response bias inherent in any survey can limit the generalization of findings to the broader population.

2.2.3 Potential Measurement Errors

Survey data may be susceptible to measurement errors due to various factors like social desirability bias, memory lapses, or misinterpretations of questions. While the GSS implements measures to minimize these errors, they cannot be entirely eliminated.

2.2.4 Limited Consideration of Gender Disparities

While acknowledging the importance of gender disparities, the analysis presented here only provides a preliminary exploration through a single table (Table 4). Further research dedicated to understanding nuanced gender differences in childbearing experiences and the complex interplay of individual and societal factors is needed.

2.2.5 Decontextualized variables

While these datasets aim to illuminate on the general time trends of childlessness with each variable measured, they are often de-contextualized for the same purpose. For instance, in Table 6, there is no clarifying note on whether people who declared themselves as 'divorced' are divorced once or more. This can be extremely narrowing, and exclude nuances when analyzing the contexts behind childlessness.

3 Result

Figure 1 shows a consistent rise in childlessness across all age groups in the United States from 1972 to 2022.

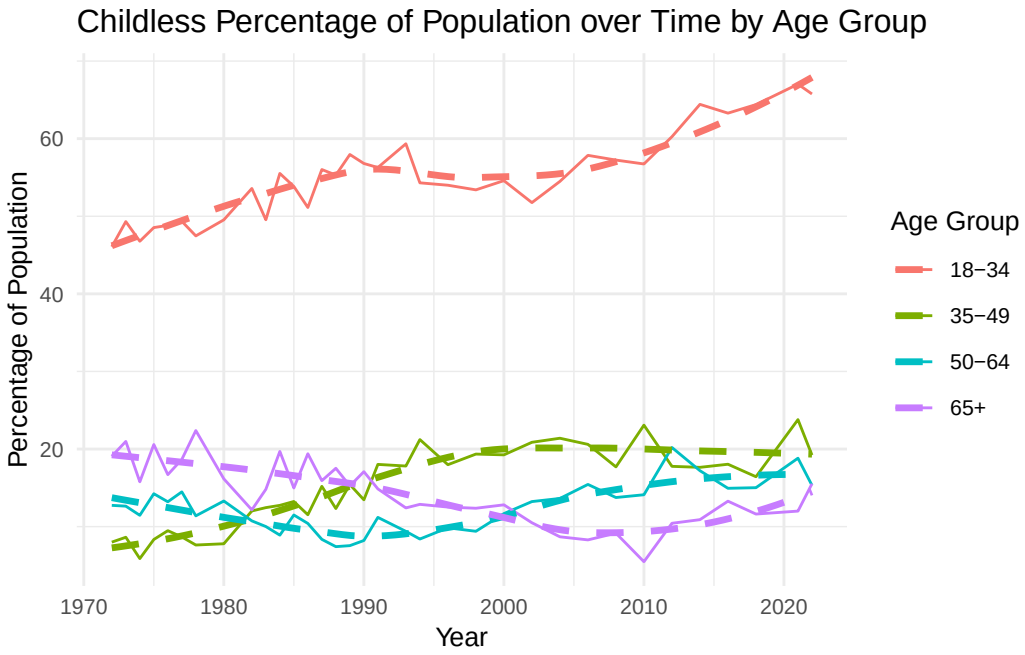

Figure 1: Percentage of Childless Adults by Age Group in the US (1972-2020)

It is important to acknowledge, however, that the data series has gaps for several years within this timeframe (1979, 1981, 1992, 1995, 1997, 1999, 2001, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017, and 2019). These missing data points can potentially limit the generalization of the observed trends and hinder a comprehensive understanding of childlessness over time. Despite these limitations, the available data reveals a steady increase in the percentage of individuals without children across all age groups. Notably, the most significant rise is observed among younger adults (18-34 and 35-49). As an example, the percentage of childless individuals in the 18-34 age group increased by approximately 42.70% from 1972 to 2022.

Figure 2 depicts the gradual increase in the percentage of childless individuals across four social classes (lower class, working class, middle class, and upper class) in the United States from 1972 to 2022. The graph reveals an upward trend in childlessness for all classes over the five decades.

People and households are divided into groups based on their socioeconomic status. The lower class experiences economic hardship, while the working class earns limited wages and faces job insecurity. The middle class has white-collar or professional occupations and enjoys a comfortable lifestyle. The upper class has substantial wealth and enjoys a privileged lifestyle with exclusive amenities (Pew Research Center 2022).

While all classes show an increase in Figure 2, the data suggests the most significant rise occurred among the lower class, with their percentage of childless individuals nearly doubling

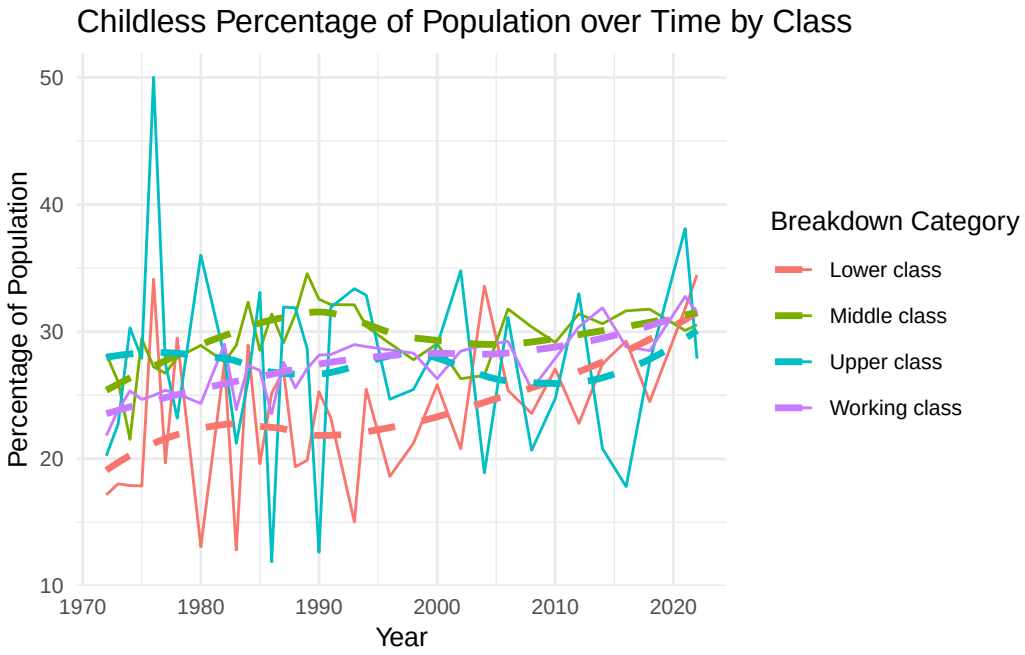

Figure 2: Percentage Childless over Time by Class

from approximately 17.16% in 1972 to around 34.46% in 2022, marking a substantial increase of approximately 101.04% over the specified period. The working class also experienced a significant increase, from around 21.83% in 1972 to approximately 31.44% in 2022, indicating a rise of roughly 43.98%. Additionally, the middle class saw a slight increase, from approximately 28.24% in 1972 to about 30.09% in 2022, representing a rise of approximately 6.55%. Similarly, the upper class saw an increase, with their percentage of childless individuals climbing from approximately 20.24% in 1972 to about 27.87% in 2022, indicating an increase of roughly 37.71%.

Figure 3 presents a comparative analysis of childlessness across individuals with different levels of educational attainment (less than high school, high school and college degree or higher) in the United States from 1972 to 2022. The graph utilizes line trends to depict the percentage of childless individuals within each degree category over the five decades.

The data reveals a distinct pattern across educational groups. Individuals with a high school diploma consistently exhibit the highest percentage of childlessness throughout the entire period, ranging from around 28.15% in 1972 to 34.56% in 2022. Conversely, the percentage of childless individuals with a college and higher degree has decreased from 32.85% in 1972 to 29.84% in 2022. The trend for individuals with a with less than a high school education increased from 16.97% in 1972 to 22.90% in 2022.

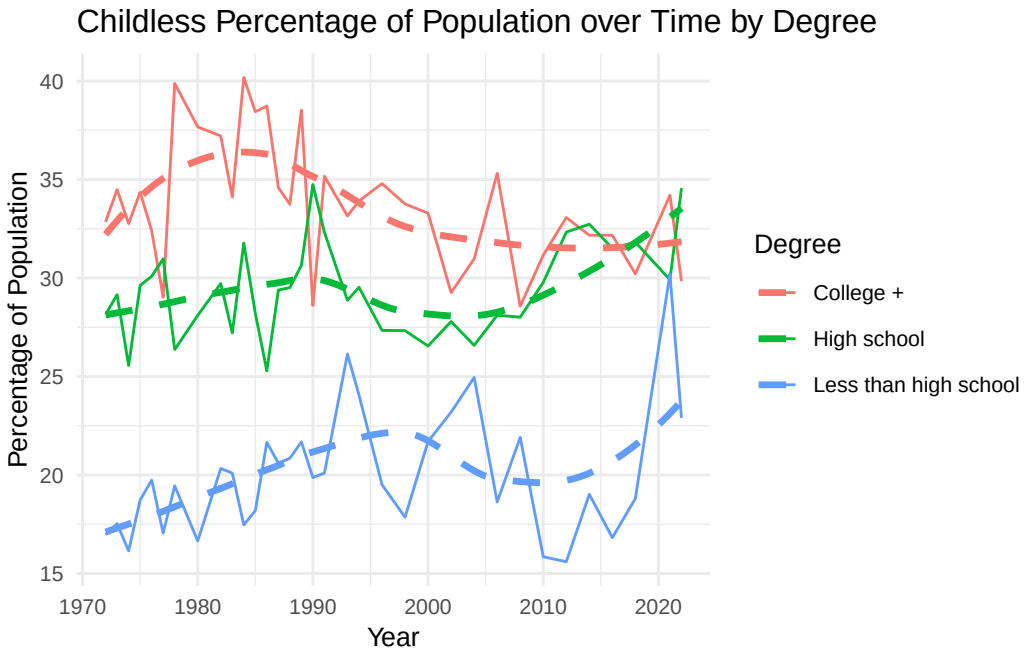

Figure 3: Percentage Childless over Time by Level of Education

Figure 4 explores gender differences in childlessness within the United States over a 50-year period (1972-2022). The graph utilizes line trends to depict the percentage of childless individuals categorized by gender (Male and Female).

The data reveals a gradual increase in childlessness for both genders over the past five decades. However, females consistently exhibit a lower percentage of childlessness compared to males throughout the entire period. While the gap appears to be slightly narrowing over time, females still have a lower percentage by around 8 percentage points in 2022 (approximately 28.32% for females and 36.09% for males).

Figure 5 explores health differences in childlessness within the United States over a 50-year period (1972-2022). The graph utilizes trend lines to depict the percentage of childless individuals categorized by health conditions (excellent, good, fair, and poor).

Overall, the data shows an increase in childlessness across all health levels and conditions approaching 2022. As mentioned, people with excellent health have the highest percentage of childlessness, having a 10.49% increase throughout the 50-year period (28.26% in 1972 to 38.75% in 2022). People with good and fair health exhibit a similar rate of childlessness in 2022, at about 30%. In particular, people with fair health marked; however, people with poor health, once having the lowest rate of childlessness (at 12.27% in 1972), now increases to 20.40% in 2022, which translates to a substantial 8.13% increase.

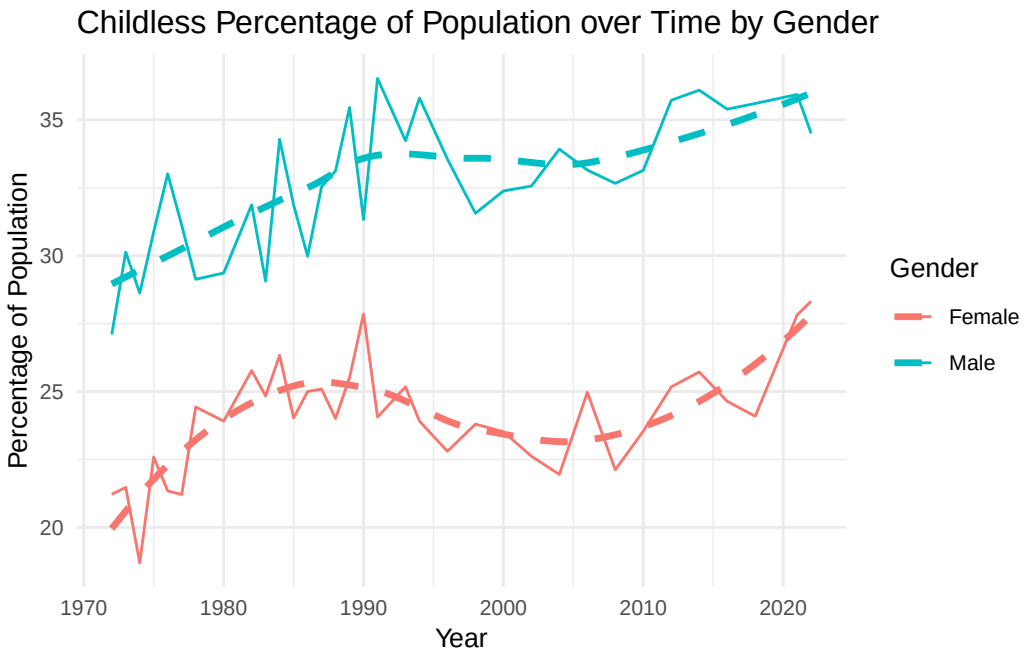

Figure 4: Percentage Childless over Time by Gender

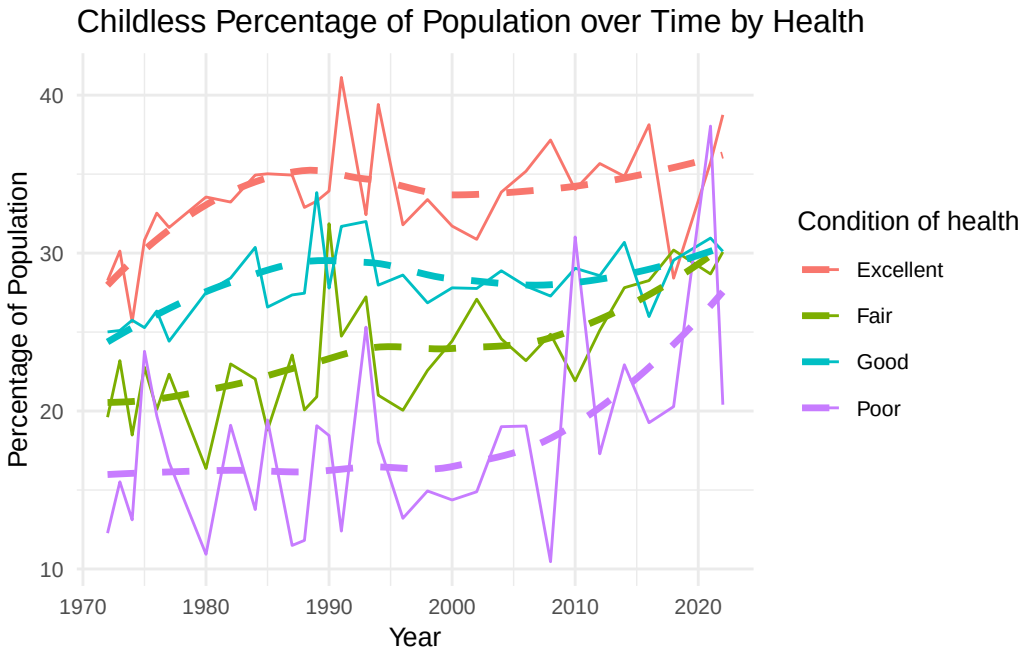

Figure 5: Percentage Childless over Time by Health Conditions

Figure 6 explores the marital status of people who are childless over a span of 50 years in the United States (1972-2022). The graph contains trend lines of varying marital statuses-Divorced, Married, Never married, Separated and Widowed-and how each has changed over the years in terms of childbearing status.

The data demonstrates that a significant portion of people who have never married are childless. However, more and more people are reluctant to get married but still consider having children. This is observable in the childlessness percentage decrease of people who never marry, decreasing from 96.73% in 1972 to 72.53% in 2022. For people who are divorced, separated and widowed, this percentage fluctuates, displaying the complex dynamics between these relationship statuses and childbearing. For married people though, this childlessness percentage also decreases, from 10.51% in 1972 to 13.97% in 2022.

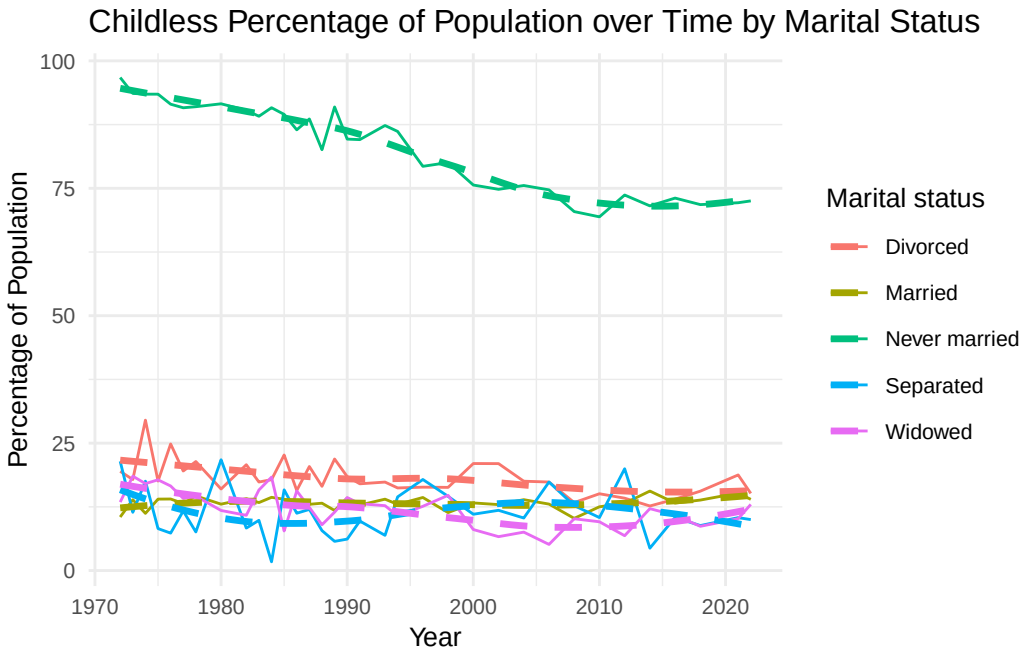

Figure 6: Percentage Childless over Time by Marital Status

The figures presented in this paper were generated using data from the (NORC 2022). These figures visually represent the key findings related to the trends and patterns in childlessness across different ages, social classes, educational attainment levels, and genders in the United States over the past five decades (1972-2022). It is important to remember that these figures solely present descriptive data and do not establish causal relationships. The Discussion section will further analyze the observed trends and explore the broader implications of these findings.

4 Discussion

4.1 Rising Childlessness: Patterns and Trends

The findings presented in this paper reveal a consistent and concerning trend of rising childlessness across various demographics in the United States. As Figure 1 illustrates, the percentage of individuals without children has steadily increased across all age groups over the past 50 years, with the most significant rise observed among younger individuals (18-34 and 35-49).

4.2 Potential Explanations for Rising Childlessness

This paper cannot definitively establish causal relationships, but the data suggests several potential factors contributing to rising childlessness, all supported by existing research. These include economic concerns like rising childcare costs, student loan debt, and economic uncertainty. Additionally, individuals with higher educational attainment, particularly women, might delay or forgo childbearing to pursue career opportunities. Furthermore, shifting social norms related to childbearing, family structures, and career aspirations, especially for women, may be contributing factors. Finally, the decision to remain childless can also be influenced by individual values, lifestyle choices, and personal circumstances.

4.3 Societal Implications of Rising Childlessness

The rising trend of childlessness carries potential consequences across various societal spheres. A shrinking pool of younger workers could pose challenges to economic growth and strain social security systems. Additionally, the rise of childless families could have implications for social support networks and intergenerational relationships. While childlessness can be a personal choice for some individuals and may even lead to a fulfilling life, it could also be associated with feelings of isolation and a lack of social support for others. These potential consequences highlight the need for further research and discussion on how to navigate the social, economic, and individual complexities associated with rising childlessness.

4.4 Weaknesses and next steps

This study has some limitations that need to be acknowledged. Firstly, the study relies only on data from the GSS, which may not be entirely representative of the US population. Secondly, the cross-sectional design of the GSS data limits the ability to establish causal relationships between variables. Lastly, surveys are prone to biases such as social desirability bias or memory lapses, which may impact the accuracy of the findings.

To gain a deeper understanding of childlessness, some crucial next steps need to be taken. Firstly, employing longitudinal studies will allow the exploration of causal relationships between factors and childbearing decisions over time. Secondly, incorporating diverse data sources, such as qualitative interviews and other surveys with broader representation, can provide richer insights and explore the nuances of individual experiences. Lastly, utilizing a mixed methods approach, combining quantitative and qualitative data analysis, will offer a more comprehensive understanding of both the broader trends and the lived experiences of individuals facing childlessness.

By addressing these limitations and pursuing the proposed next steps, future research can contribute significantly to a more nuanced and in-depth understanding of childlessness and its various aspects.

5 Conclusion

This paper investigated the rising trend of childlessness in the United States, highlighting its prevalence across various demographics. By analyzing data from the GSS, it revealed consistent and concerning increases in the percentage of individuals without children. While definitive causal explanations remain elusive due to limitations in the analysis, the discussion explored potential contributing factors, including economic considerations, educational aspirations, shifting social norms, and individual preferences. Additionally, the potential consequences of this trend, spanning across social, economic, and individual realms, were examined.

Moving forward, further research with longitudinal studies and diverse data sources including qualitative interviews, alongside a mixed methods approach, is crucial to gain a comprehensive understanding of childlessness, its nuances, and its multifaceted implications. This knowledge can inform future policies and interventions aimed at fostering a supportive environment for individuals and families as they navigate the complex decisions around childbearing in the 21st century.

A Appendix

The survey questions are available here under each trend: https://gssdataexplorer.norc.org/trends

A.1 Survey Questions from GSS

(1) How many children have you ever had? Please count all that were born alive at any time (including any you had from a previous marriage).

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8 or more

(2) RESPONDENT'S AGE (short answer text)

(3) If you were asked to use one of four names for your social class, which would you say you belong in:

- The lower class
- The working class
- The middle class
- The upper class

(4) RESPONDENT'S DEGREE:

- College +
- High school
- Less than high school

(5) RESPONDENT'S SEX:

- Female
- Male

(6) Are you currently:

- Married
- Widowed
- Divorced

- Separated
- Never married

(7) Would you say your own health, in general:

- Excellent
- Good
- Fair
- Poor

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