U.S. national happiness post-covid*

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Abstract

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1 Introduction

Human beings strive for different things in life, but the ultimate goal is usually to achieve happiness. Happiness can be seen as a measure of life quality, and it is often associated with factors such as income, education, social interactions, and family. The relationship between happiness and age has been widely studied, and research suggests that there is not much change in happiness until around the age of 55, after which happiness starts to increase, peaking around 67, with a quite sharp decline around the age of 75 (Frijters and Beatton 2012). Studies examining the relationship between gender and happiness have found that individuals in the United States were more than twice as likely to experience well-being in states with high gender equality scores compared to states with low gender equality scores (Holter 2014). The relationship between race and happiness has also been studied, with research suggesting that the gap in happiness between whites and blacks is substantial, with whites more likely to report being very happy and less likely to report being not too happy (Icel and Ludwig-Dehm 2019). Several studies conducted in Europe suggest that working fewer hours is correlated with higher life satisfaction (Shao 2022). Regarding income, studies have shown that the relationship between perceived sufficient income and happiness is mediated by perceived health. Individuals with sufficient income are more likely to have better perceived health, which leads to increased happiness (Robert Weech-Maldonado and Miller 2017).

This paper delves into the complex relationship between age, gender, race, working hours, and income, and their impact on an individual's overall happiness. The findings reveal that while the level of happiness among various age groups remains stable, the 18-34 age group reported the highest level of extreme happiness. Additionally, the study suggests that male respondents tend to report higher levels of happiness compared to their female counterparts, whereas the level of happiness remains similar across different racial groups. [insert something here]

The remainder of the paper is split into five sections. Section 2 explains the data source and collection methodology, key features, our selected data's characteristics, strengths and weakness, as well as potential ethics issues. Section 3 discusses the methods used to produce the wanted results to investigate the relationship between happiness and the various factors. Section 4 presents the findings from our methodology.

2 Data

2.1 Data Source and Collection

To get better insights on what factors affect happiness, we utilized the 2021 US General Social Survey ("US General Social Survey" 2021) from NORC. The raw dataset is a Stata file and was imported in R using the package Haven (Wickham, Miller, and Smith 2022). It includes data from 568 survey questions for 4,032 survey participants. Using the R (R Core Team 2022) package tidyverse (Wickham et al. 2019) and dplyr (Wickham et al. 2022), we were able to clean and perform exploratory data analysis on the dataset to get insights into the data. Further, we used R package ggplot2 (Wickham 2016), Knitr (Xie 2014) and KableExtra (Zhu 2021) to visualize the data for this paper.

*Code and data are available at:

Table 1: U.S. happiness in 2021

Variable	N	Mean	Std. Dev.	Min	Pctl. 25	Pctl. 75	Max
age	3699	52.165	17.233	18	37	66	89
sex	3940						
... male	1736	44.1%					
... female	2204	55.9%					

The survey of interest in this report is the General Social Survey ("US General Social Survey" 2021), one that monitors pubic opinion and behavior in the United States. It has been conducted since 1972 by the NORC at the University of Chicago and funded by the National Science Foundation(NSF); aiming to minimize all changes via retaining similar sampling and questioning approaches. In each round, the GSS contains a set of repeating modules and a section of topical modules that is subject to change in every round and each participant will be given a subset of repeating modules and topical modules (it may not contain all modules).

Variables [what is this and why is it here?]

2.2 Methodology

Since its inception, the GSS has traditionally used in-person data collection as its primary mode of data collection. However, to safeguard the health of staff and respondents during the COVID-19 pandemic, the 2021 GSS data collection used a mail-to-web methodology (supplemented with phone for respondents who needed the option) instead of its traditional in-person interviews.

Outreach was conducted via mail and phone using commercially available phone number matches for addresses in the sample or inbound phone contact. GSS staff redesigned the mail-based outreach to respondents to introduce the GSS to fresh address-based sample and encourage them to participate, either by web or over the phone. Throughout the data collection period, selected households were sent postcards, invitation packets, and reminder letters using a combination of USPS and FedEx and urging them to complete the 2021 GSS survey. The sample was released in three batches, with evaluation of respondent recruitment protocol for each batch allowing the fine-tuning of protocol for subsequent batches.

With a response rate of 17.4%, a total of 4,032 surveys were completed; from December 1, 2020, to May 3, 2021. 88.3% of those respondents completed the survey via the web, and 11.7% completed it via the phone.

2.3 Key Features

The GSS collects data on contemporary American society to monitor and explain trends in opinions, attitudes, and behaviors. The GSS contains a standard core of demographic, behavioral, and attitudinal questions, plus topics of special interest. Among the topics covered are civil liberties, crime and violence, intergroup tolerance, morality, national spending priorities, psychological well-being, social mobility, and stress and traumatic events. The survey data has 4,032 respondents and counts 735 variables.

2.4 Variable Selection

2.5 Strengths and Weaknesses

2.6 Ethical Concerns & Limitations

[what is estimand and where to put it?]

3 Discussion

In order to understand the context and trends, we observed the overall trend of happiness of the U.S. population in 2021. We also looked into the distribution of happiness among different age groups, sex groups, and racial groups.

3.1 National Happiness

In overall, the level of happiness in the United States in 2021 is "pretty happy". Among 4041 respondents, more than half (57.5%) reported that they feel happy, while 923 people were not happy and 783 people were extremely happy. Figure 1

Figure 1: National Happiness

3.2 Happiness among age groups

Comparing happiness among different age groups, it is apparent that the level of happiness remained stable throughout the groups. While in 18 to 64 and non-identifiable age groups, there are more people feeling unhappy than extremely happy, from 65 and above age group witnesses the same proportion of people feeling not too happy and extremely happy. In the 18-34 age group, there are 189 respondents (25.9%) reported to feel extremely happy, while that of 35-49, 50-64, and 65 and above age group take up 22.9%, 23.5%, and 21% respectively.

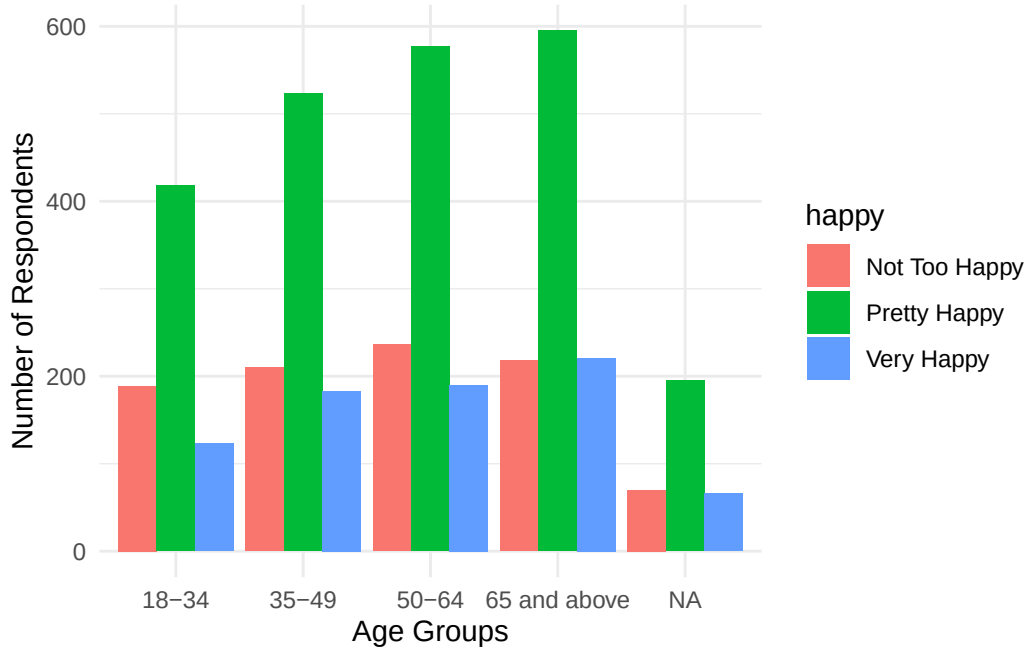

Figure 2: Happiness by age

3.3 Happiness among male, female, and others

Figure 3 shows that male tend to be more happy than female. In the year 2021, the U.S. population reported to relatively happy among different sex groups. There is a great disparity between female respondents feeling unhappy and very happy - more female experienced unhappiness than extremely happy, while that of male respondents is quite similar. In addition, there are 92 people who responded their level of happiness without identifying their sex. In this group, there are 62 respondents feel happy, 18 respondents feel extremely happy, and 12 respondents feel unhappy.

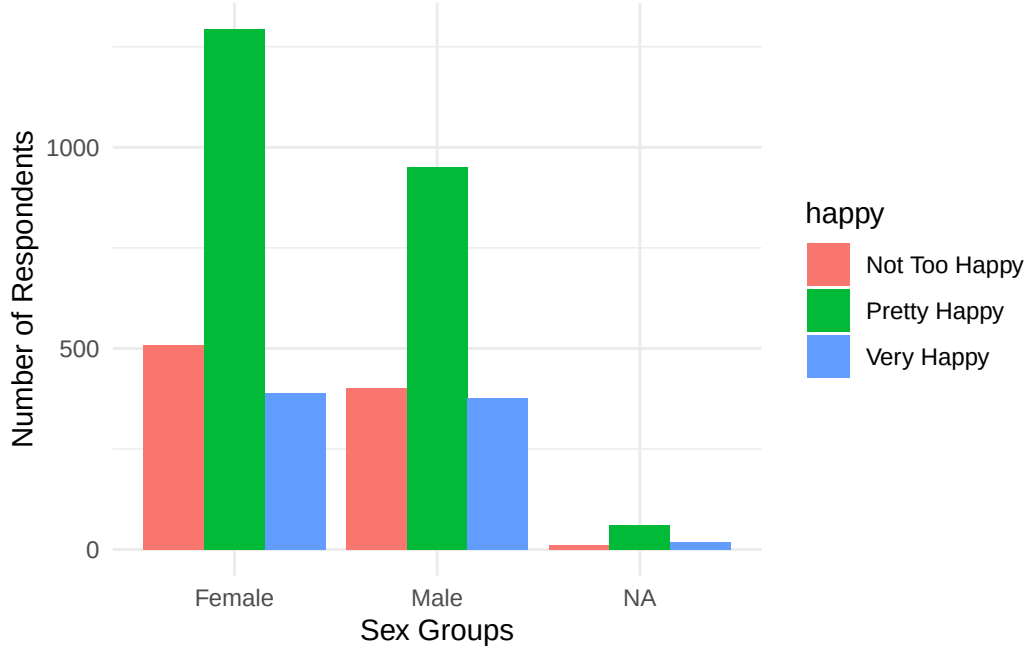

Figure 3: Happiness by sex in 2021

Table 2: The means of hours worked last week in different levels of happiness

happy	Mean	Sd	Total_observed
Not too happy	40.68378	13.04215	370
Pretty happy	40.16744	11.95678	1075
Very happy	39.87363	13.63153	364

3.4 Happiness among different races

As a multicultural country, happiness in different races is also worth observing as it shows the level of happiness in different racial communities. From Figure 4 We notice that there is a similar pattern between the black and white racial groups, and between other races and non-identifiable group.

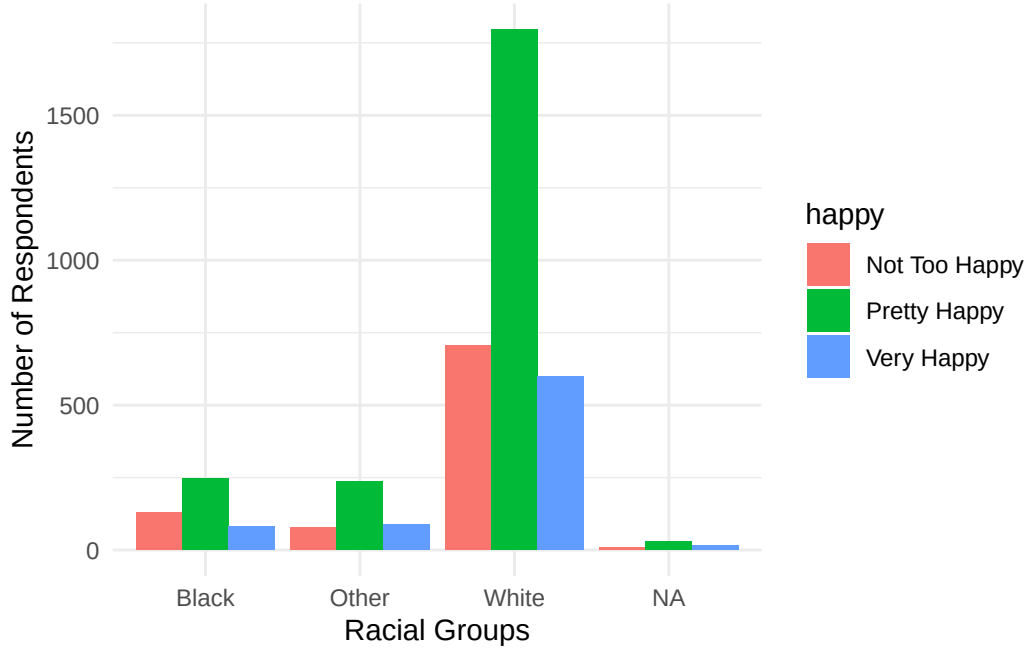

Figure 4: Happiness by race

3.5 Happiness and job conditions

Besides we looked into how job conditions may affect the level of happiness.

Firstly, we looked at the hours the respondent worked in the last week from they responded to the survey.

Then, we looked at how people in different income group rated their levels of happiness.

To better visualize the results and find the tendency, we plotted a graph.

4 Conclusion

5 Appendix

Table 3: The level of happiness in different income groups

rincome	happy	n
LOWER THEN $1000	Not too happy	3
	Pretty happy	2
	Very happy	4
$1000 TO 2999	Not too happy	7
	Pretty happy	8
	Very happy	3
$3000 TO 3999	Not too happy	4
	Pretty happy	8
	Very happy	1
$4000 TO 4999	Pretty happy	4
$5000 TO 5999	Not too happy	1
	Pretty happy	10
	Very happy	3
$6000 TO 6999	Not too happy	2
	Pretty happy	5
	Very happy	8
$7000 TO 7999	Not too happy	3
	Pretty happy	8
	Very happy	3
$8000 TO 9999	Not too happy	7
	Pretty happy	13
	Very happy	3
$10000 TO 14999	Not too happy	19
	Pretty happy	44
	Very happy	13
$15000 TO 19999	Not too happy	19
	Pretty happy	41
	Very happy	6
$20000 TO 24999	Not too happy	27
	Pretty happy	59
	Very happy	10
$25000 OR MORE	Not too happy	278
	Pretty happy	873
	Very happy	310

Figure 5: Relationship of income level and happiness

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