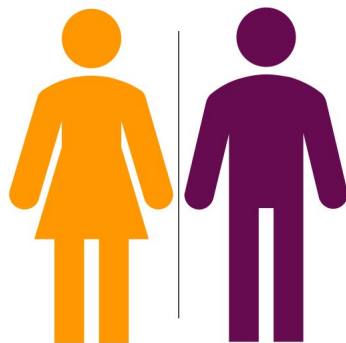


Gender Analysis of the American Time Use Survey, 2003-2021



W200 Project 2

Angela Chang, Jared Feldman, Hope Huang

Guiding Questions

1. Do people of different sexes spend time differently? Have the sex differences in time use changed over time?
2. What are the categories of activities that have the biggest difference in time spent between the sexes?
3. Were any of the differences in time spent on the activities between the sexes affected by COVID-19?

The Dataset: ATUS Activity Summary, 2003-2021

- Source: U.S. Bureau of Labor Statistics, American Time Use Survey (ATUS)
- File: ATUS Activity Summary 2003-2021
 - Summarizes daily time use data in minutes
 - 228,455 rows
 - 456 columns/variables



Approach: Clean-up and Analysis

1. Filter out unneeded columns/variables
2. Prepare the dataset to calculate average time spent per day
3. Calculate the average time spent per day using the following formula provided by ATUS:

Average hours per day. \bar{T}_j , the average number of hours per day spent by a given population engaging in activity j , is given by

$$\bar{T}_j = \frac{\sum_i fwt_i T_{ij}}{\sum_i fwt_i}$$

where T_{ij} is the amount of time spent in activity j by respondent i , and fwt_i is the final weight for respondent i .

Approach: Clean-up and Analysis

Preparation required new columns:

- **correct_wgt ($fwgt_i$):** Correct weight for each respondent – selected based on respondent year
- **act_total (T_{ij}):** Sum of time spent on the targeted activity's sub-activities (ex. Laundry, interior cleaning, etc. if examining household activities)
- **wgt_act_time ($fwgt_i \times T_{ij}$):** Weighted time spent = **act_total** x **correct_wgt**

Average hours per day. \bar{T}_j , the average number of hours per day spent by a given population engaging in activity j , is given by

$$\bar{T}_j = \frac{\sum_i fwgt_i T_{ij}}{\sum_i fwgt_i}$$

where T_{ij} is the amount of time spent in activity j by respondent i , and $fwgt_i$ is the final weight for respondent i .

Data Decisions and Assumptions

- **Selecting the “correct” weight**
 - **Decision/Assumption:** Use 2020 weight for 2020 respondents, other weight for all other respondents
- **Creating annual estimates for 2020**
 - **Decision/Assumption:** Include annual estimates for 2020 though data is incomplete for that year; any info is better than nothing
- **Defining activity categories**
 - **Decision/Assumption:** Follow the categories as grouped in the Lexicon

Division of Work

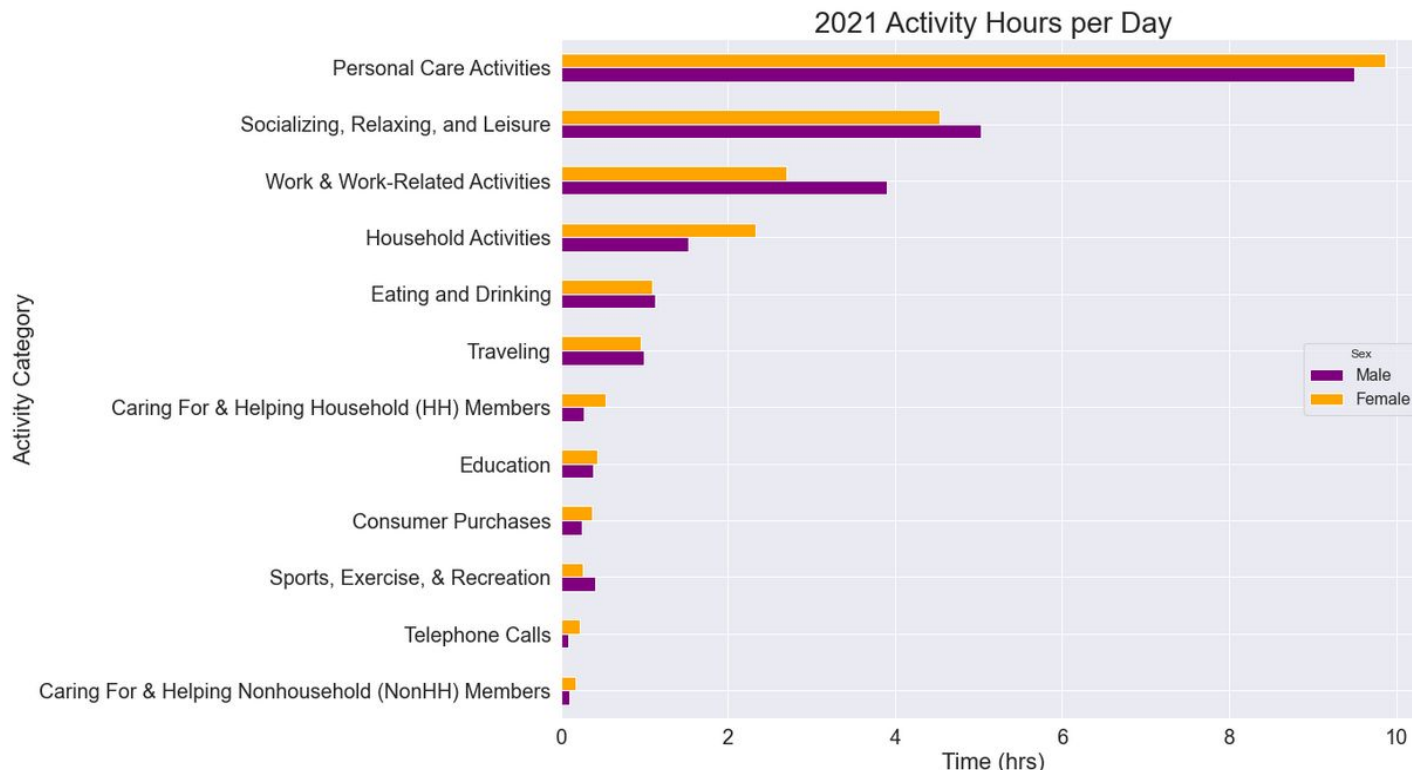
Coding

- Collaborative effort to develop the clean-up and analysis process
- Applying the process was then divided:
 - Time spent on activity categories in 2021 (Jared)
 - 2003-2021 targeted activity categories (Hope)
 - Final code clean-up, compilation, and project coordination (Angela)

Writing

- Report Outline & Overview (Angela)
- Analysis of 2021 & Conclusion (Jared)
- Analysis by Activity Category, 2003-2021 (Hope)

2021



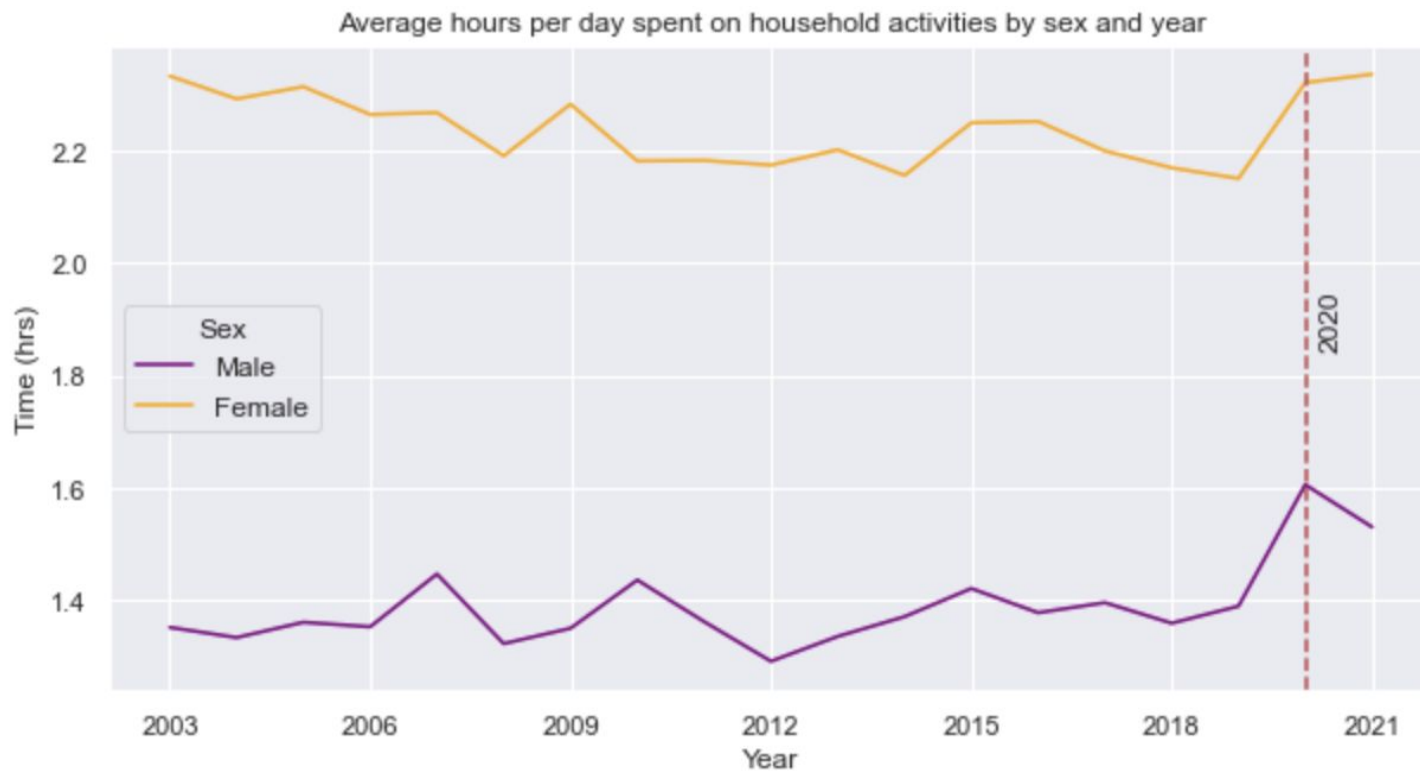
2021 (continued)

Activity	Raw Difference Female vs. Male
Household Activities	0.804665
Personal Care Activities	0.374589
Caring For & Helping Household (HH) Members	0.258615
Telephone Calls	0.133301
Consumer Purchases	0.12332
Caring For & Helping Nonhousehold (NonHH) Members	0.078731
Education	0.052877
Eating and Drinking	-0.035362
Traveling	-0.035775
Sports, Exercise, & Recreation	-0.142837
Socializing, Relaxing, and Leisure	-0.495448
Work & Work-Related Activities	-1.197102

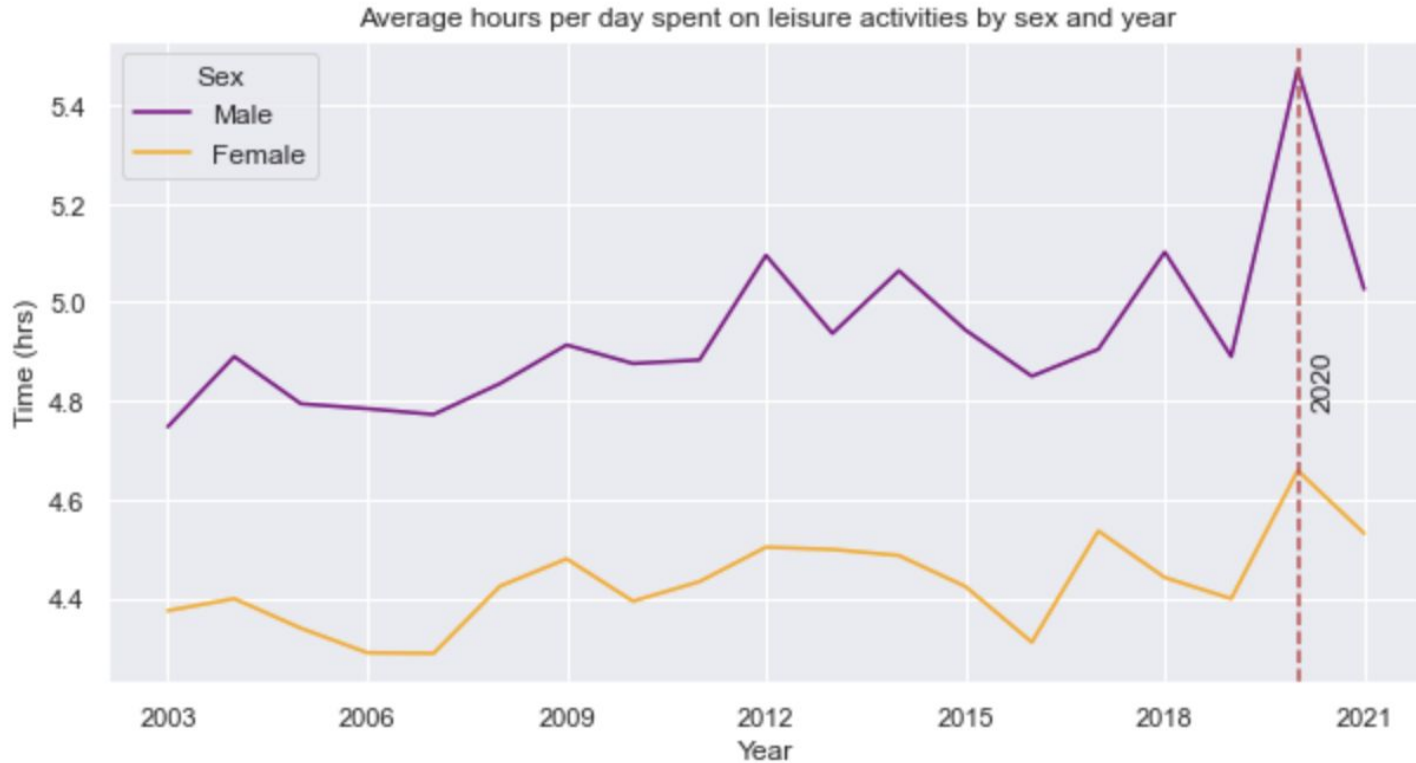
Working and Work-Related Activities



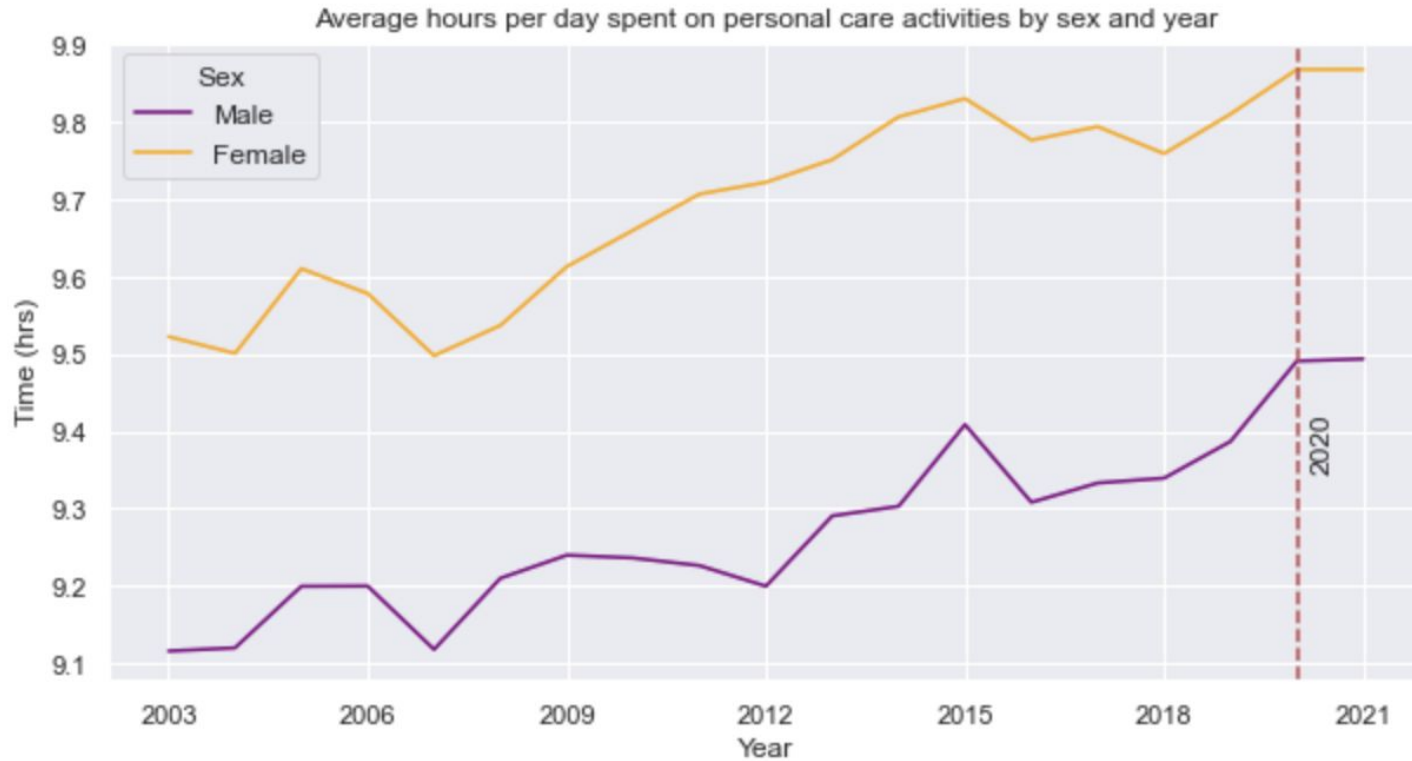
Household Activities



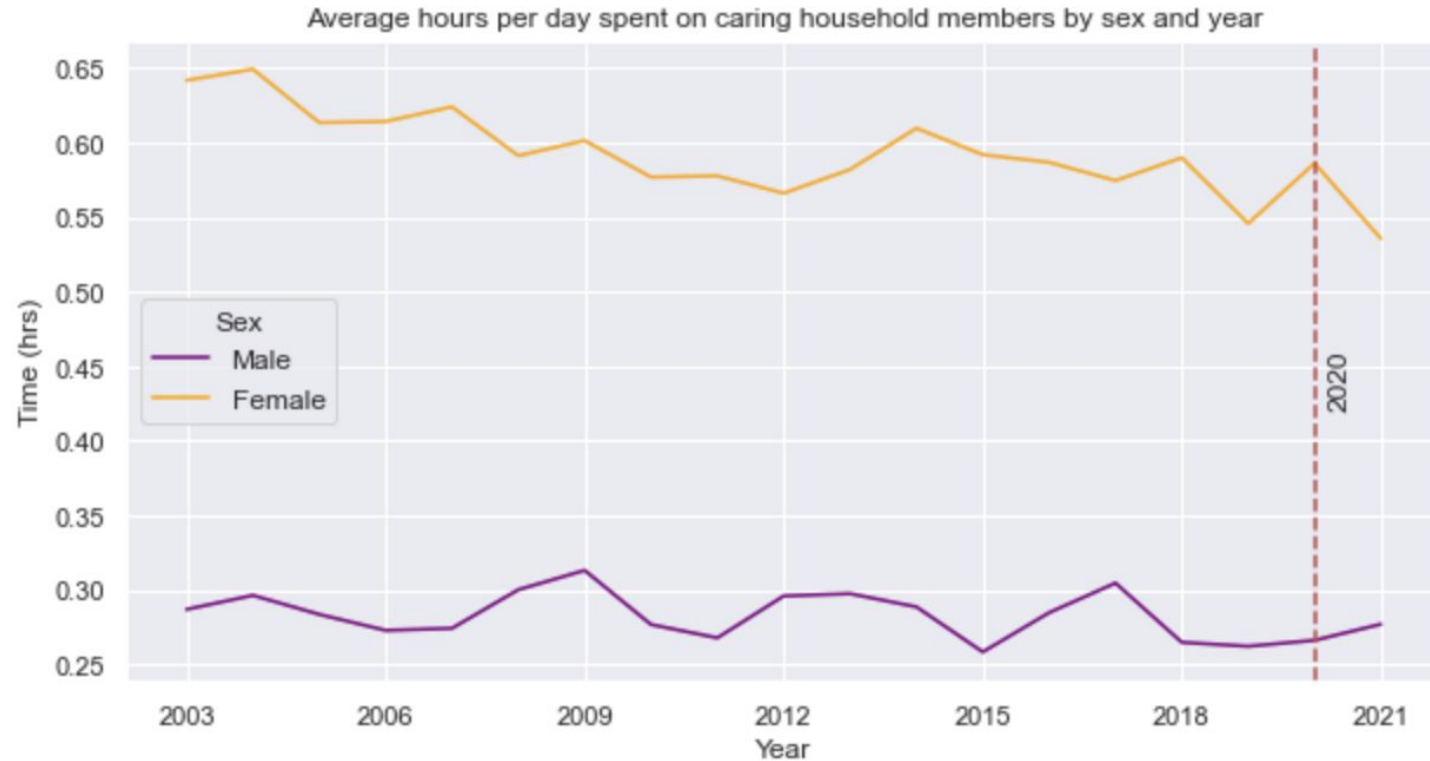
Socializing, Relaxing, and Leisure Activities



Personal Care Activities



Caring For and Helping Household Members

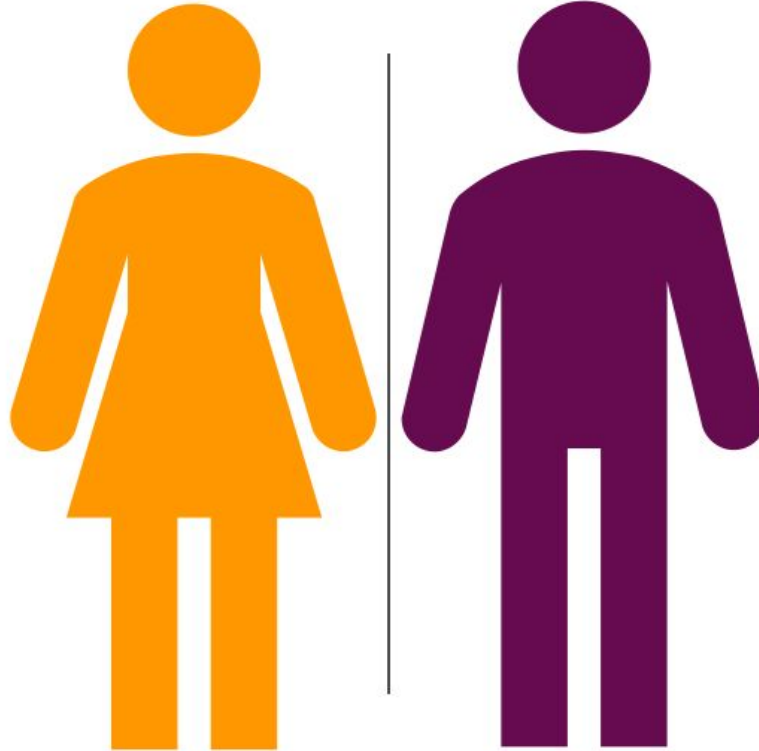


Conclusion

Household Activities

Personal Care
Activities

Caring For & Helping
Household Members



Working &
Work-related
Activities

Socializing, Relaxing,
and Leisure