



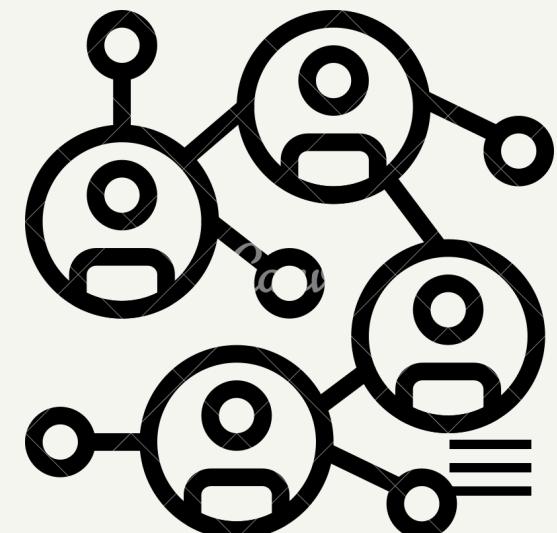
# Flexible social identities: Intra-individual behavioral variation on social media

— 01

Melody Sepahpour-Fard



SFI Centre for Research Training  
in Foundations of Data Science





# BACKGROUND



— 02





# BACKGROUND

## Academic

- BSc. in Linguistics at Université Paris Cité
- BSc. in Psychology at Université Paris Cité
- MSc. in Cultural and Social Psychology (Erasmus Mundus Joint Master's Degree)
- PhD student at the SFI CRT in Foundations of Data Science  
Advisors: Dr Mike Quayle (University of Limerick), Dr Dong Nguyen (Utrecht University & Dr Taha Yasseri (University College Dublin)

— 02





# BACKGROUND



## Academic

- BSc. in Linguistics at Université Paris Cité
- BSc. in Psychology at Université Paris Cité
- MSc. in Cultural and Social Psychology (Erasmus Mundus Joint Master's Degree)
- PhD student at the SFI CRT in Foundations of Data Science  
Advisors: Dr Mike Quayle (University of Limerick), Dr Dong Nguyen (Utrecht University & Dr Taha Yasseri (University College Dublin)

— 02

## Relevant experience

- Linguist at Appen
- Data Science intern at Microsoft





# Contextual social identity variation

— 03





# Using word embeddings to analyse audience effects and individual differences in parenting Subreddits

—<sup>04</sup>

Melody Sepahpour-Fard, Michael Quayle, Maria Schuld, Taha Yasseri





# How does audience affect behaviours?

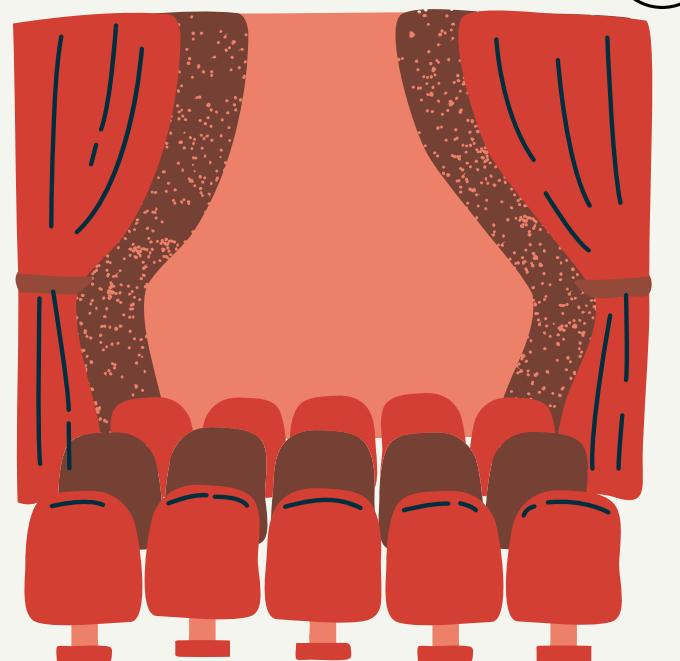
— 05





# Audience effects and social identity

Audience → Reminder of identity



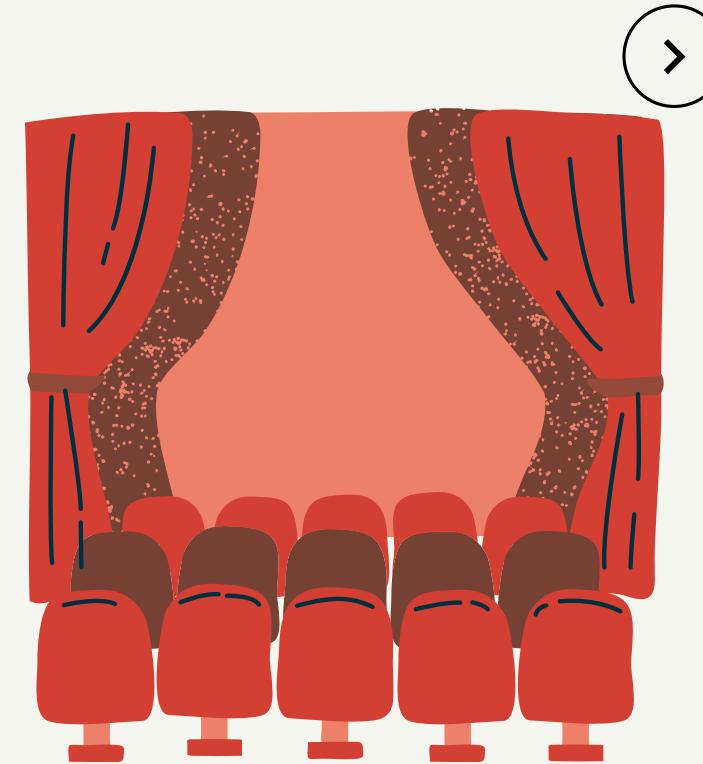
— 06



# Audience effects and social identity

Audience → Reminder of identity → Identity-relevant behaviours

(Klein et al., 2007)

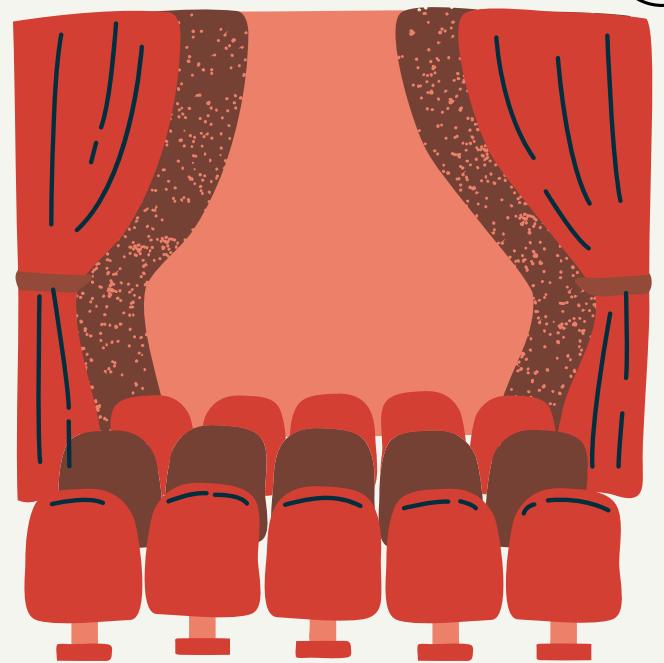




# Audience effects and social identity

Audience → Reminder of identity → Identity-relevant behaviours

(Klein et al., 2007)



— 06

## Self-monitoring theory

Individual differences:

- High self-monitors: Important for them to adapt their behaviour

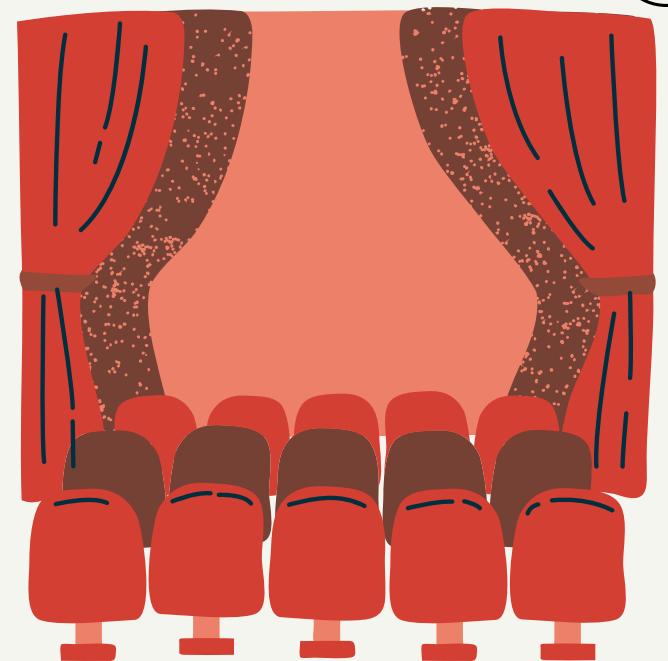




# Audience effects and social identity

Audience → Reminder of identity → Identity-relevant behaviours

(Klein et al., 2007)



— 06

# Self-monitoring theory

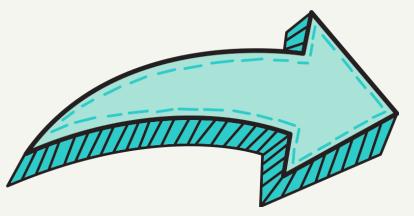
Individual differences:

- High self-monitors: Important for them to adapt their behaviour
- Low self-monitors: Less concerned about conforming with audience expectations



(Snyder, 1974)





## **Present study: Single vs. mixed-gender parenting subreddits**

— 07





# Parenting → Gender Stereotypes



— 08

Eagly & Steffen, 1984; Ellemers, 2018





# Gender Stereotypes

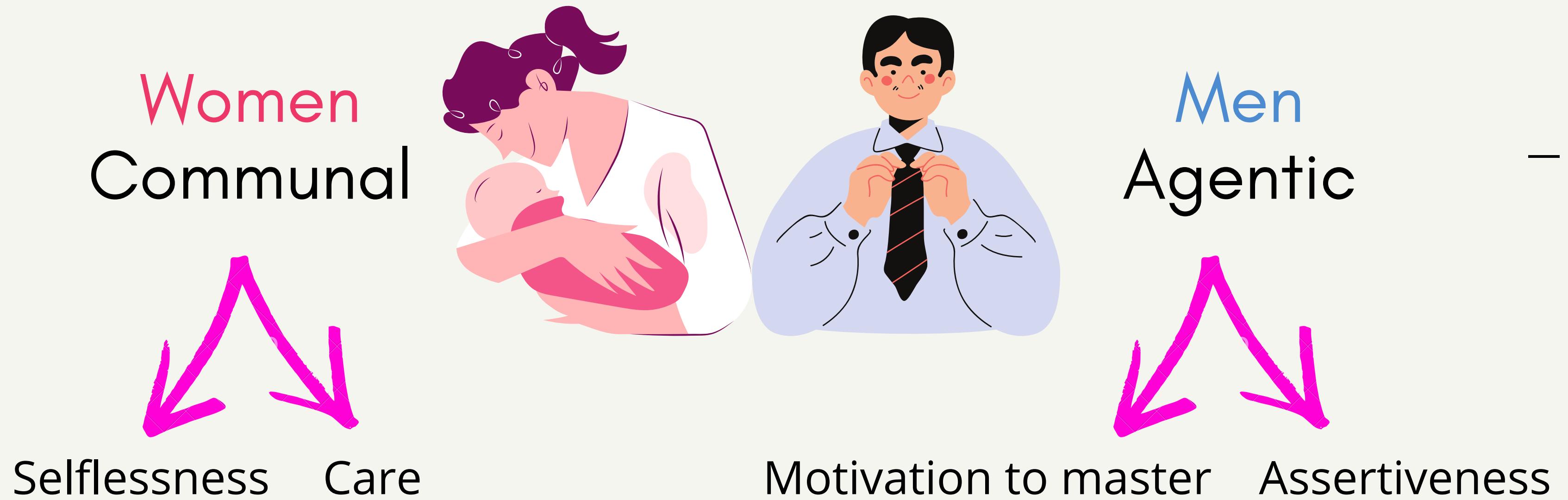


Eagly & Steffen, 1984; Ellemers, 2018





# Gender Stereotypes

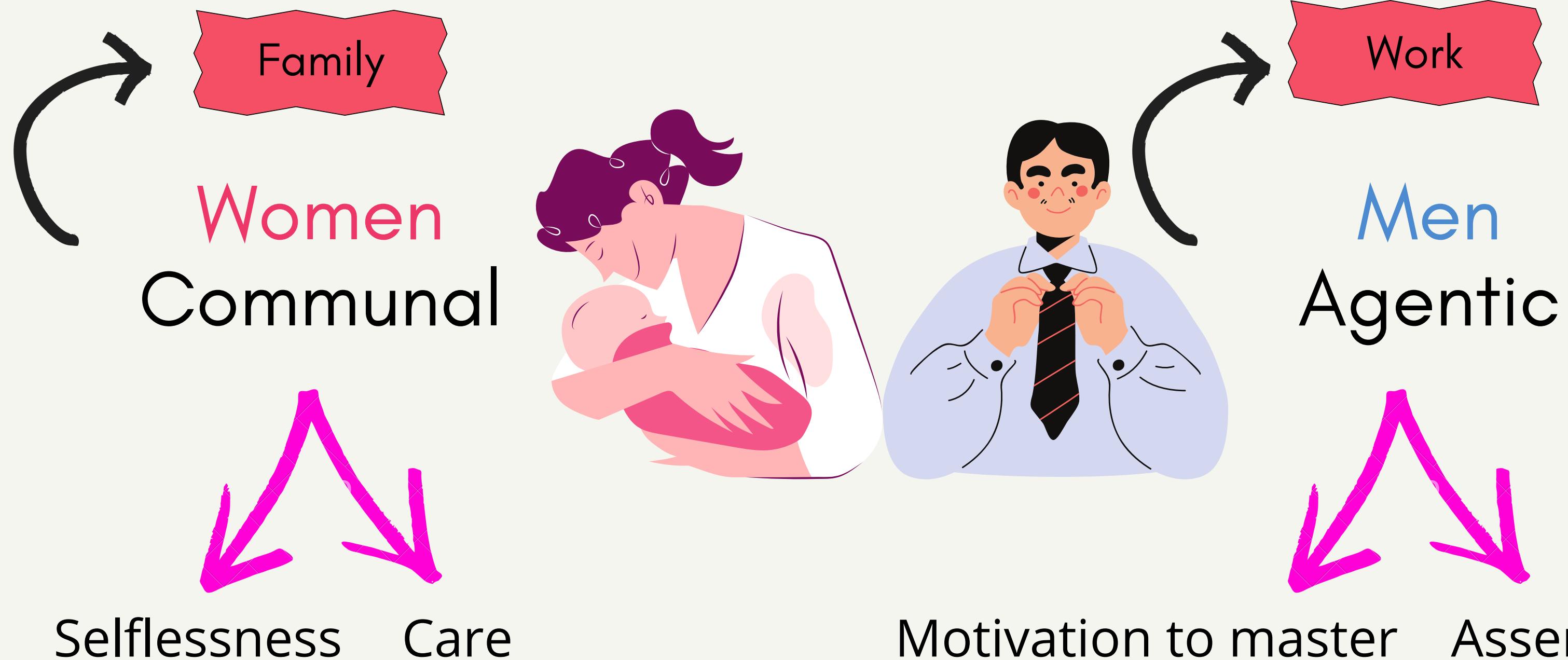


Eagly & Steffen, 1984; Ellemers, 2018





# Gender Stereotypes



Eagly & Steffen, 1984; Ellemers, 2018





# Dataset



Up ↑ r/Mommit Crossposted by u/burningcapricorn 3 days ago  
26 Wow if only I'd thought of that  
Down ↓ r/DunderMifflin · Posted by u/specialpuss 4 days ago 4  
Goddess 😂JC

I'm sorry. I was up all night with Cece.

You probably shouldn't keep a baby up that late.

32.0k points · 200 comments

Up ↑ r/Parenting · Posted by u/Buntyhoven123 21 hours ago  
359 Am I being over sensitive? Partner goes out once a week. We have a  
newborn.  
Down ↓ Newborn 0-8 Wks

Up ↑ r/daddit · Posted by u/BerryinDisguise 2 days ago  
784 Wife and kids out of town. Little midweek R&R  
Down ↓ Tips And Tricks

87 Comments Award Share Save ...

The raw dataset represents 145,771 comments posted in 2020 by 7,791 authors



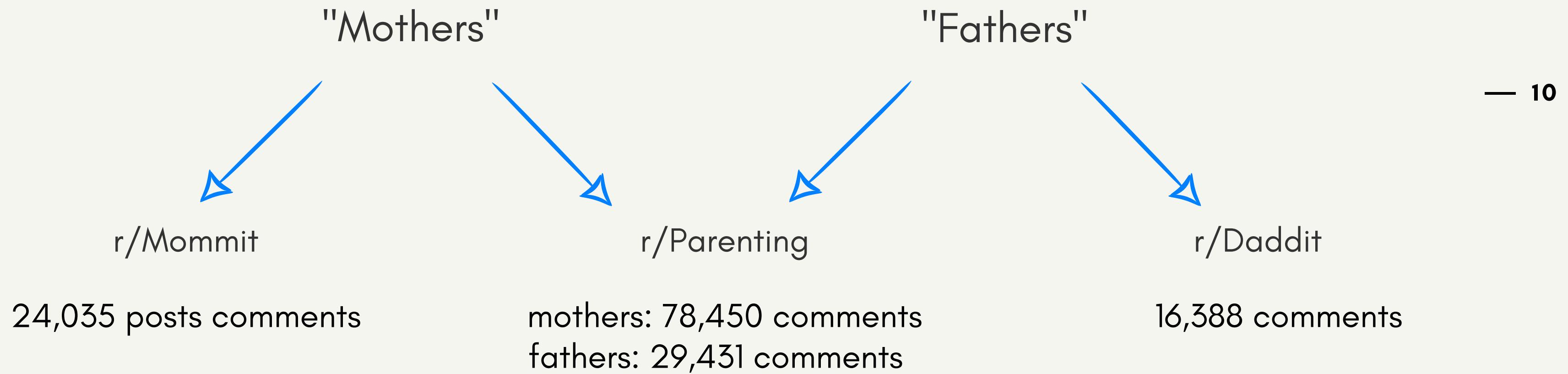


# Data collection





# Data collection





- Word embeddings (Word2Vec)
- User embeddings: User as a token in the document

— 11

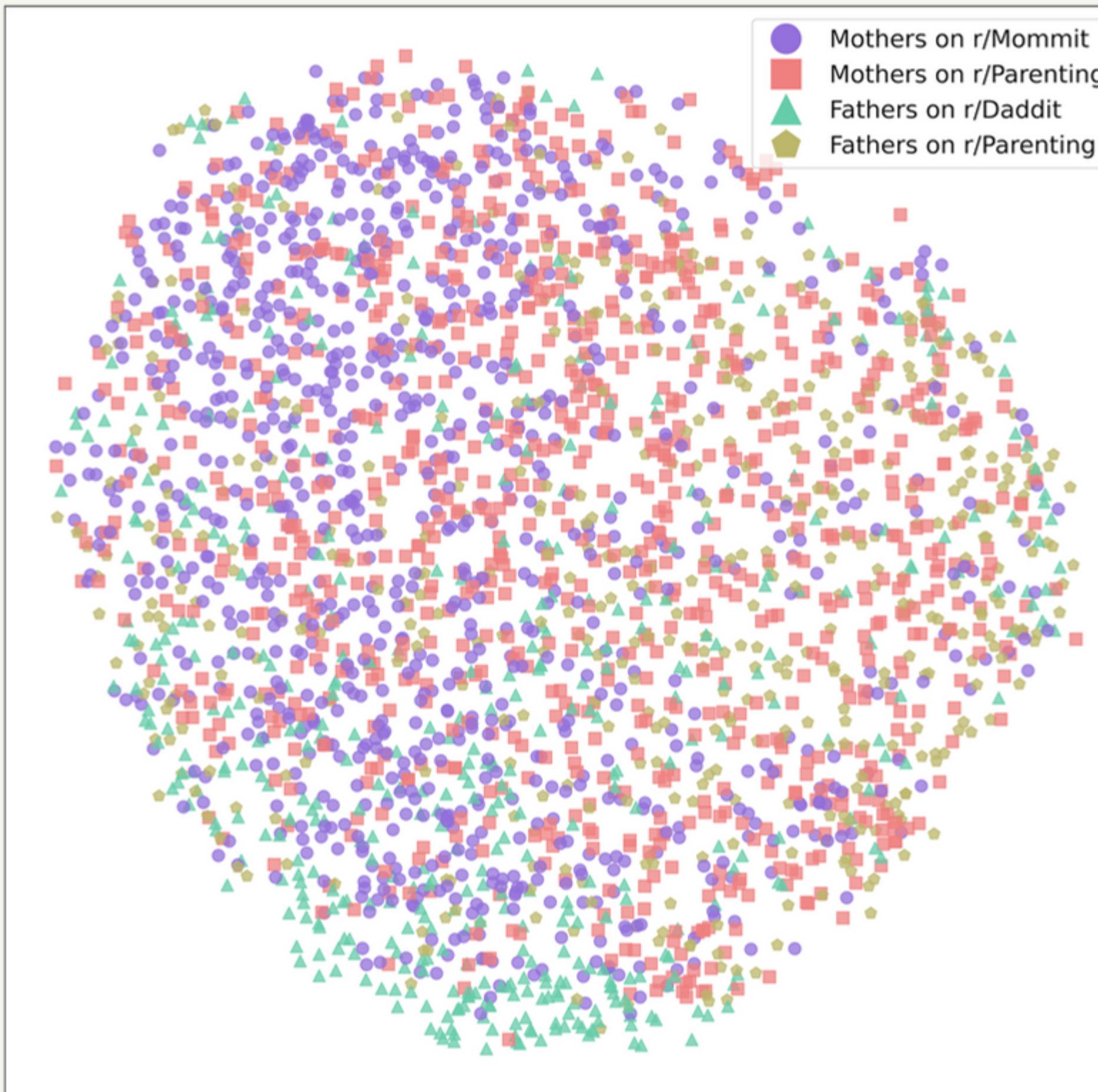
```
sitting agent_prizedkaleidoscope_mm amazing
omg perfect hope to start feeling agent_Mrs_Beardicus_mm better_soon
sweet beautiful agent_Mrs_Beardicus_mm baby
virus killed toddler agent_MrsStickMotherOfTwig_mm sleep havent_slept more_than few_hours christmas
solidarity wasnt virus just travel getting agent_Katiepants1987_mm molar damn tired
agent_socialcult_mm needed
```

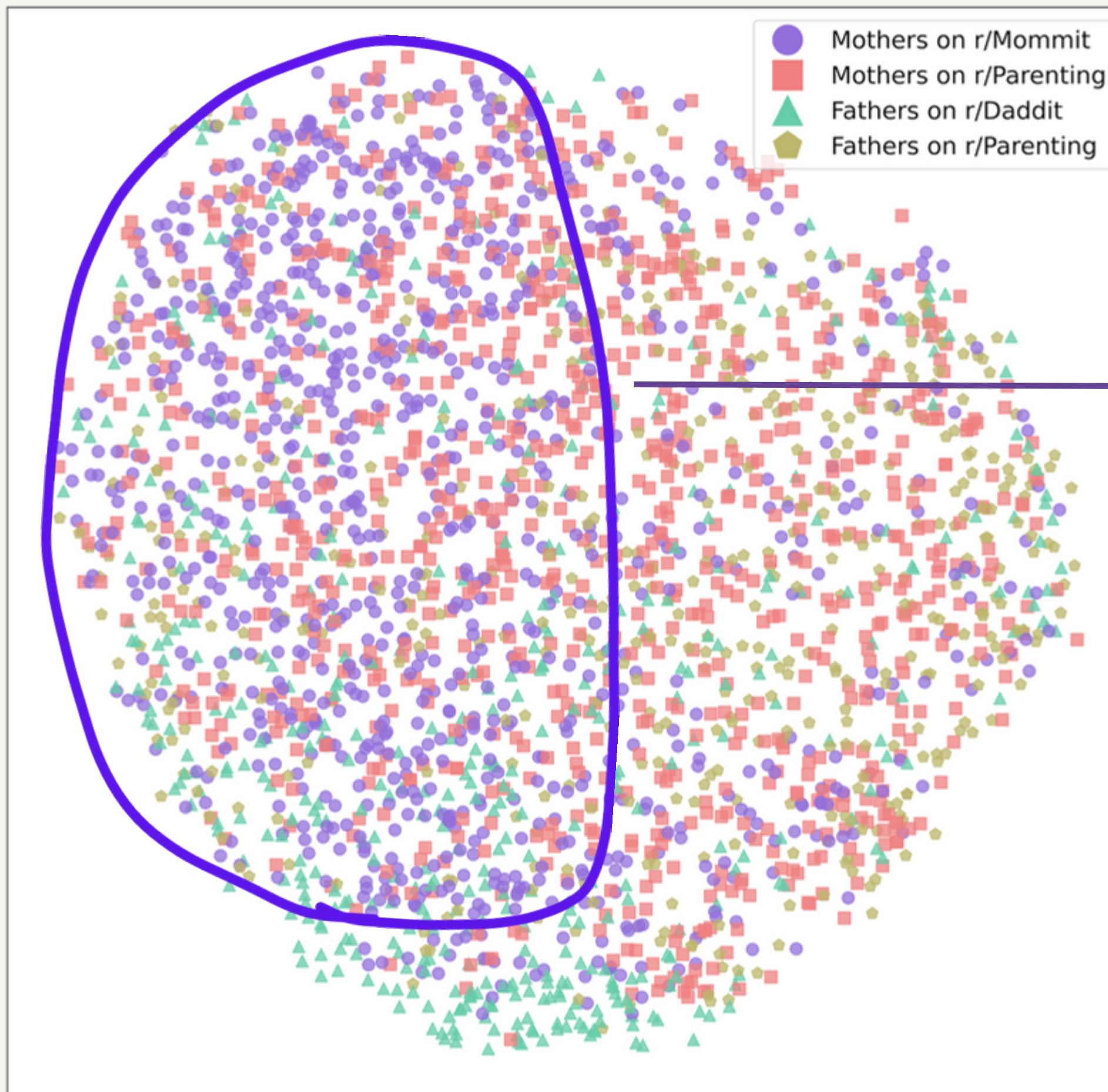




# Results

## User embedding

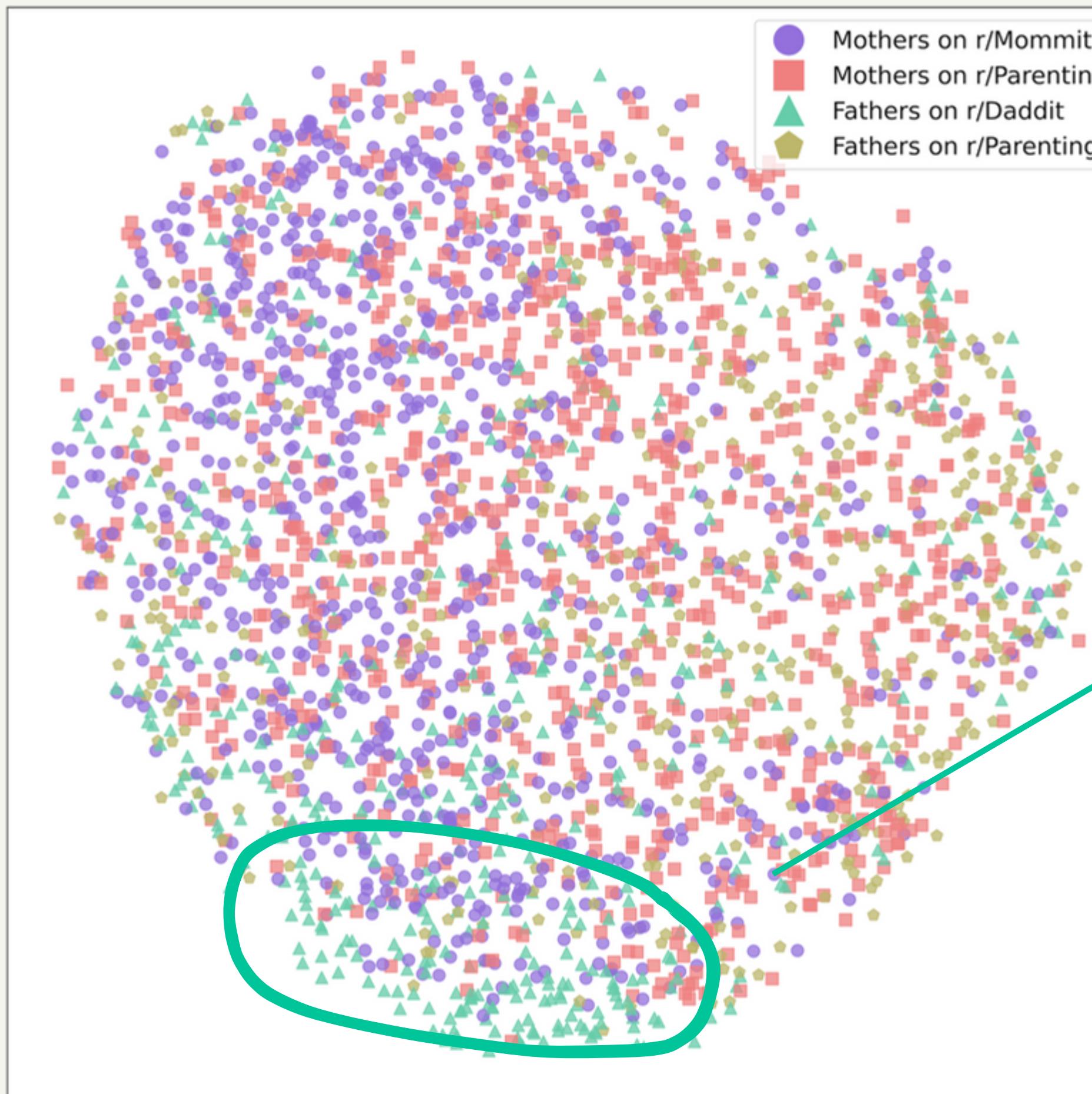




Mothers in r/Mommit

— 12





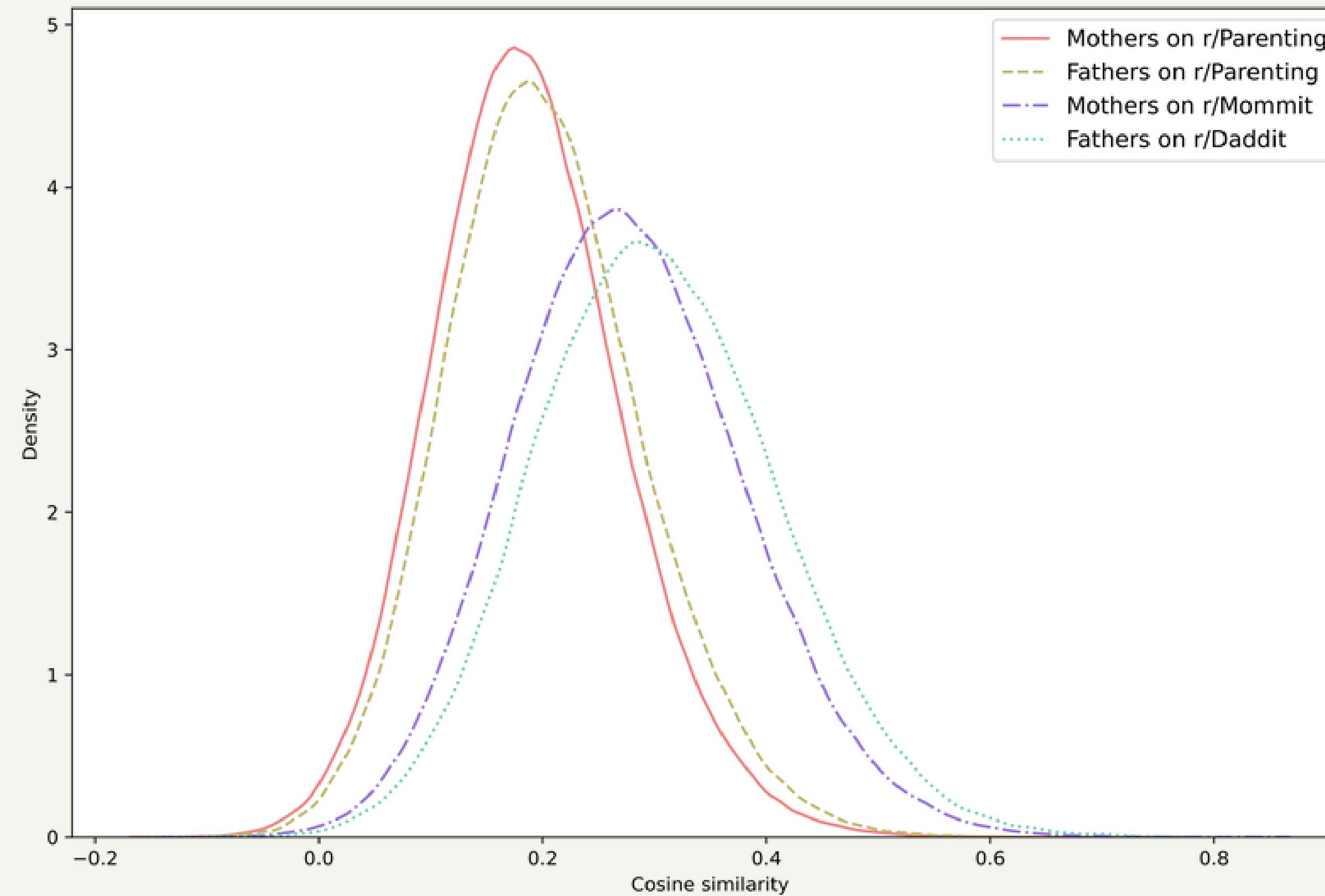
Fathers in r/Daddit

— 12





# Cosine similarity within groups

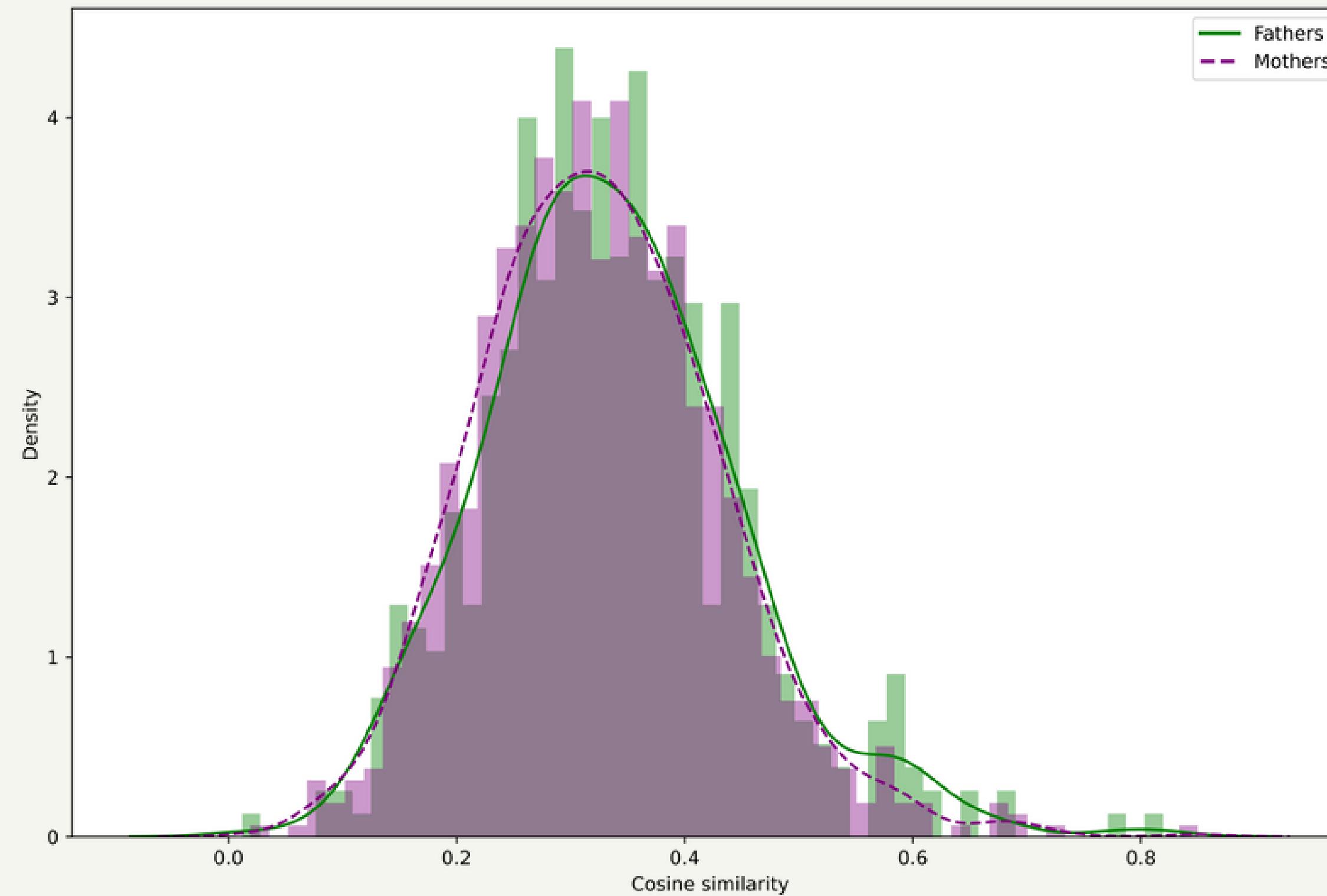


— 13





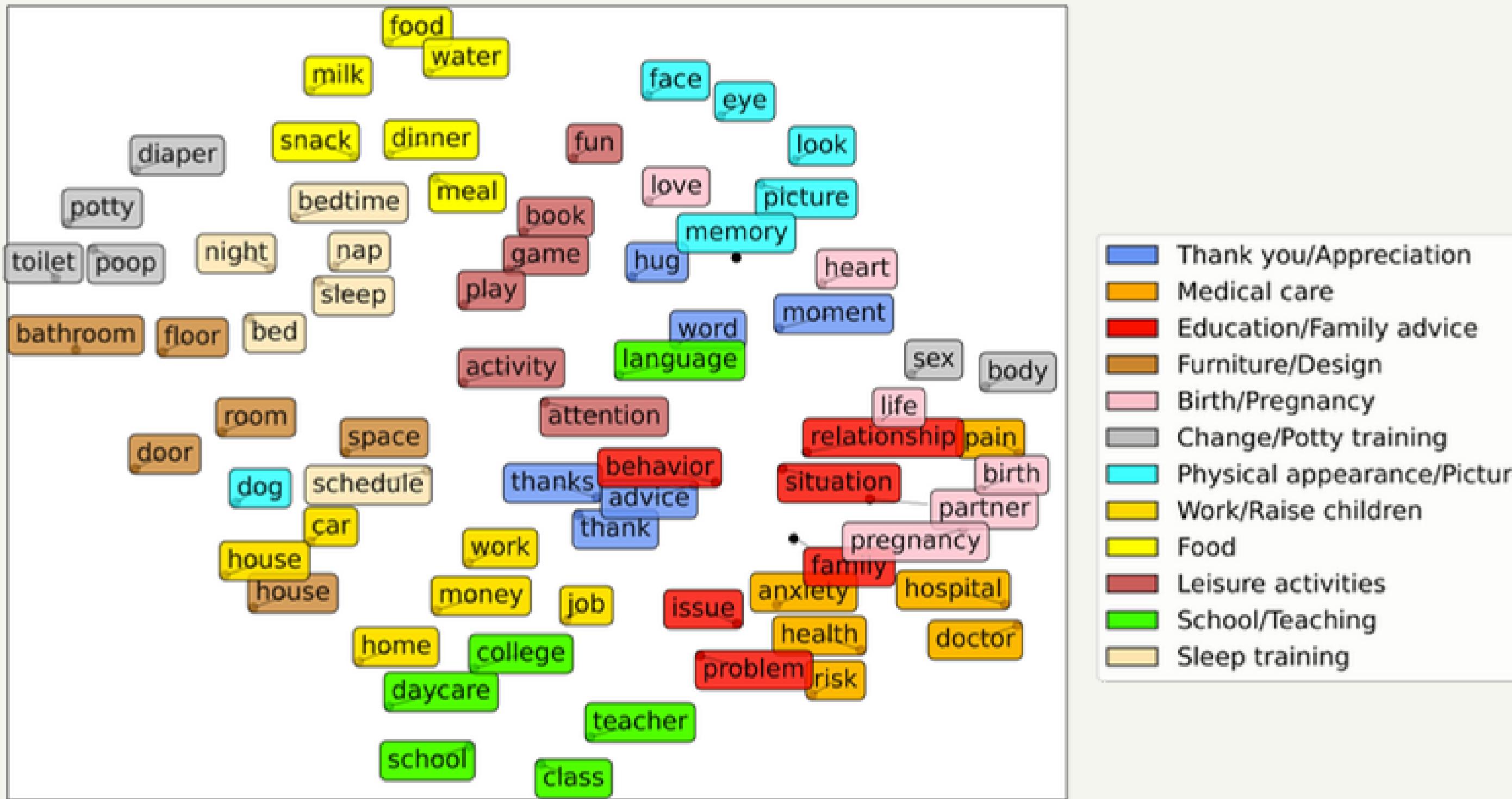
# Cosine similarity between two versions of the same user



— 14

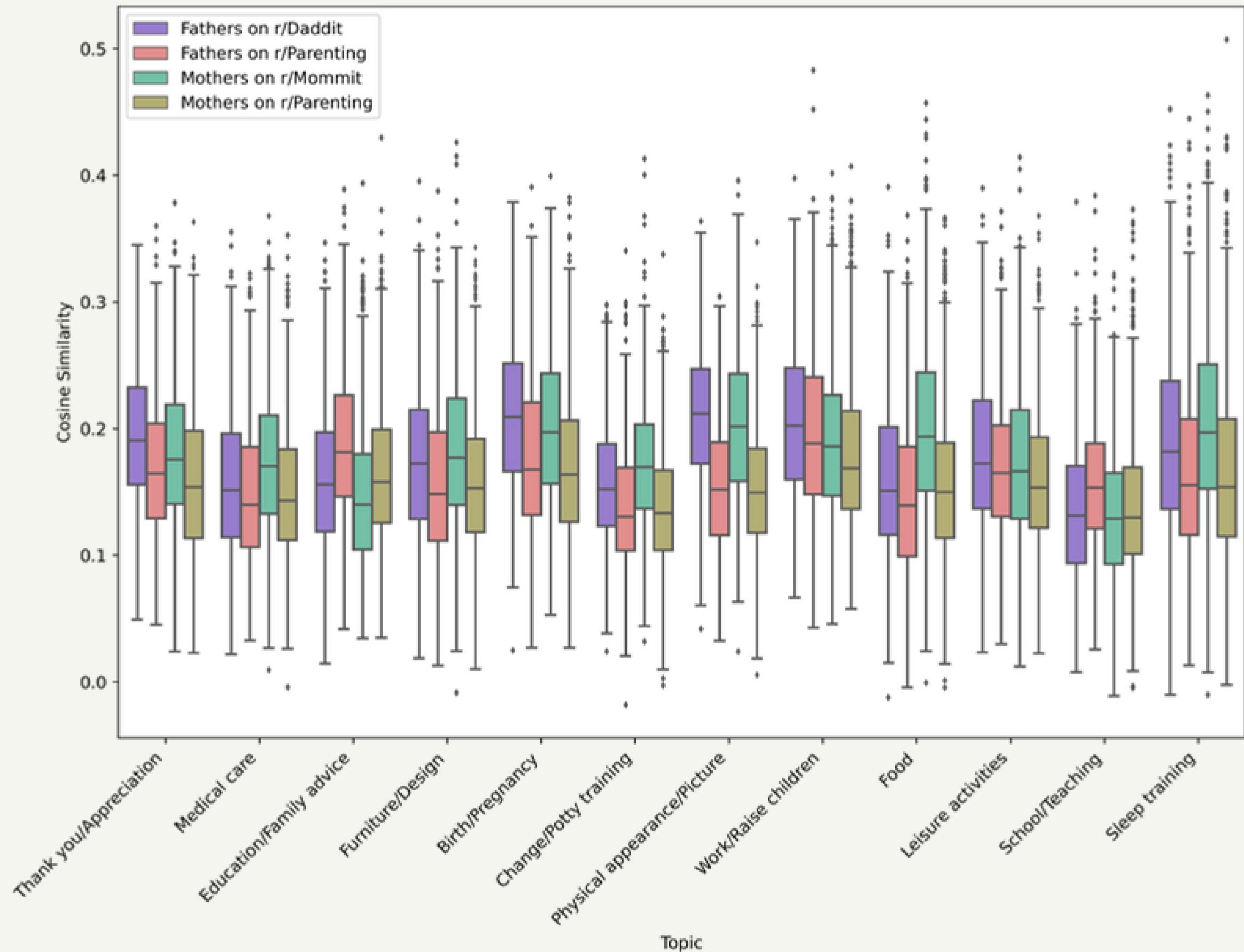


# Topic modelling keywords





# Cosine similarity between groups and topics



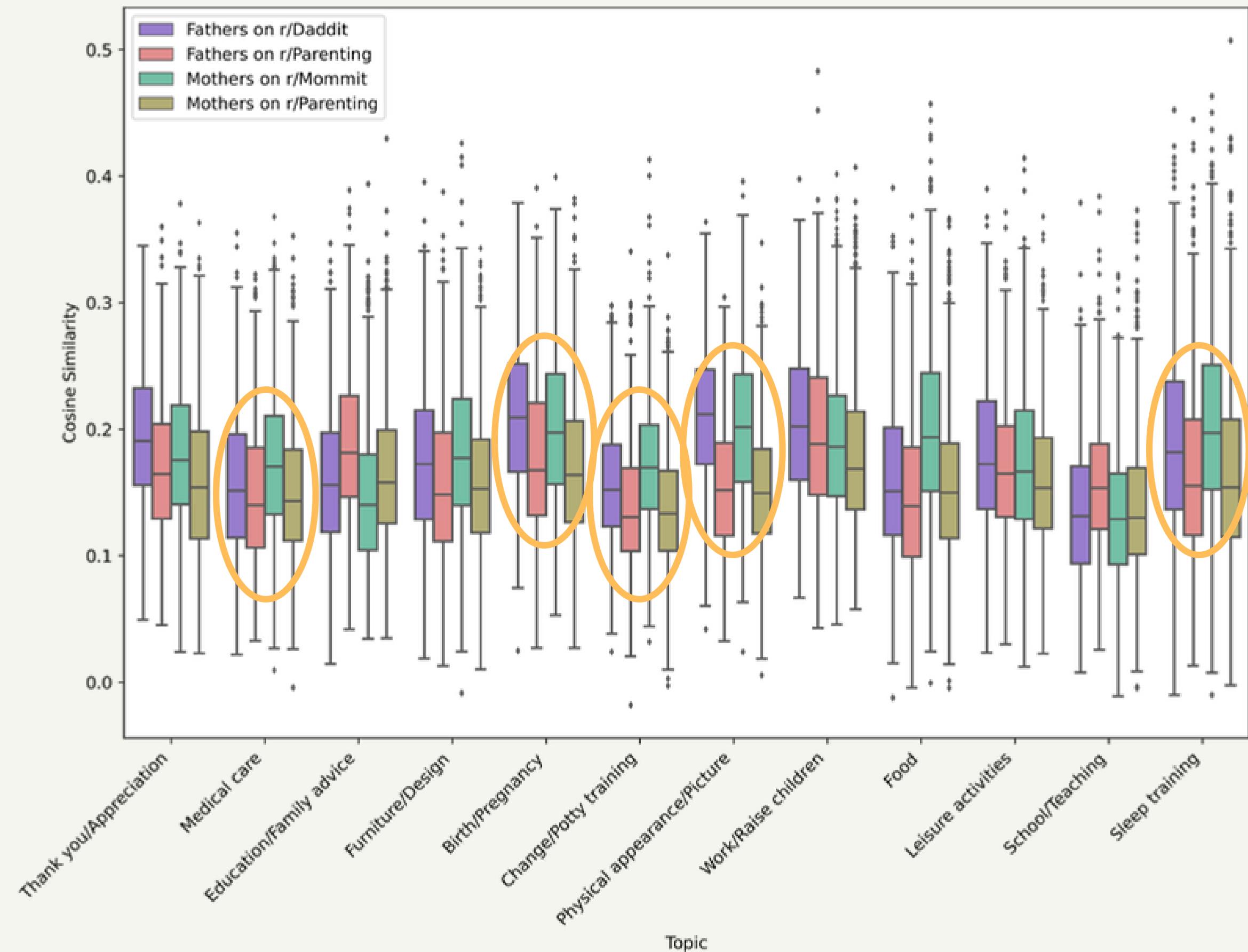
— 16





# Cosine similarity between groups and topics

**Subreddit norms on  
r/Parenting**



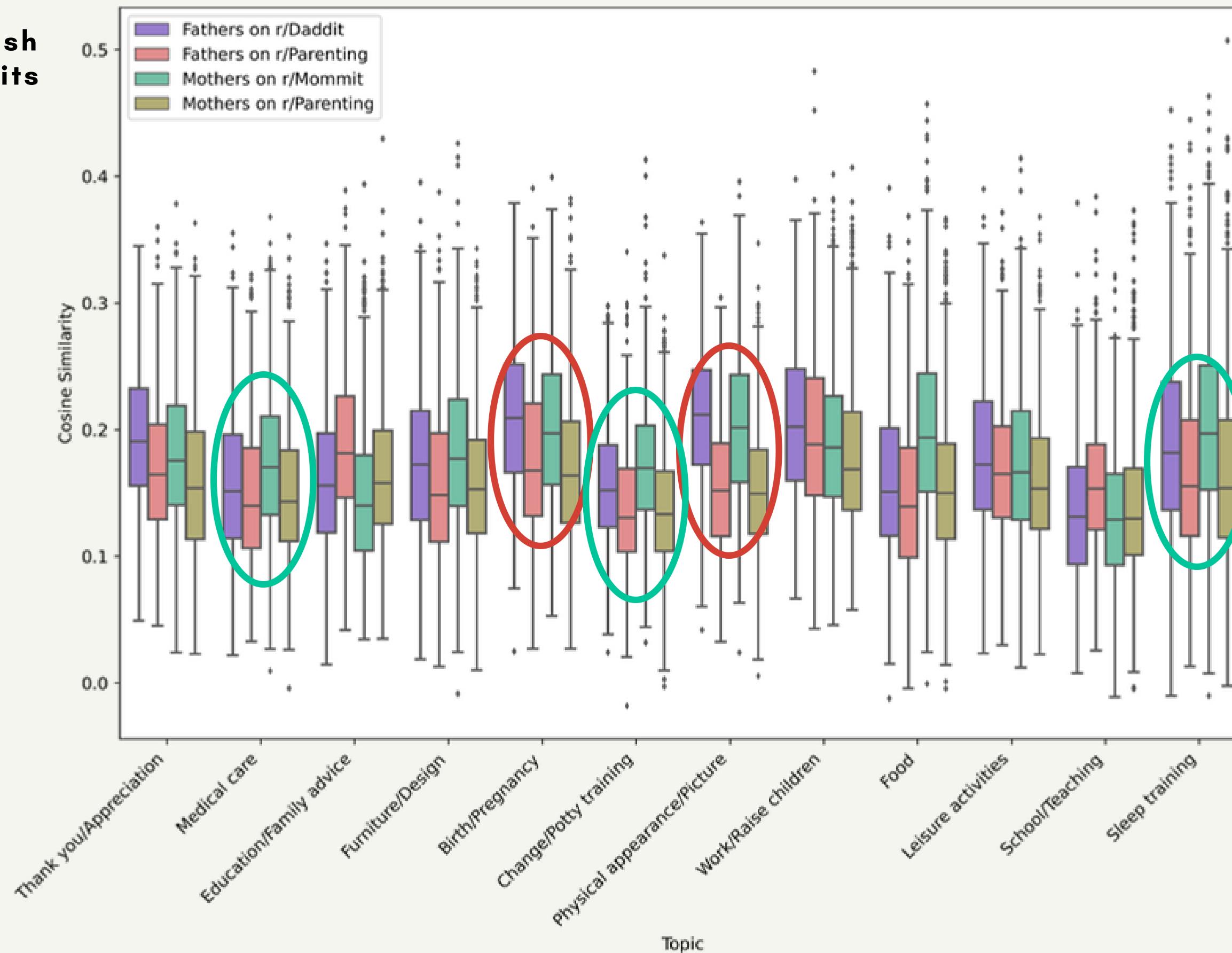
— 16





# Cosine similarity between groups and topics

These topics distinguish single-gender subreddits



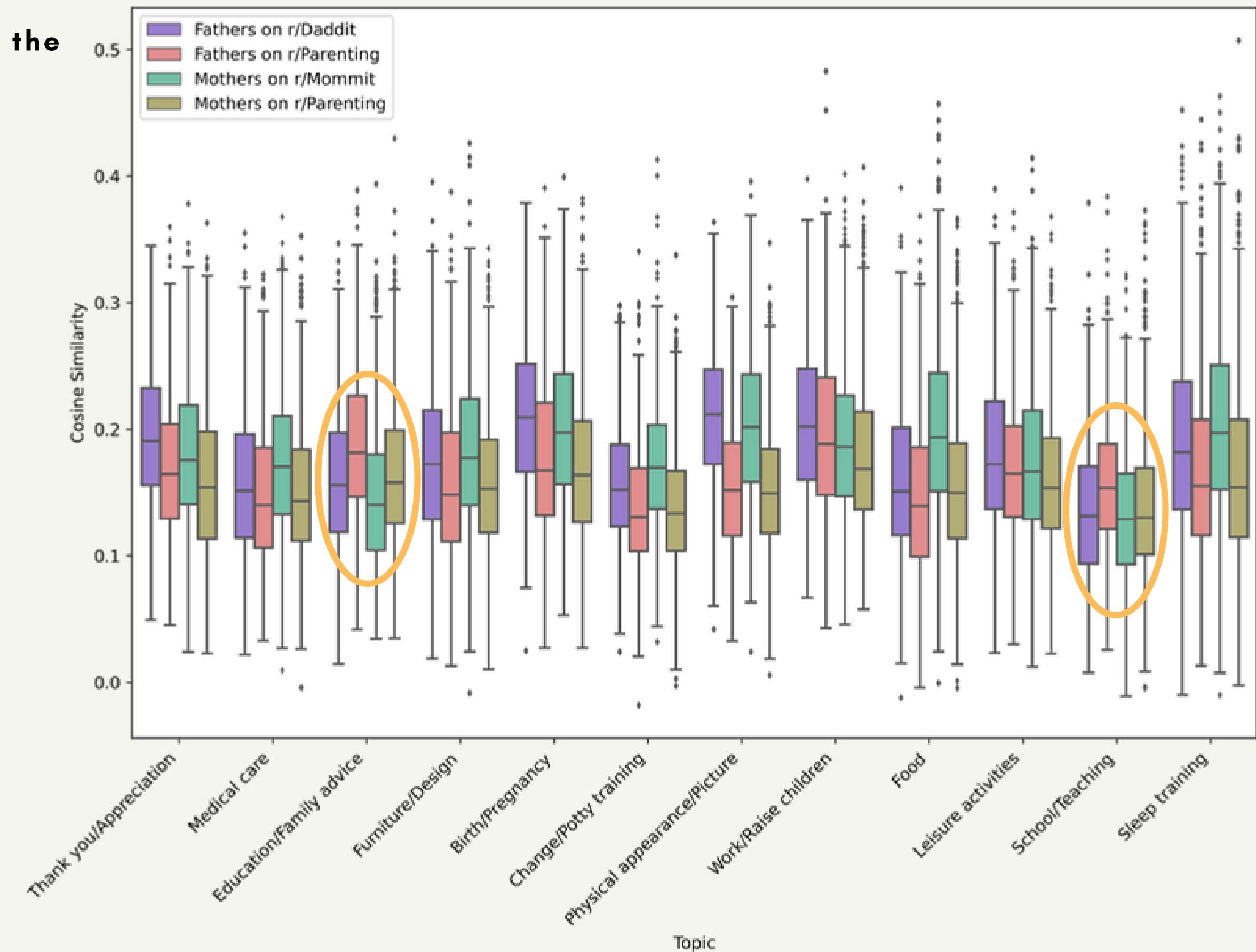
— 16





# Cosine similarity between groups and topics

Gender differences in the  
same subreddit  
(r/Parenting)



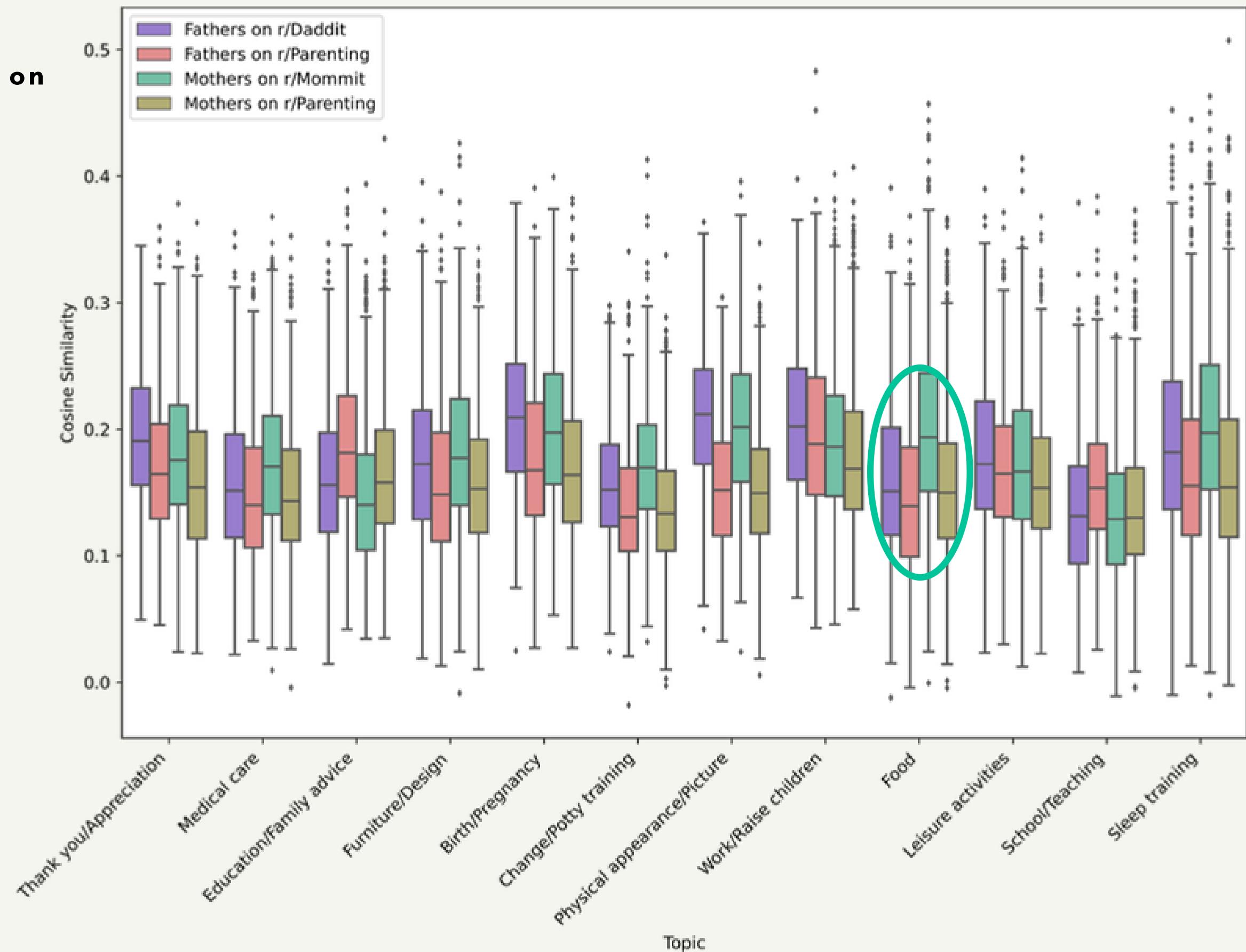
— 16





# Cosine similarity between groups and topics

The topic Food  
distinguishes mothers on  
r/Mommit



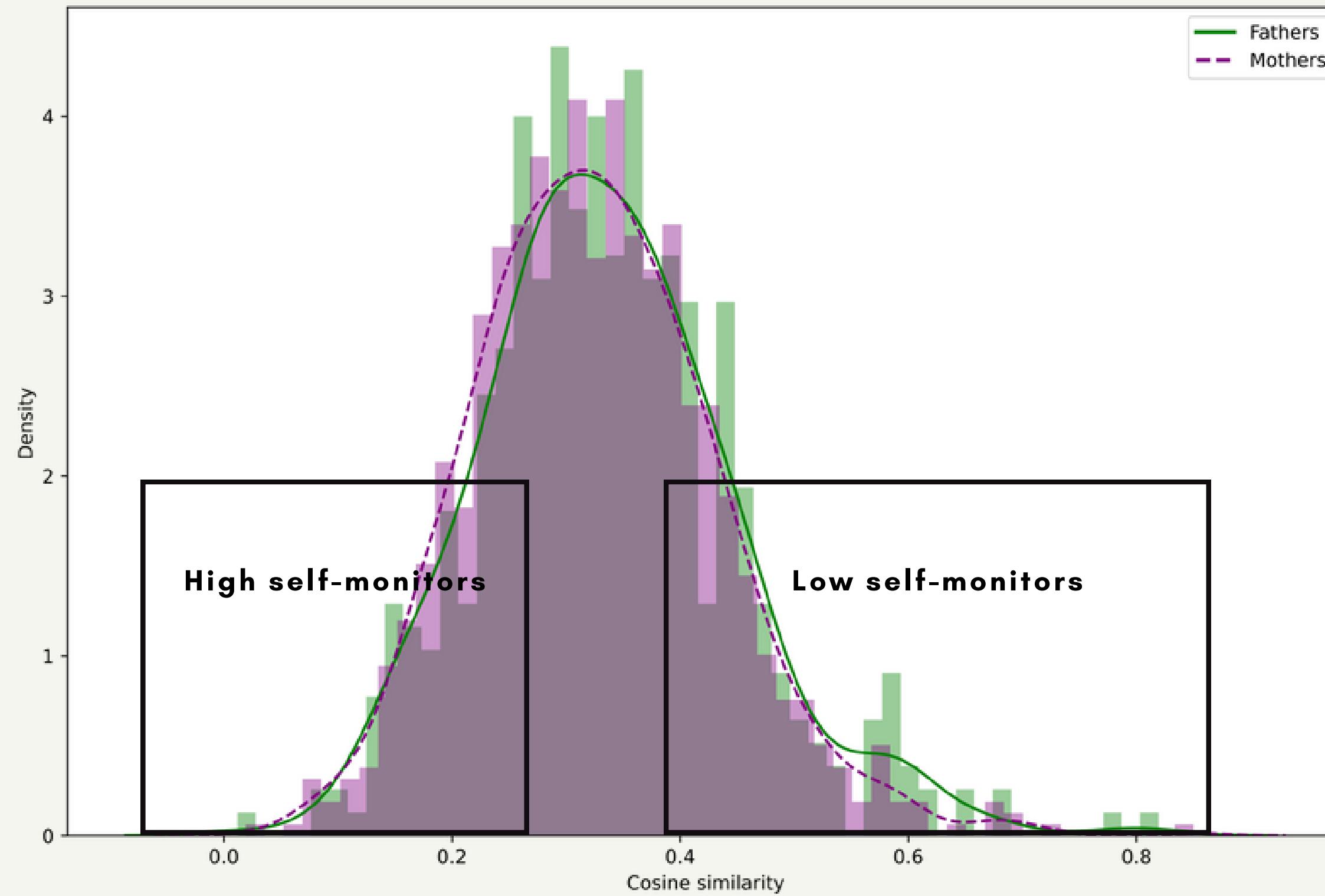
— 16





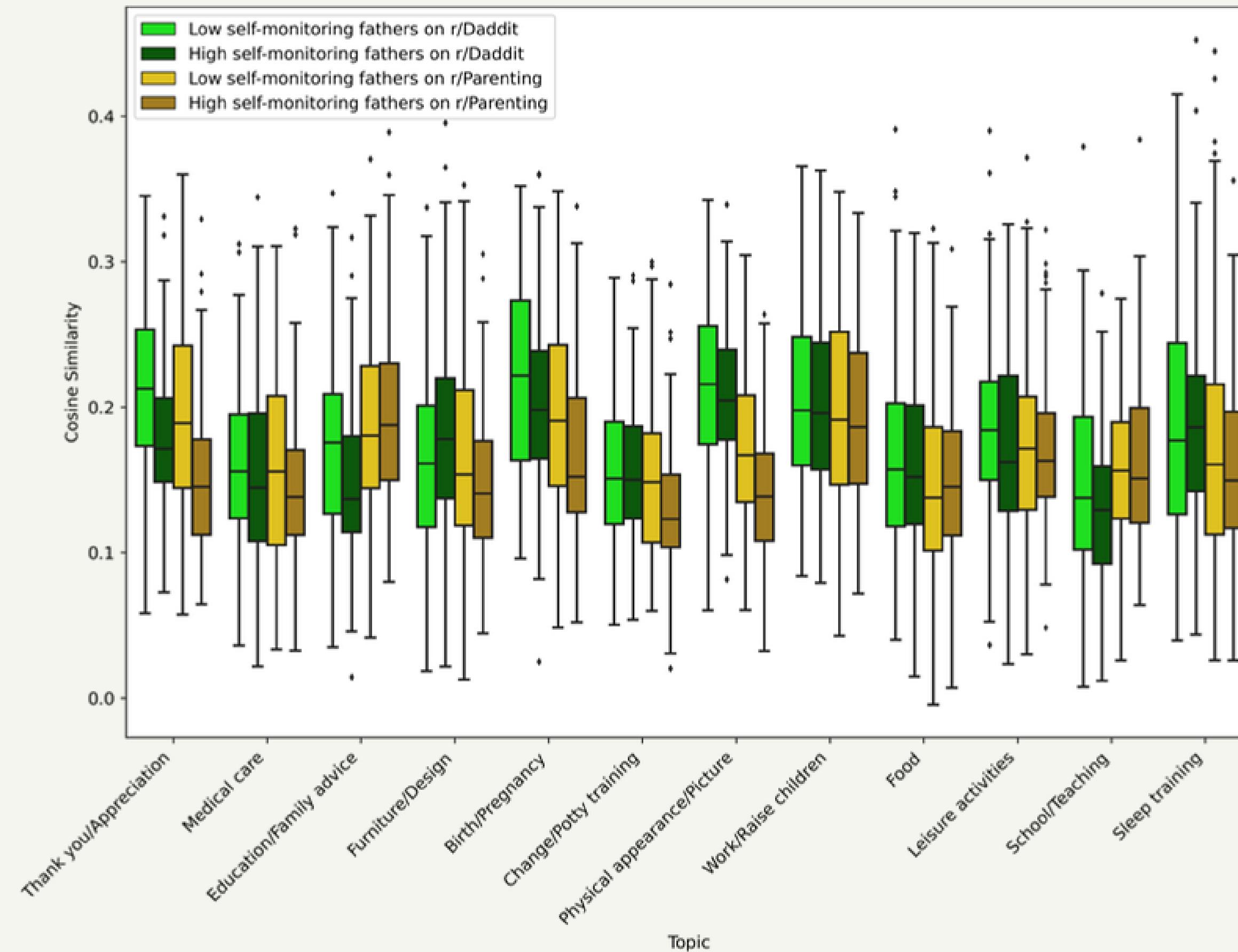
# Cosine similarity between two versions of the same user

— 17





# Self-monitoring - Cosine similarity between fathers and topics

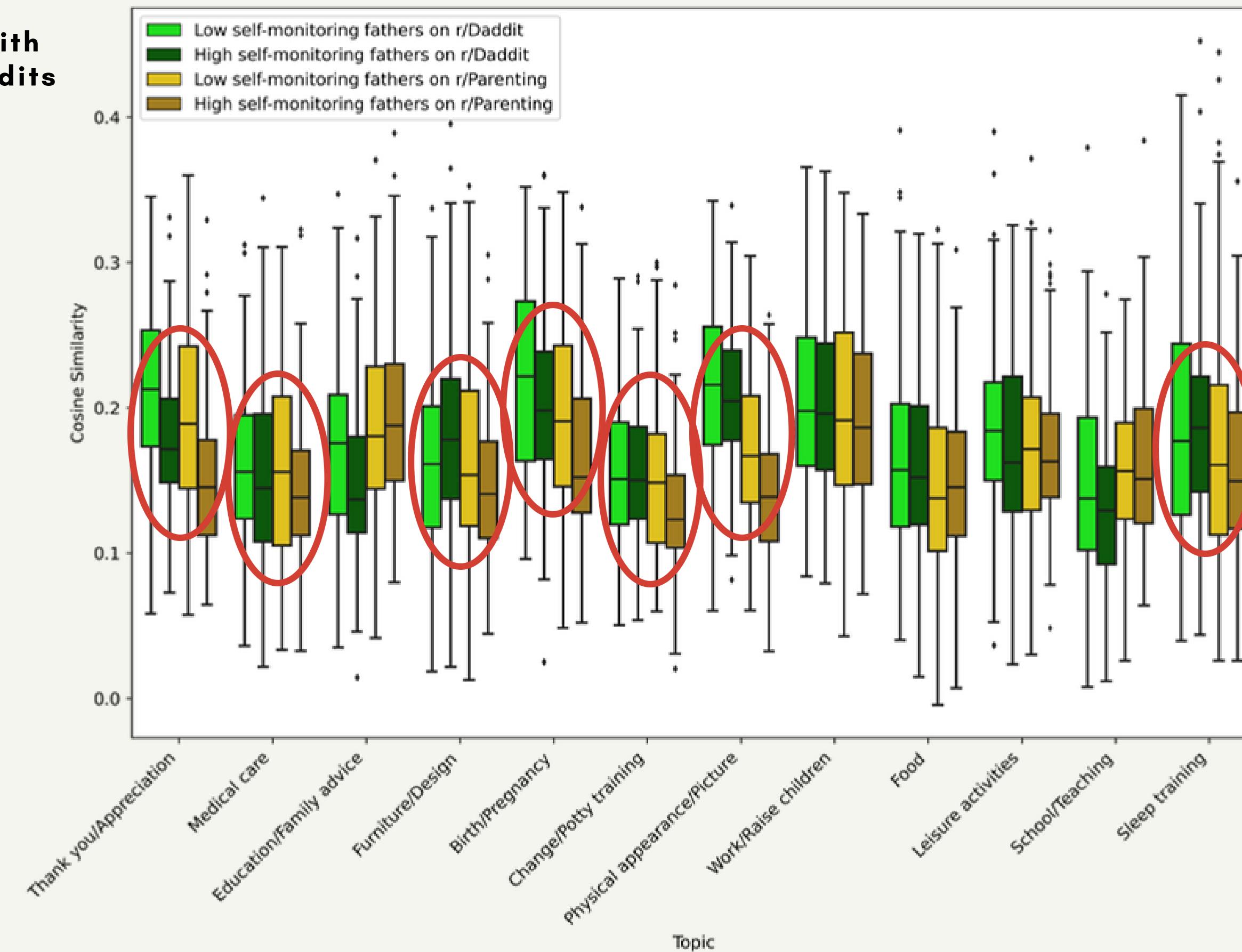


— 18



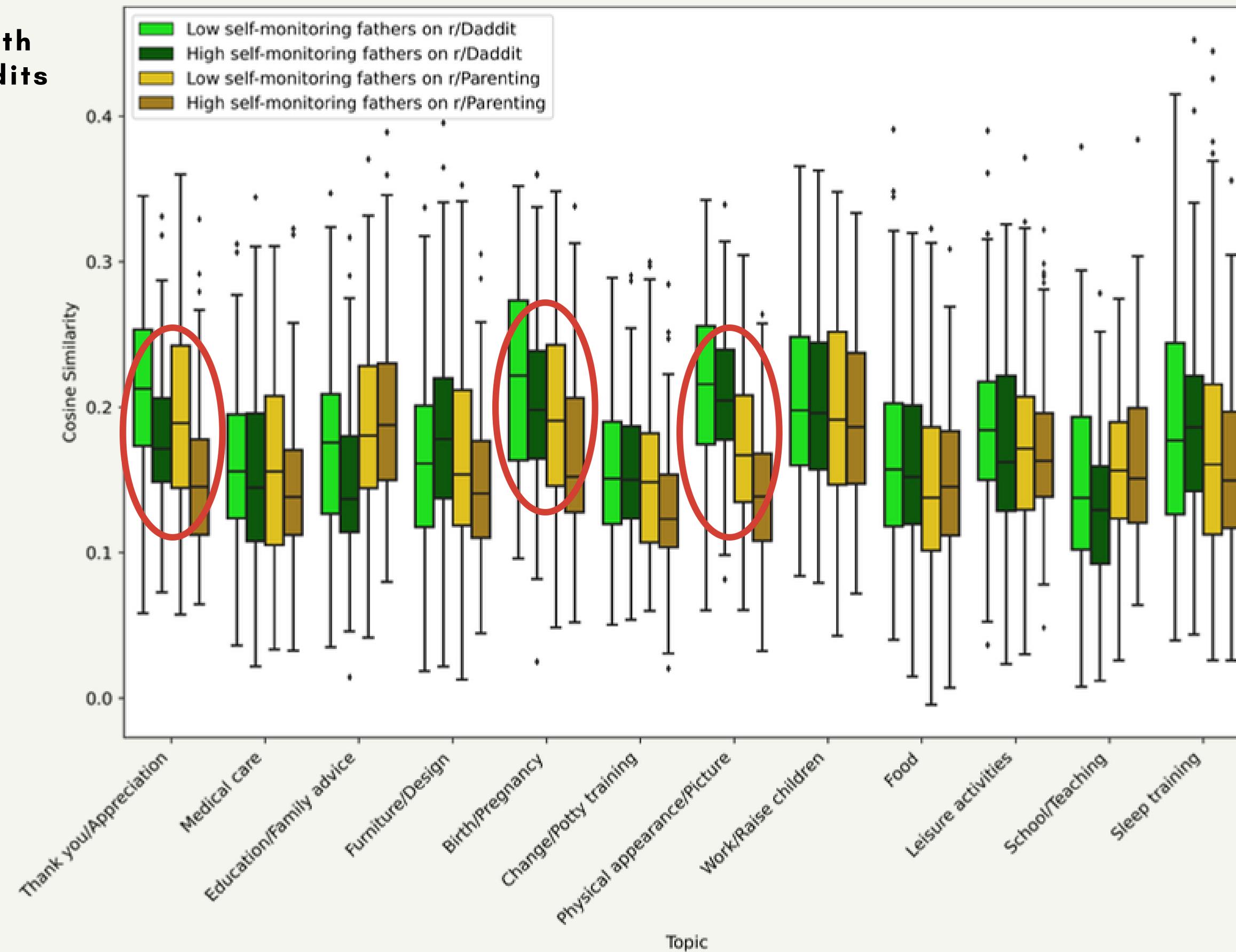
# Self-monitoring - Cosine similarity between fathers and topics

**Topics associated with single-gender subreddits**

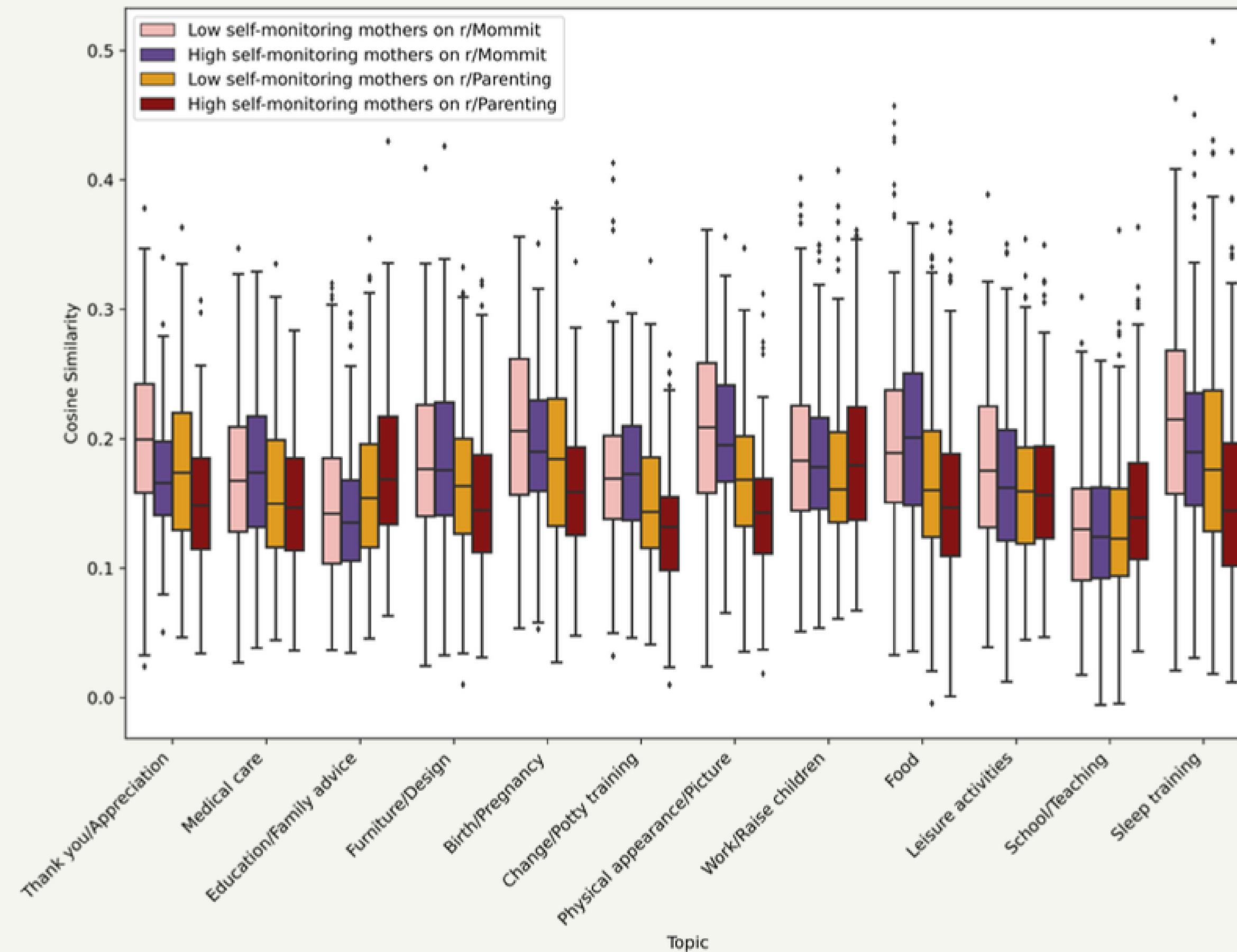


# Self-monitoring - Cosine similarity between fathers and topics

**Topics associated with single-gender subreddits**

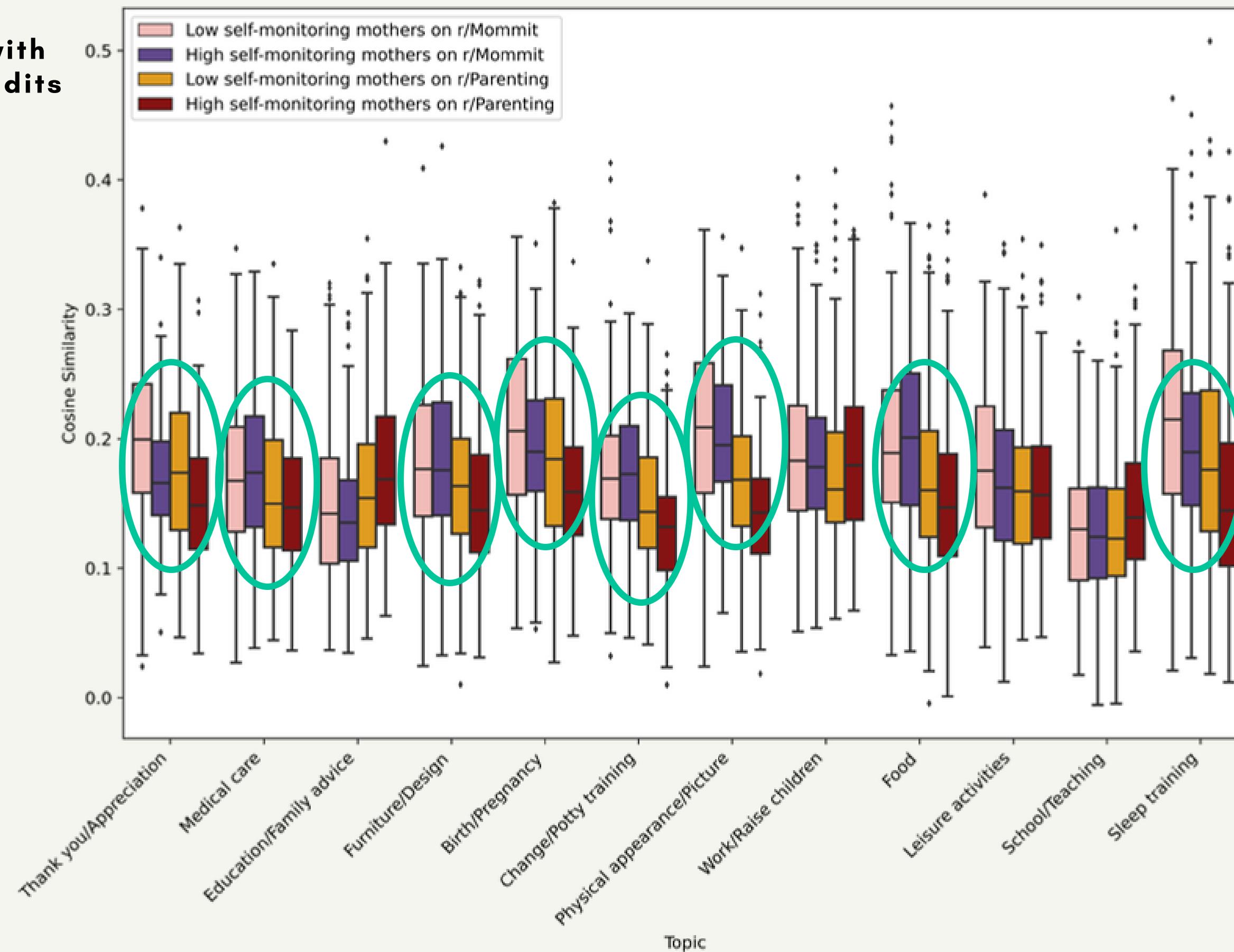


# Self-monitoring – Cosine similarity between mothers and topics



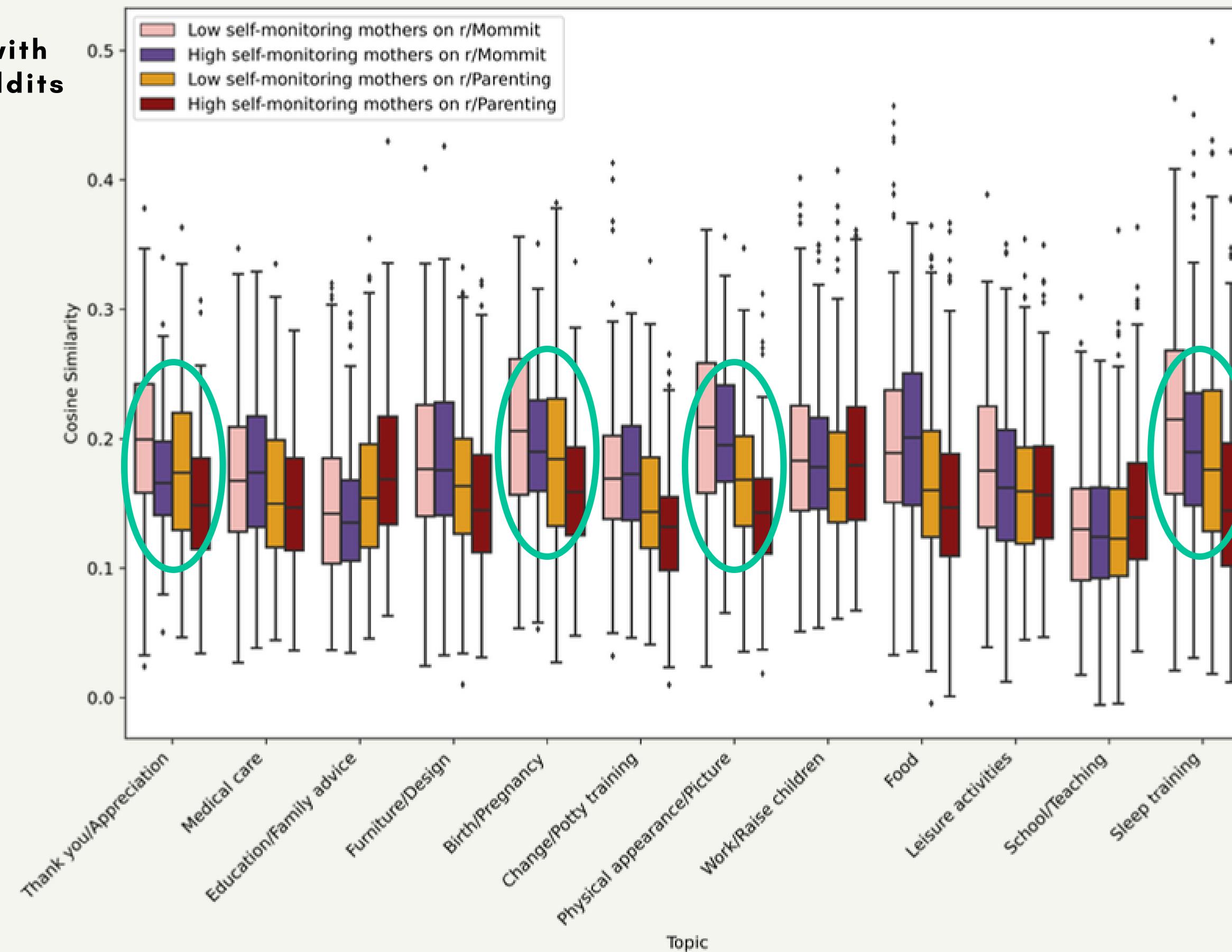
# Self-monitoring – Cosine similarity between mothers and topics

**Topics associated with single-gender subreddits**



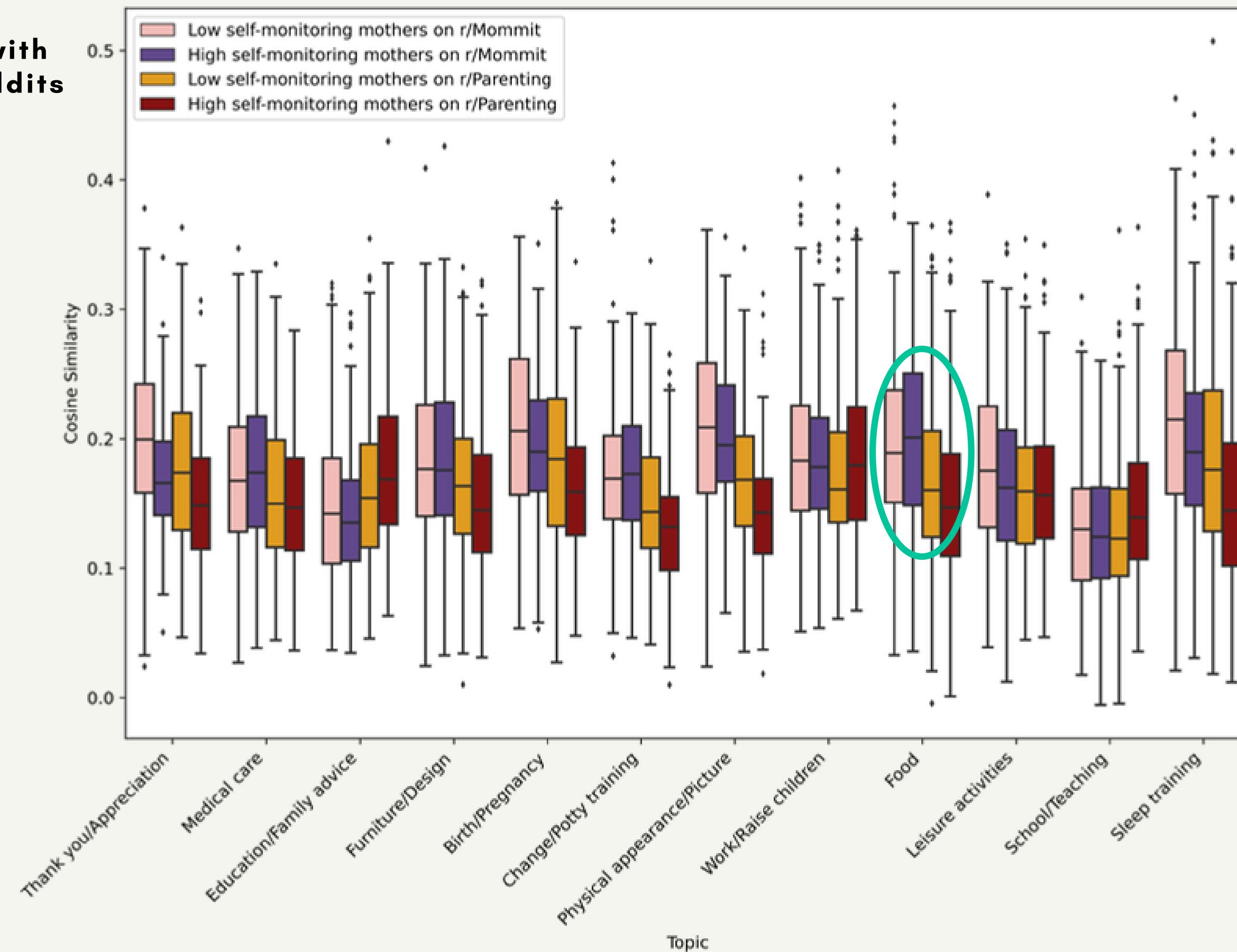
# Self-monitoring – Cosine similarity between mothers and topics

**Topics associated with single-gender subreddits**

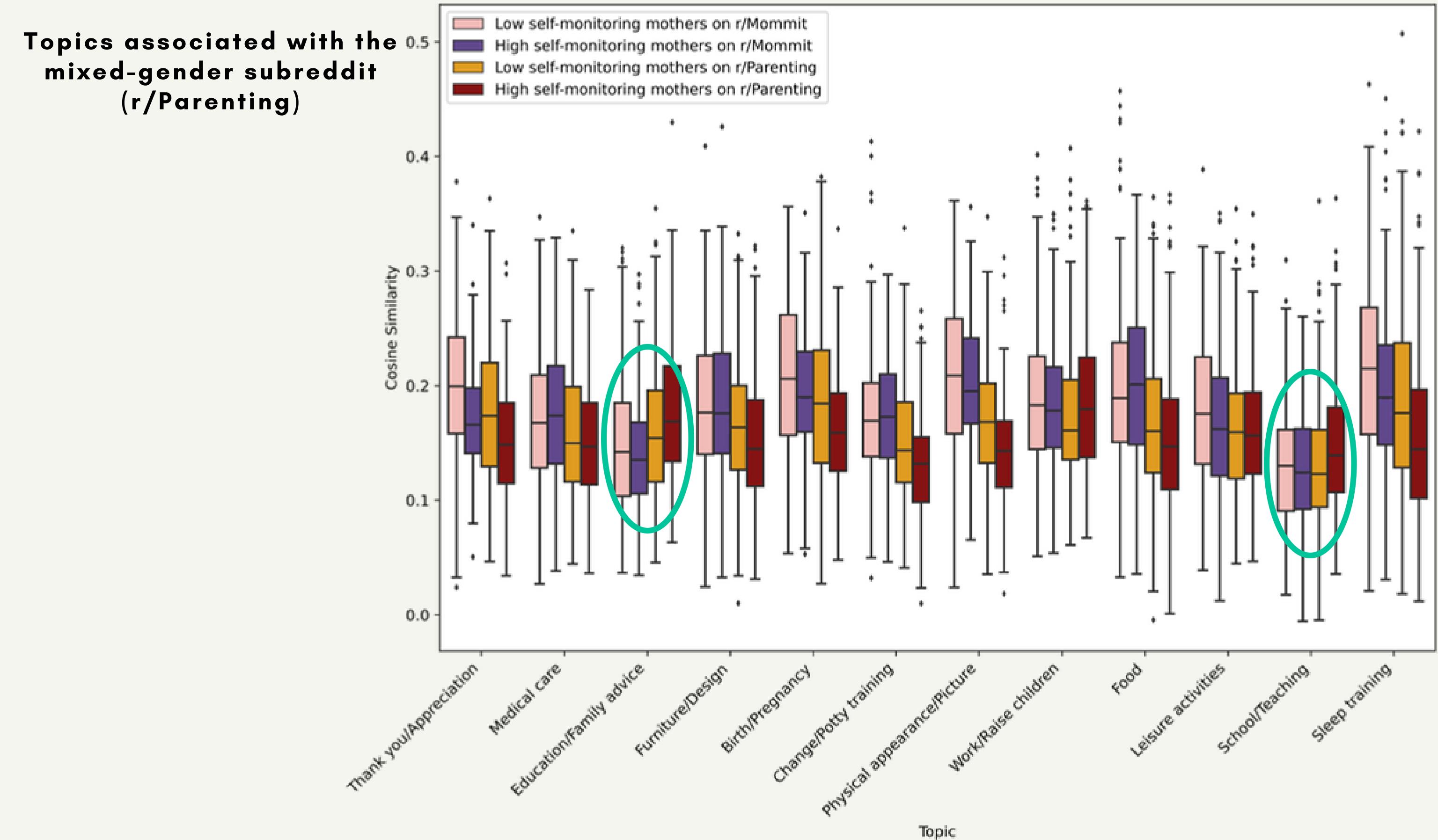


# Self-monitoring – Cosine similarity between mothers and topics

**Topics associated with single-gender subreddits**



# Self-monitoring – Cosine similarity between mothers and topics





Mothers and fathers similarly change their behaviours  
when interacting with different audiences



- Mothers and fathers similarly change their behaviours when interacting with different audiences
- Mothers talk about the practical aspects of parenting while fathers celebrate events (congratulations, pictures, etc.)



- Mothers and fathers similarly change their behaviours when interacting with different audiences
- Mothers talk about the practical aspects of parenting while fathers celebrate events (congratulations, pictures, etc.)
- There are individual differences within mothers and fathers as they differentially adapt their discourse to audiences





# **Social identity formation following a social event: The case of vaccination in France**

— 21

Melody Sepahpour-Fard, Padraig MacCarron, Michael Quayle, Dong Nguyen





Did people opposing vaccination-related policies in France create a social identity on Twitter?

— 22





# Did people opposing vaccination-related policies in France create a social identity on Twitter?

What defines a social identity?

- A person's sense of who they are based on their group membership(s).

— 22





# Did people opposing vaccination-related policies in France create a social identity on Twitter?

What defines a social identity?

- A person's sense of who they are based on their group membership(s).
- Once they identify as group members, people start to think, feel and behave as such, rather than as individuals.

— 22

(Social Identity Theory, Tajfel and Turner, 1979)





# Did people opposing vaccination-related policies in France create a social identity on Twitter?

## What defines a social identity?

- A person's sense of who they are based on their group membership(s).
- Once they identify as group members, people start to think, feel and behave as such, rather than as individuals.

— 22

(Social Identity Theory, Tajfel and Turner, 1979)

## Context of the study

- December 27, 2020: Vaccination starts in France





# Did people opposing vaccination-related policies in France create a social identity on Twitter?

## What defines a social identity?

- A person's sense of who they are based on their group membership(s).
- Once they identify as group members, people start to think, feel and behave as such, rather than as individuals.

— 22

(Social Identity Theory, Tajfel and Turner, 1979)

## Context of the study

- December 27, 2020: Vaccination starts in France
- Slowly, over the following months, pressure rises on non-vaccinated people to get vaccinated until mandatory vaccination





# Did people opposing vaccination-related policies in France create a social identity on Twitter?

## What defines a social identity?

- A person's sense of who they are based on their group membership(s).
- Once they identify as group members, people start to think, feel and behave as such, rather than as individuals.

— 22

(Social Identity Theory, Tajfel and Turner, 1979)

## Context of the study

- December 27, 2020: Vaccination starts in France
- Slowly, over the following months, pressure rises on non-vaccinated people to get vaccinated until mandatory vaccination
- Opposition arises with both non-vaccinated and vaccinated people gathered by their criticism of government policies





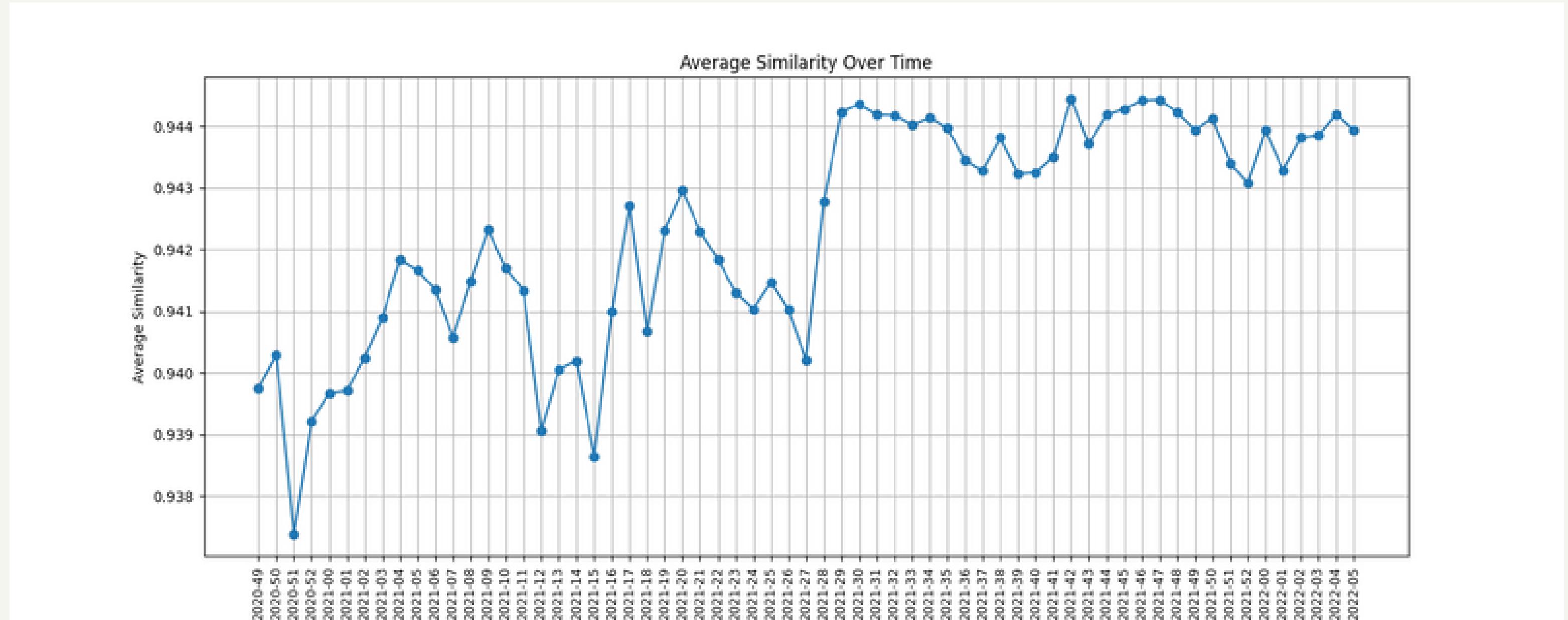
# Dataset

- Tweets containing a set of hashtags used by vaccine-hesitant users (e.g. #DictatureSanitaire or #antivax) posted between December 2020 and January 2022
- Classifier trained (CamemBERT) to identify provax tweets (~15% of the data) and remove them
- Final dataset
  - 342280 tweets
  - 26924 users





# Results: Similarity between tweets (CamemBERT)



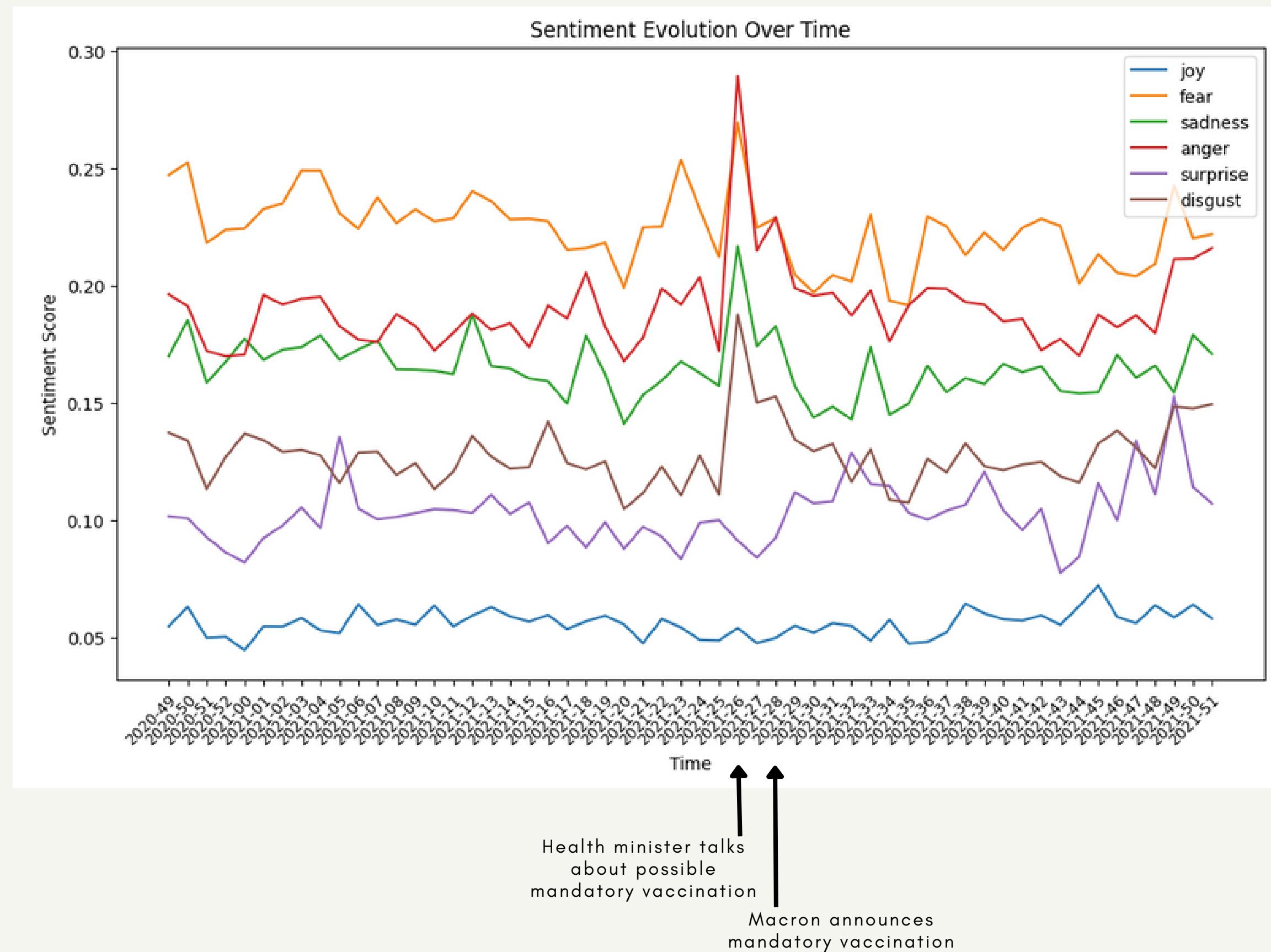
Health minister talks  
about possible  
mandatory vaccination

Macron announces  
mandatory vaccination



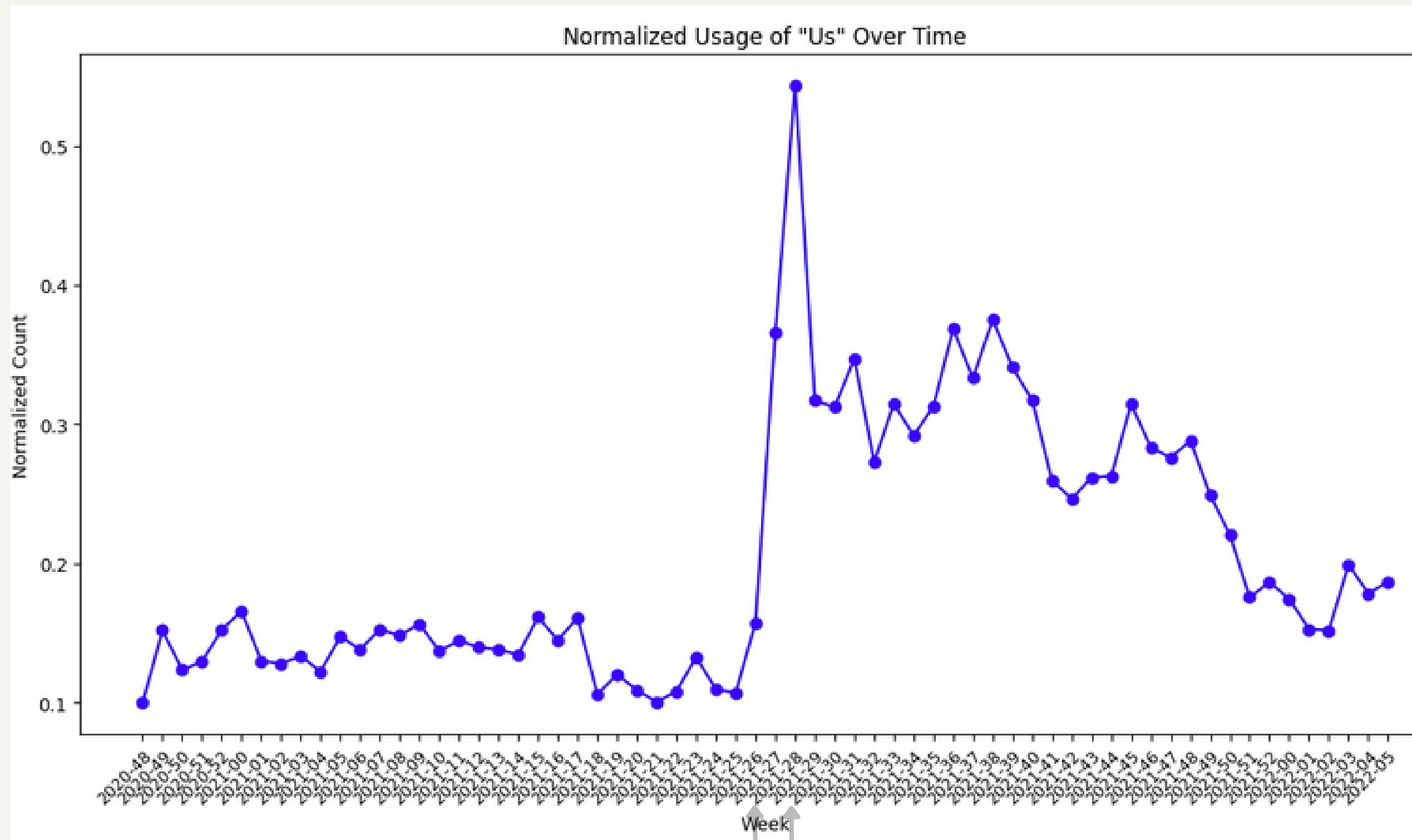


# Results: Emotions expressed (NRC Emotion Lexicon)





# Results: Use of the word “us” (“nous” in French)





## Rejection-Identification theory?

When members of groups perceive to be rejected on the basis of their group membership, they identify more strongly with that group (Branscombe, 1999)





# Rejection-Identification theory?

When members of groups perceive to be rejected on the basis of their group membership, they identify more strongly with that group (Branscombe, 1999)

Results showed:

— 27

- A pic of negative emotions not long before the pic in similarity and the use of the pronoun “us”.
- There seems to be a social identity formation linked to the high intensity of negative emotions felt.





## Future analyses:

- Social identity means think, feel, and behave as a group member
  - Look at users rather than tweets: similarity between users regarding opinions and emotions expressed





## Future analyses:

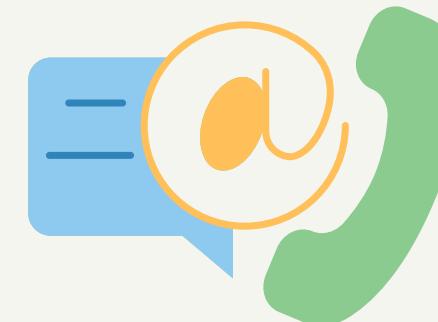
- Social identity means think, feel, and behave as a group member
  - Look at users rather than tweets: similarity between users regarding opinions and emotions expressed

— 28

Any feedback / ideas to better analyse the formation of social identity?



# Thank you!



**Melody Sepahpour-Fard**



[melody.sepahpourfard@ul.ie](mailto:melody.sepahpourfard@ul.ie)



[@melodysep](https://twitter.com/melodysep)