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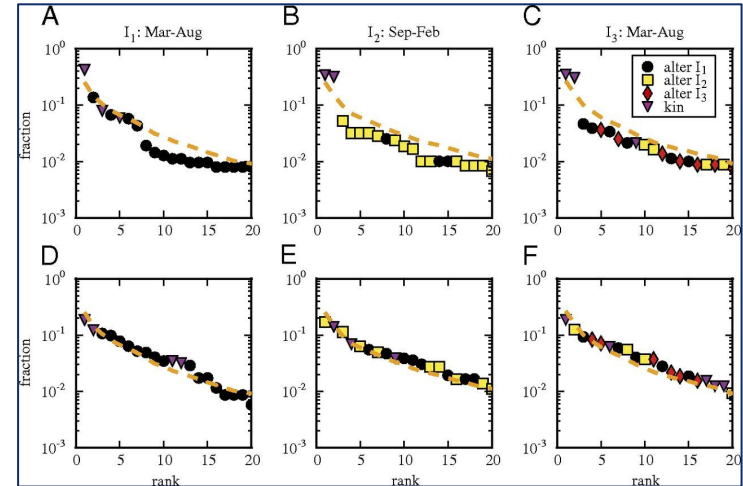
# ATTITUDE TO WORK AS A FACTOR OF STABILITY OF A WOMAN'S SOCIAL SIGNATURE DURING THE TRANSITION TO MOTHERHOOD

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**Social signature** is a pattern of distribution of human (ego) communication with contacts (alters) over time; unique and stable for each ego despite the turnover of alters and life changes.

Most of the results were derived from samples of students.

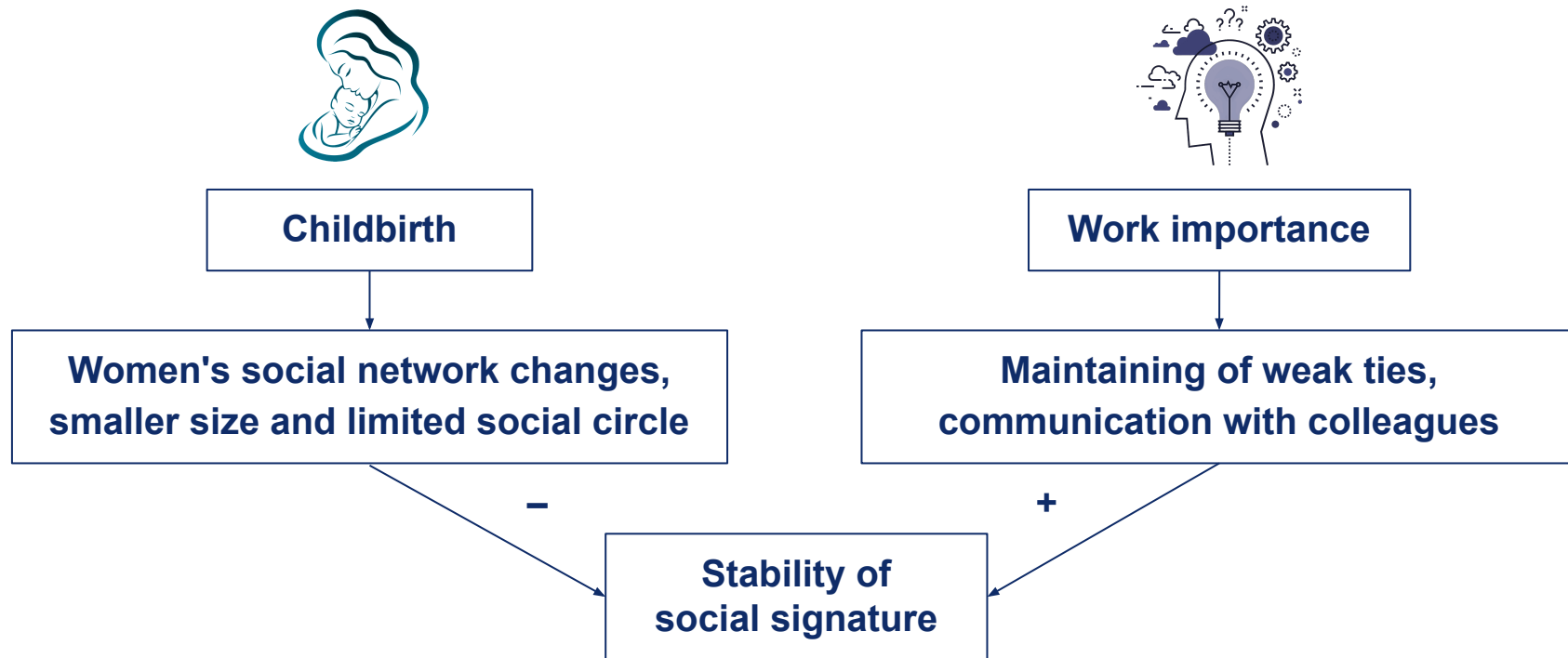
There is a lack of research on other samples and life situations, such as **becoming a parent and obtaining new social role**.



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Bost K. K. et al. Structural and supportive changes in couples' family and friendship networks across the transition to parenthood // Journal of Marriage and Family. – 2002. – T. 64. – №.

2. – C. 517-531.



### Aim

To study the relationship between the attitude to work and the stability of a woman's social signature during the birth of her first child.

### Hypotheses

- 1) The higher a woman's work engagement,
  - 2) The higher a woman's work centrality,
  - 3) The clearer the image of a woman's professional future,
- the more stable her social signature.



## A sample of longitudinal study

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**Wave 1 (2023): data on the attitude to work and communication of 55 women pregnant** with their first child, aged 21 to 36 years.

**Wave 2 (2024):** communication data for **50 women**, aged 22 to 37, who gave birth to their first child within the age range of 5-12 months.

Three women refused to participate (10% of the first stage), 2 respondents were excluded from the analysis.

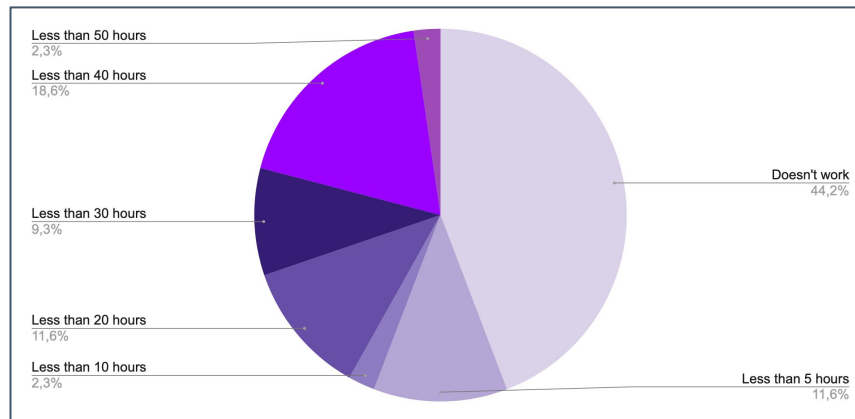
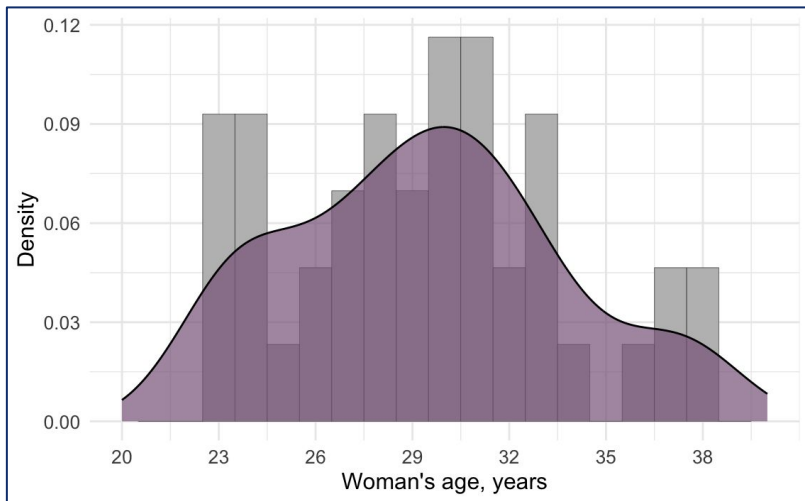
**Wave 3 (2025): 43 women** with a child aged 16 to 25 months. 1 respondent was excluded from the analysis.

The recruitment of participants was carried out through posting information about the study on specialized communities for pregnant women on social media, distributing information at women's healthcare clinics and pregnancy support centers in St. Petersburg, as well as using the "snowball" method through the study participants.



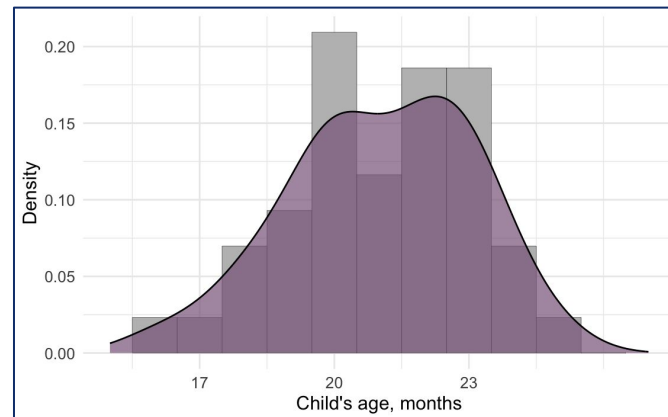
## Sample characteristics in the third wave

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86% of women are married and have completed higher education.

72% of them are currently on parental leave.



### 1 wave – questionnaires about the attitude of women to work

1) a shortened version of the "**Work centrality**" scale ( $\alpha = 0,706$ ) adapted by Emeshkina, Mararitsa (2023)

It is an indicator of the individual value of work, defined as a belief about the degree of importance that work plays in life.

2) a shortened version of the "Utrecht **Work Engagement** Scale" ( $\alpha = 0,906$ ) adapted by D. Kutuzova (2006)

It reflects a positive, fulfilling work-related state of mind that is characterized by vigor, dedication and absorption.

3) **The Professional Future Elaboration** index (Strauss, Griffin, Parker (2012), "**Future Work Self**",  $\alpha = 0,891$ ; Hirschi et al. (2018), "**Career clarity**",  $\alpha = 0,92$ ; Rottinghaus et al. (2012), "**Career optimism**",  $\alpha = 0,886$ )

It is an individual's vision of themselves in the future, including significant hopes and aspirations related to their work.

### 1-3 waves – data on communication and socio-demographic questionnaire

The assessment of interpersonal communication was carried out using  
a **semi-structured interview** in the online call format.

Gathered information is a **reconstruction of the woman's communication experience over the past week in all communication channels (phone, messenger, face-to-face meetings)** based on a mobile device.



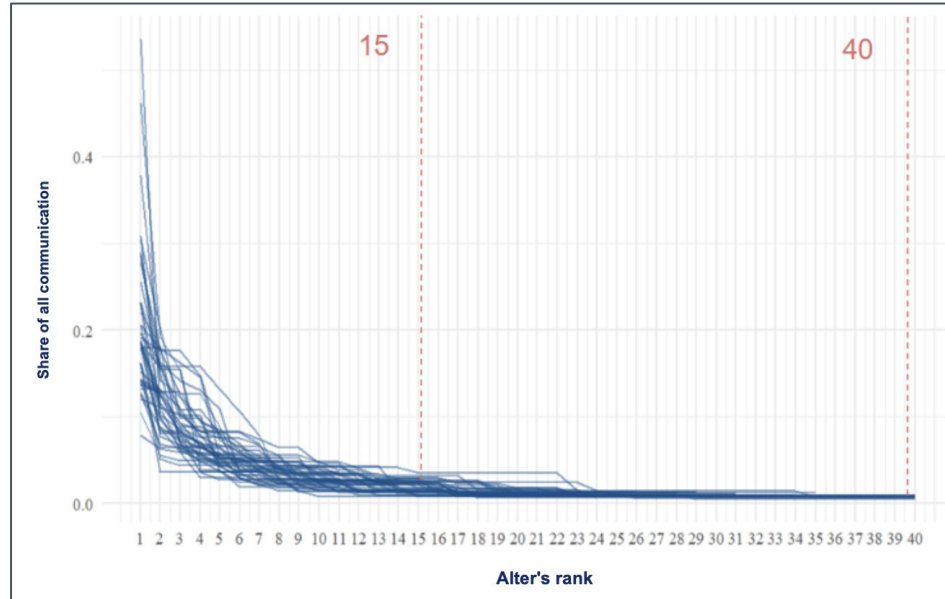
## Operationalization of social signature

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**Ranking of alters** by the number of days of communication per week  
and **calculating the share of communication with each alter** →

social signature distribution function

(limit the distribution by two thresholds, leave the Top-15 or Top-40 alters)





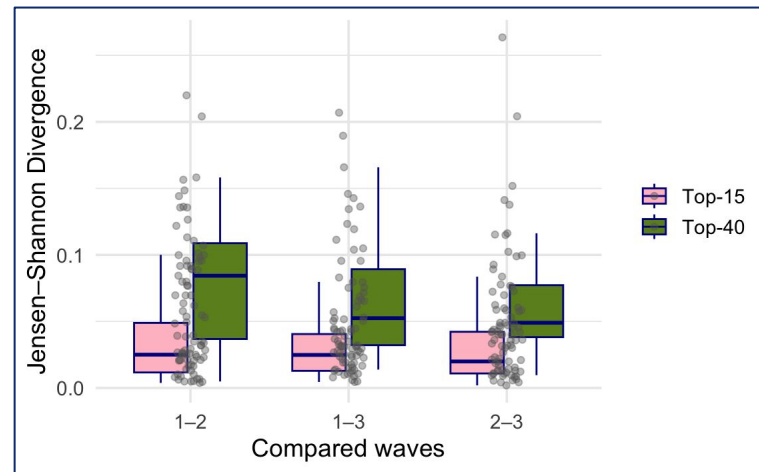
### Stability of social signature

The similarity of the distribution of human communication over time  
(JSD, Jensen-Shannon divergence,  
a method for measuring the similarity of two probability distributions)

We compare 3 periods:  
pregnancy, six months and 1.5 years (+/- 3 months)  
after the birth of the child

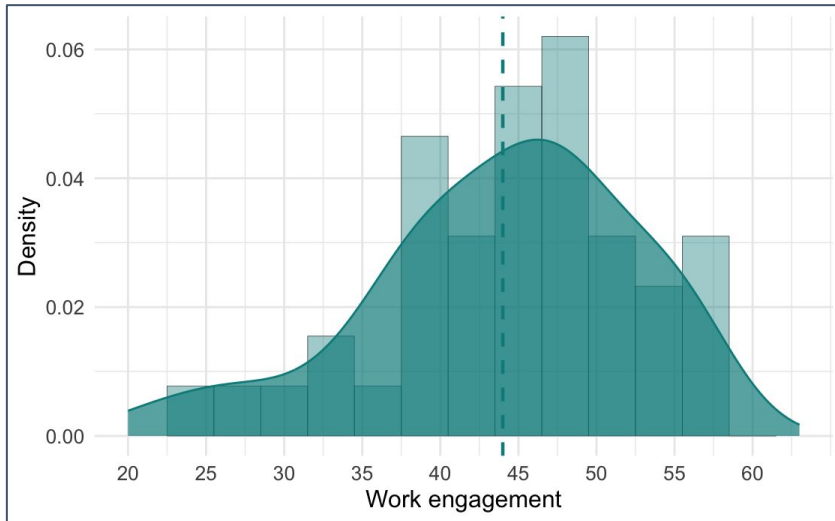
**The closer the JSD is to 0, the more similar the distributions are  
(the more stable the signature is)**

The greatest differences are observed between the first  
and second waves for both thresholds, in general,  
greater variability is typical for signature with a longer “tail”  
(Top-40 alters)

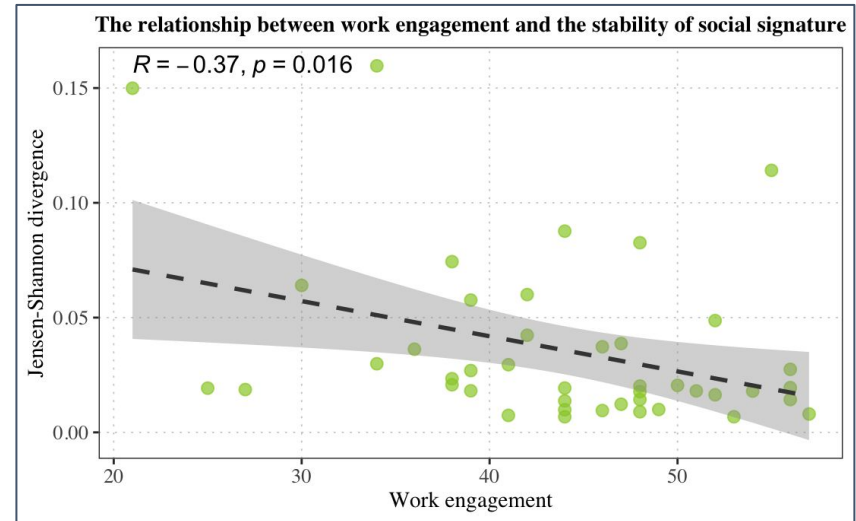


A negative correlation was found between the average value of the Jensen-Shannon divergence for 15 alterers and work engagement ( $r=-0.37$ ,  $p<0.05$ ).

Since more stable signature is characterized by low values of divergence, it can be concluded that **the higher the work engagement, the higher the stability of signature over time.**



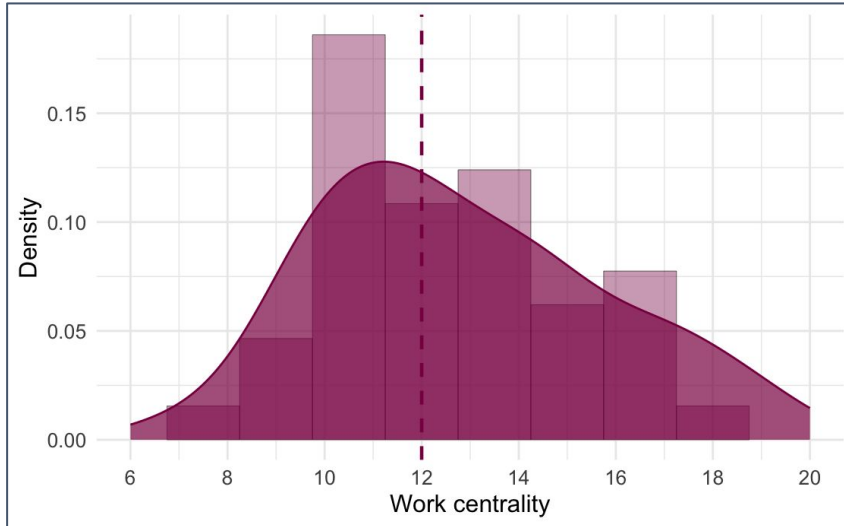
Distribution of points on the scale (median=44)



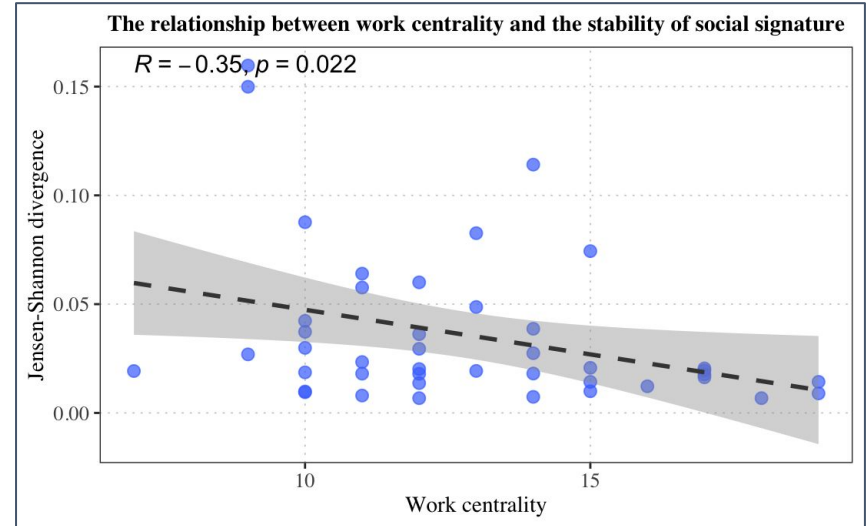
Spearman correlation ( $r=-0.37$ )

Similar result was derived for work centrality:

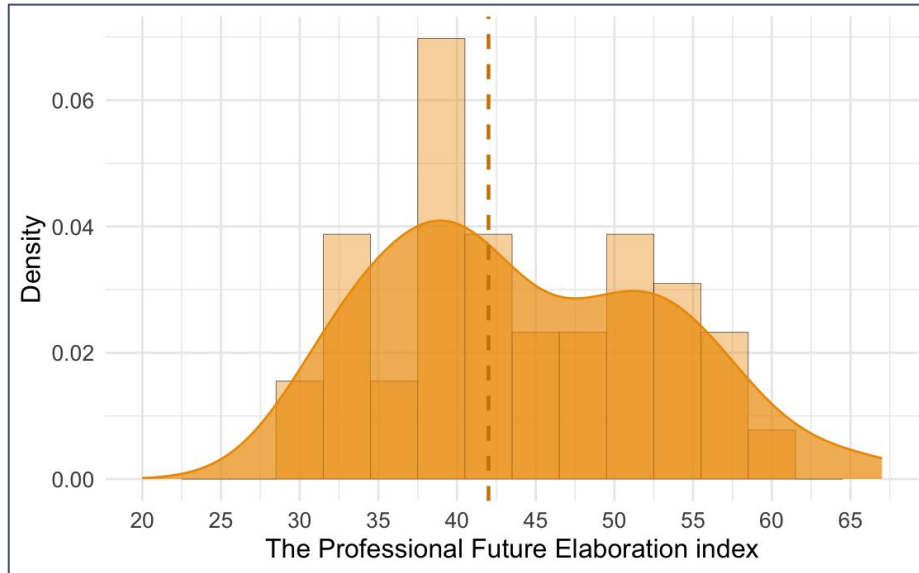
**the higher the centrality, the more stable the social signature created for 15 alterers,**  
and the distance between time periods is smaller ( $r=-0.35$ ,  $p<0.05$ ).



Distribution of points on the scale (median=12)



Spearman correlation ( $r=-0.35$ )



Distribution of points on the scale (median=42)

There is **no significant correlation** between **The Professional Future Elaboration** index and the stability of social signature.

Additionally, there is no relationship between aspects of work attitudes and **signature's stability among 40 alters**.

There is a positive correlation between the work centrality and work engagement ( $r=0.6$ ,  $p<0.05$ ), the “**Work Importance index**” was calculated as the sum of the standardized scores on the scales.

Jensen-Shannon divergence between Wave 1 and Wave 2					
term	estimate	conf.low	conf.high	std.error	p.value
(Intercept)	0.043	0.020	0.066	0.011	<b>0.000</b>
Work Importance index	-0.008	-0.016	-0.001	0.004	<b>0.025</b>
Need to work (2 wave)	0.008	-0.003	0.020	0.006	0.156
Working hours (2 wave)	-0.007	-0.015	0.001	0.004	0.102
N = 43; R <sup>2</sup> = 0.177; Adj. R <sup>2</sup> = 0.114					

Jensen-Shannon divergence between Wave 1 and Wave 3					
term	estimate	conf.low	conf.high	std.error	p.value
(Intercept)	0.034	0.018	0.051	0.008	<b>0.000</b>
Work Importance index	-0.006	-0.011	0.000	0.003	<b>0.045</b>
Need to work (3 wave)	0.007	-0.002	0.016	0.004	0.110
Working hours (3 wave)	-0.004	-0.008	0.001	0.002	0.096
N = 43; R <sup>2</sup> = 0.148; Adj. R <sup>2</sup> = 0.083					

Taking into account **the control variables** in the form of the **need to work and the number of working hours per week**, an increase in the “work importance index” is associated with a decrease in JSD by 0.008 and 0.006 (i.e., signature is more stable).

- A small sample size may explain why it was not possible to detect weaker effects, and the snowball sampling method also indicates limited representation.
- Due to the lack of tools to fully assess all aspects of the image of the future at work, we limited ourselves to a set of available questionnaires in our study.
- Given that the sample consisted only of pregnant women, it was impossible to unequivocally attribute changes in communication to the birth of a child.
- Analysis of multi-channel communication data was limited to one week of data.

**The next stage of our study will be to explore the relationship between work attitudes and women's communication dynamics based on behavioral data – logs of communication in messengers.**

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Telegram

