



International Microbiota Observatory



Methods

Methods

This international survey was conducted online in **7 countries** from March 21st - April 7th 2023. **6,500 people** were interviewed in the 7 countries, among representative samples of the population aged 18 y.o. and more in each country :

-  United States of America (n=1000)
-  Brazil (n=1000)
-  Mexico (n=1000)
-  France (n=1000)
-  Portugal (n=500)
-  Spain (n=1000)
-  China (n=1000)

An automated selection from the Ipsos Panel ensured representative samples in each country (gender, age, employment status and country region) based on quota method.

Comments



ALL COUNTRIES

(n=6500)

= Average response for all 7 countries.



= Focus on detailed results according to different criteria such as gender or age.

 Significant differences vs total - superior

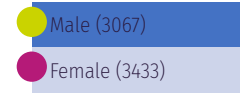
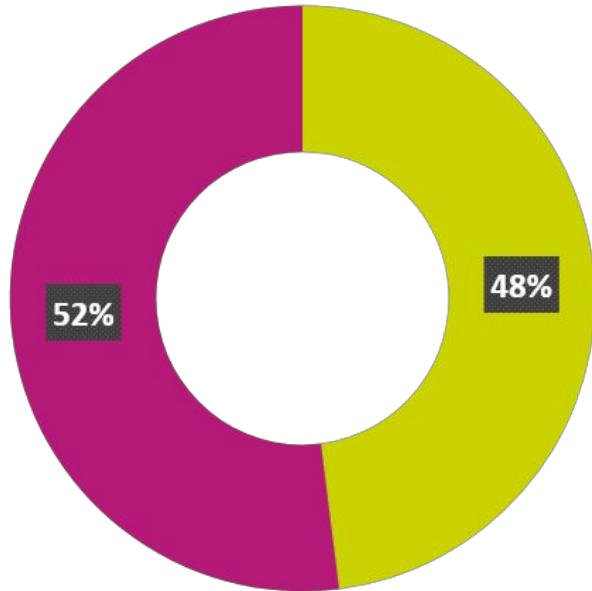
 Significant differences vs total - inferior

= These indications show results that are statistically different (above or below) the average for all respondents.



All results are presented in %.

Gender





Vaginal microbiota: a little-known organ

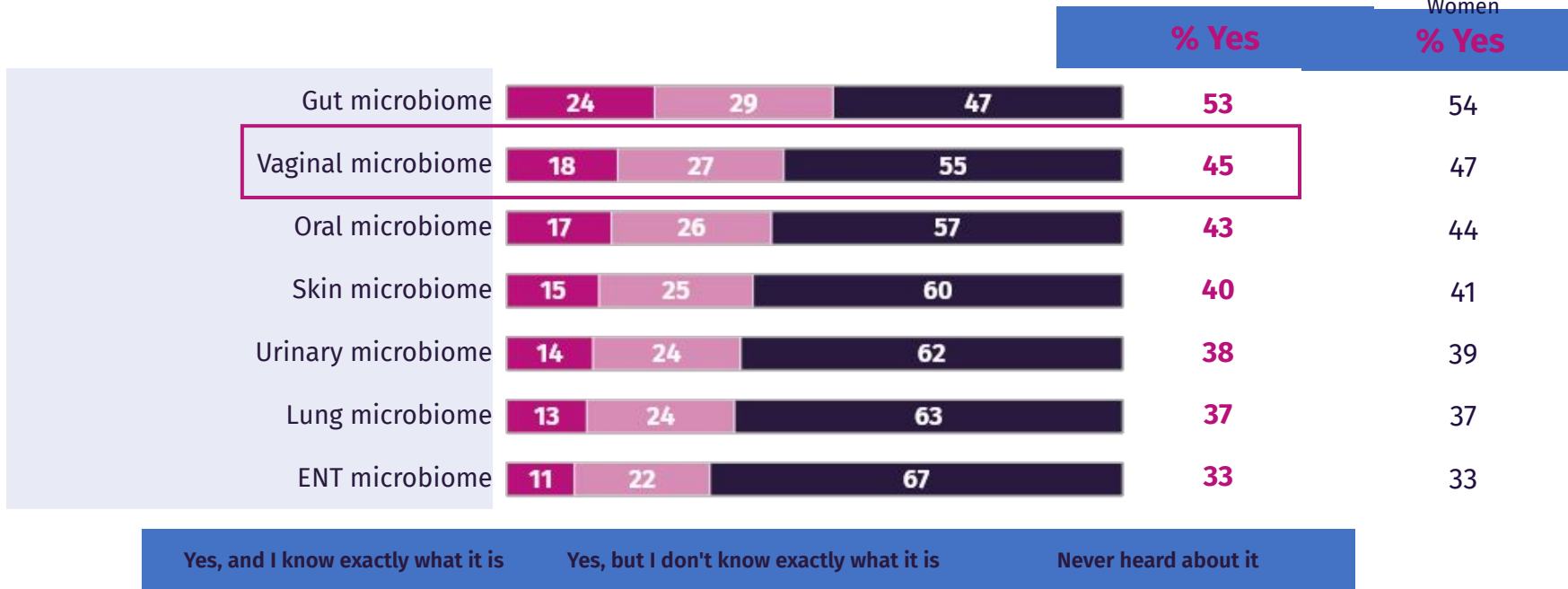
Only 1 in 5 people (18%) say they know the exact meaning of the term “vaginal microbiota”



Question 3. And more specifically, have you ever heard of the following terms?
Base: All respondents



Women



Yes, and I know exactly what it is

Yes, but I don't know exactly what it is

Never heard about it



In details, Chinese seem to know better vaginal microbiome.



Question 3. And more specifically, have you ever heard of the following terms?

Base: All respondents

% Yes	base	Total	USA	LATIN AMERICA	Brazil	Mexico	EUROPE	France	Spain	Portugal	CHINA
		n=6500	n=1000	n=2000	n=1000	n=1000	n=2500	n=1000	n=1000	n=500	n=1000
		53	42	54	51	58	55	63	57	45	54
		45	35	47	46	48	45	48	44	43	49
		43	36	45	42	47	41	43	39	39	52
		40	38	43	41	45	37	37	36	37	48
		38	32	42	38	45	37	37	37	37	43
		37	30	42	42	42	33	32	31	36	45
		33	26	34	37	32	31	30	30	32	44

● Significant differences vs total - superior

● Significant differences vs total - inferior



Women aged 60 yo and more appear less familiar of vaginal microbiome.



Question 3. And more specifically, have you ever heard of the following terms?

Base: Women (3433 people)

Women

% Yes	base	Women	Less than 25 yo	25-34 yo	35-44 yo	45-59 yo	60 yo and more
		n=3433	n=406	n=763	n=736	n=785	n=743
	Gut microbiome	54	50	63	60	51	48
	Vaginal microbiome	47	43	58	52	44	40
	Oral microbiome	44	43	54	48	39	36
	Skin microbiome	41	42	53	43	38	33
	Urinary microbiome	39	39	48	39	35	34
	Lung microbiome	37	39	48	40	32	31
	ENT microbiome	33	32	42	36	29	27

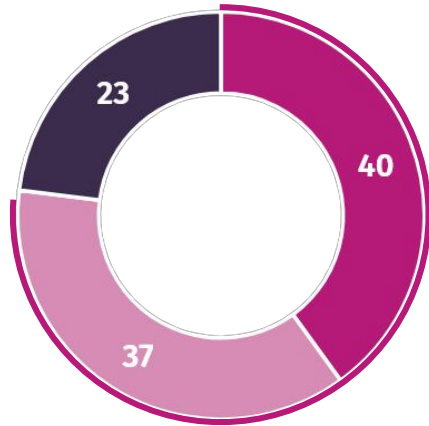
● Significant differences vs total - superior
 ● Significant differences vs total - inferior

Almost 1 in 2 women do not know what the vaginal flora is exactly



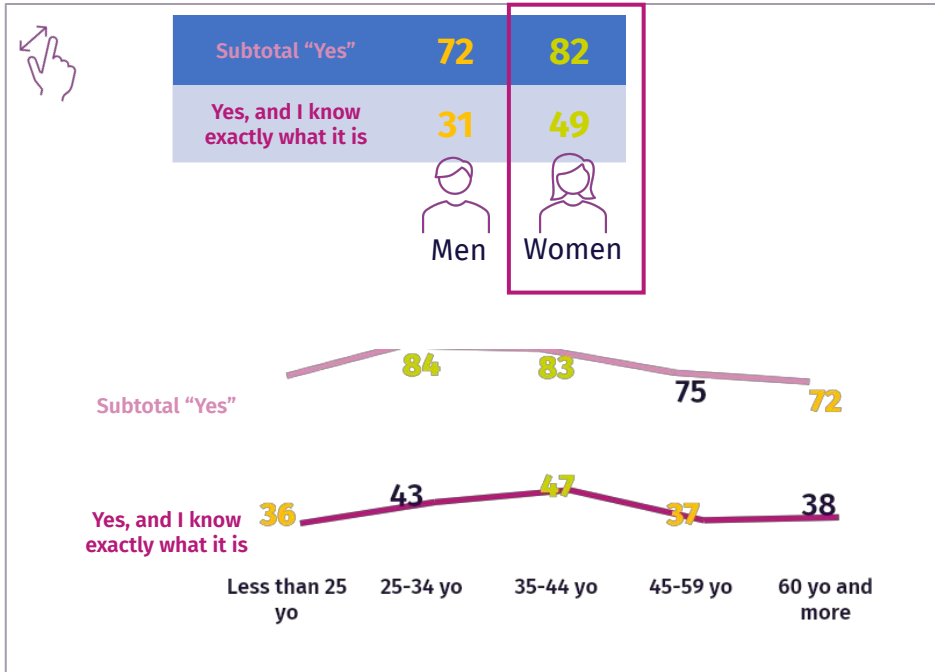
Question 2bis. And have you ever heard of these terms?
Base: All respondents

Vaginal flora



77%
have already heard
about vaginal flora

- Yes, and I know exactly what it is
- Yes, but I don't know exactly what it is
- No, I never heard about it





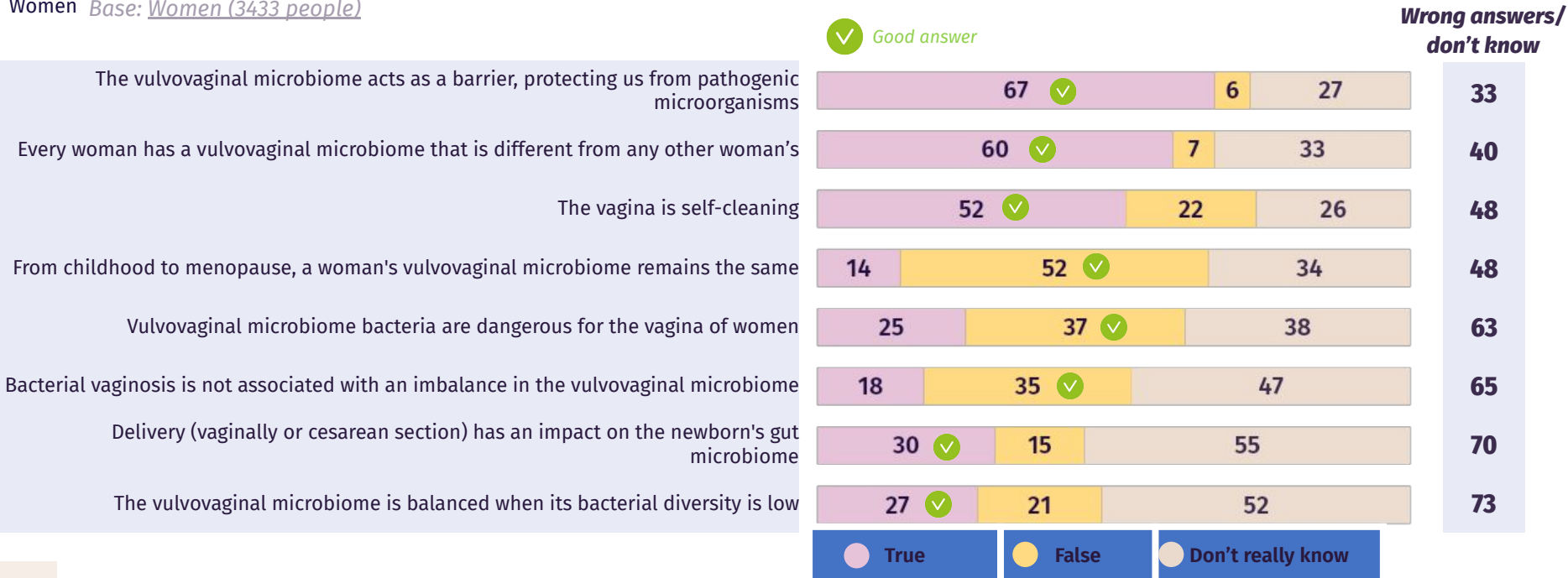
A relatively **poor**
knowledge of the
role and importance
of **microbiota**

When focusing on the vulvovaginal microbiome, knowledge appears more limited.



Question 13. For each of the following statements, tell us if you think it is TRUE or FALSE. If you are unsure about your answer, answer I do not really know.

Women Base: Women (3433 people)





Knowledge about vulvovaginal microbiome is contrasted between countries and on the various topics : it's a little bit better in China



Question 13. For each of the following statements, tell us if you think it is TRUE or FALSE. If you are unsure about your answer, answer I do not really know.

Base: Women (3433 people)

Women

% good answer	Total	USA	LATIN AMERICA	Brazil	Mexico	EUROPE	France	Spain	Portugal	CHINA
	base n=3433	n=547	n=1129	n=572	n=557	n=1283	n=523	n=516	n=244	n=474
The vulvovaginal microbiome acts as a barrier, protecting us from pathogenic microorganisms	67	53	71	69	74	66	63	63	70	74
Every woman has a vulvovaginal microbiome that is different from any other woman's	60	55	64	58	69	60	59	58	64	56
From childhood to menopause, a woman's vulvovaginal microbiome remains the same	52	53	48	49	47	55	52	48	66	50
The vagina is self-cleaning	52	59	46	46	46	50	59	30	59	66
Vulvovaginal microbiome bacteria are dangerous for the vagina of women	37	34	38	39	36	38	39	33	41	36
Bacterial vaginosis is not associated with an imbalance in the vulvovaginal microbiome	35	36	32	35	30	31	24	32	37	48
Delivery (vaginally or cesarean section) has an impact on the newborn's gut microbiome	30	28	32	34	30	25	24	27	23	48
The vulvovaginal microbiome is balanced when its bacterial diversity is low	27	19	34	33	34	19	15	17	26	47

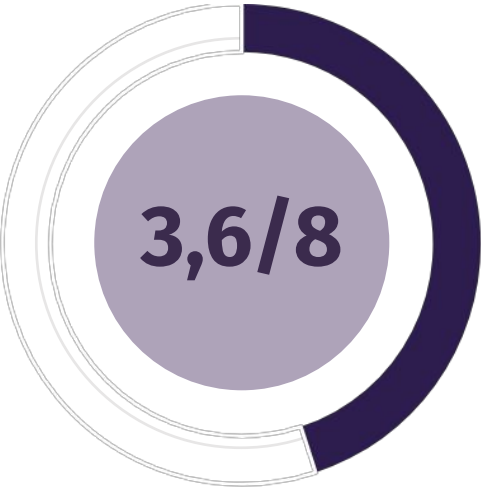


In all countries, women do not know a lot about vulvovaginal microbiome.

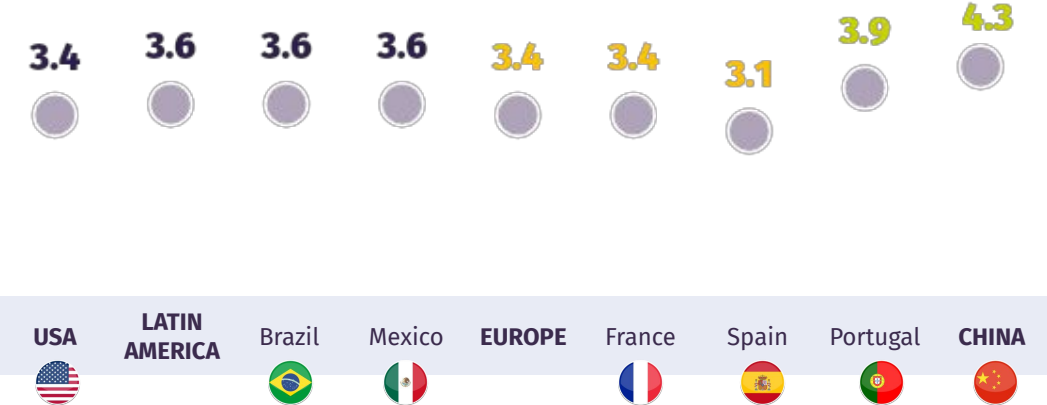


Question 13. For each of the following statements, tell us if you think it is TRUE or FALSE. If you are unsure about your answer, answer I do not really know.

Women Base: Women (3433 people)



Number of good responses on average



- Significant differences vs total - superior
- Significant differences vs total - inferior



Women over 60 yo know the least about vulvovaginal microbiome.



Question 13. For each of the following statements, tell us if you think it is TRUE or FALSE. If you are unsure about your answer, answer I do not really know.

Base: Women (3433 people)

Women

% good answer	Total	Less than 25 yo	25-34 yo	35-44 yo	45-59 yo	60 yo and more
	base n=3433	n=406	n=763	n=736	n=785	n=743
The vulvovaginal microbiome acts as a barrier, protecting us from pathogenic microorganisms	67	61	70	73	65	64
Every woman has a vulvovaginal microbiome that is different from any other woman's	60	56	63	62	59	58
From childhood to menopause, a woman's vulvovaginal microbiome remains the same	52	46	51	53	57	50
The vagina is self-cleaning	52	55	60	54	48	47
Vulvovaginal microbiome bacteria are dangerous for the vagina of women	37	39	37	40	36	33
Bacterial vaginosis is not associated with an imbalance in the vulvovaginal microbiome	35	37	37	38	34	29
Delivery (vaginally or cesarean section) has an impact on the newborn's gut microbiome	30	28	41	34	27	23
The vulvovaginal microbiome is balanced when its bacterial diversity is low	27	25	34	29	25	23

● Significant differences vs total - superior

● Significant differences vs total - inferior

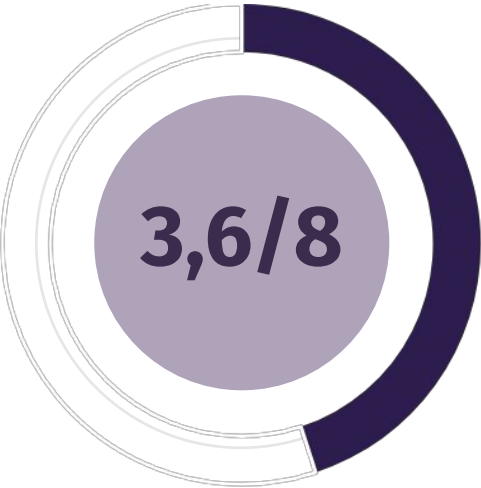


Women aged 25-44 yo and mothers have more knowledge about vulvovaginal microbiome but their level of knowledge remains low.

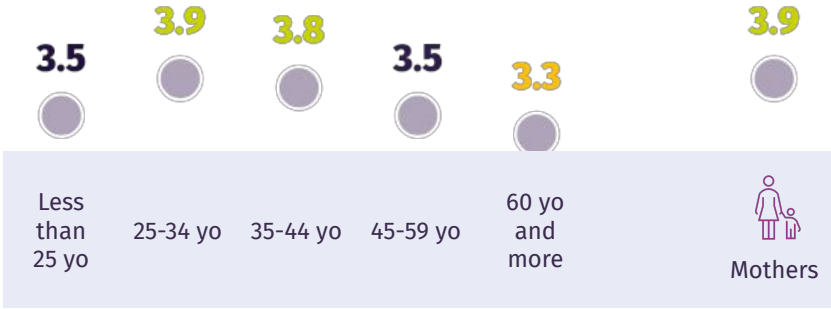


Question 13. For each of the following statements, tell us if you think it is TRUE or FALSE. If you are unsure about your answer, answer I do not really know.

Women Base: Women



Number of good responses on average



- Significant differences vs total - superior
- Significant differences vs total - inferior



Information
provided by
doctors is still too
rare

Only 1 in 3 women say their doctor explained what the vulvovaginal microbiome is and what its purpose is



Question 14. Has the healthcare professional following your gynecological health talked to you about the following?
Base: Women (3433 people)

22% received ALL THESE INFORMATION, at least one time
5% received all these information several times

% Yes

Explain the good behaviors to adopt in order to maintain a good balance within your vulvovaginal microbiome as much as possible



42

Educate you on the importance of preserving as much as possible the balance of your vulvovaginal microbiome



40

Explain to you what the vulvovaginal microbiome is and what its purpose is



35

Suggest testing your vulvovaginal microbiome



31

● Yes, several times ● Yes, once ● No, never



Women over 45 yo have received few information from their HCPs about vulvovaginal microbiome.



Question 14. Has the healthcare professional following your gynecological health talked to you about the following?

Base: Women (3433 people)

% Yes	Women (3433 people)						
	Total n=3433	Less than 25 yo n=406	25-34 yo n=763	35-44 yo n=736	45-59 yo n=785	60 yo and more n=743	
% Have received ALL THE INFORMATION, at least one time	22	23	34	26	16	15	
Explain the good behaviors to adopt in order to maintain a good balance within your vulvovaginal microbiome as much as possible	42	45	56	47	34	34	
Educate you on the importance of preserving as much as possible the balance of your vulvovaginal microbiome	40	45	53	46	31	32	
Explain to you what the vulvovaginal microbiome is and what its purpose is	35	36	48	37	28	29	
Suggest testing your vulvovaginal microbiome	31	33	42	35	24	24	

● Significant differences vs total - superior

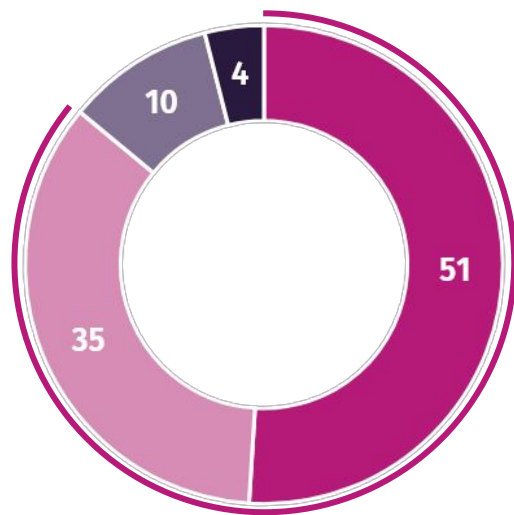
● Significant differences vs total - inferior

Most of women would like to have more information about the importance of the vulvovaginal microbiome and its impact on health.

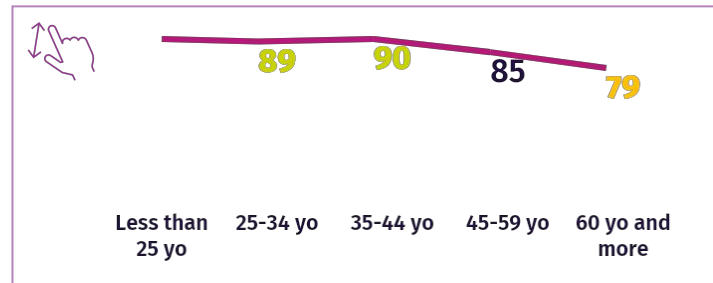


Question 15. And would you like the healthcare professional monitoring your gynecological health to tell you more about the importance of your vulvovaginal microbiome and its impact on your health?

Base: Women (3433 people)



86% would like to have more information about the importance of the vulvovaginal microbiome and its impact on health



● Significant differences vs total - superior

● Significant differences vs total - inferior

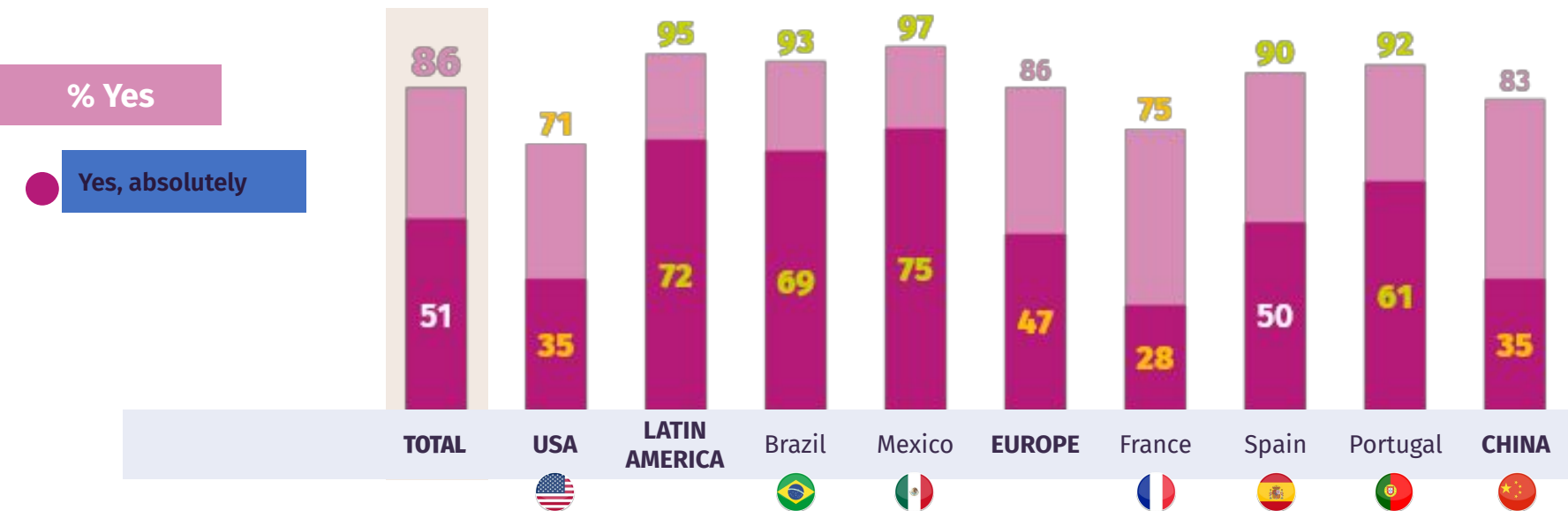


Women

Latinos, Spanish and Portuguese women would most like to have more information about their vulvovaginal microbiome.

Question 15. And would you like the healthcare professional monitoring your gynecological health to tell you more about the importance of your vulvovaginal microbiome and its impact on your health?

Base: Women (3433 people)



Significant differences vs total - superior



Significant differences vs total - inferior



A **moderate**
proportion of women
adopted
5 **behaviors** to
protect their
vaginal microbiota.

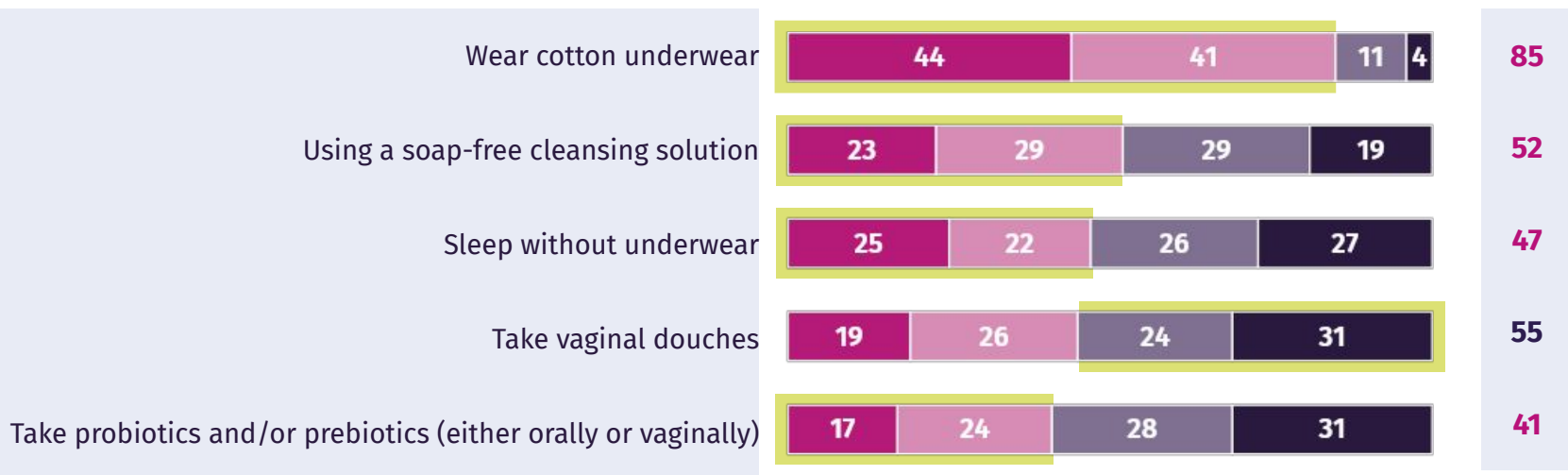
In detail, and except the cotton underwear, a moderate proportion of women adopted specific behaviors to protect the health of their vulvovaginal microbiome.



Question 16. In your daily life, do you regularly adopt the following behaviors?

Base: Women (3433 people)

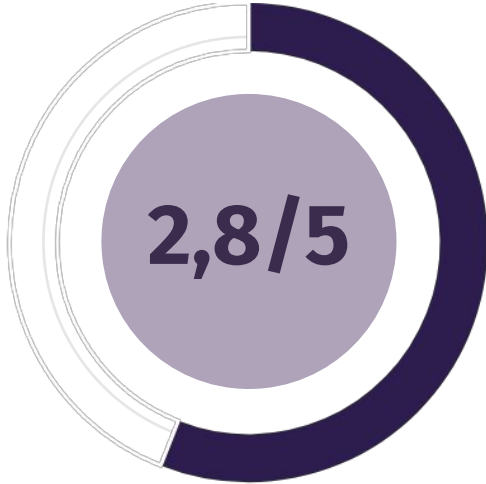
% Appropriate behavior



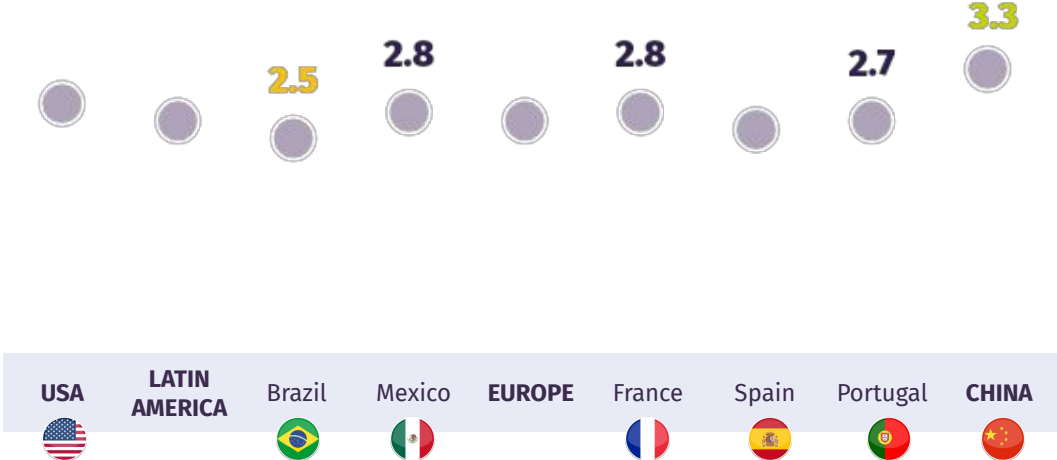


Less than 3 behaviors have been adopted by women to maintain their vulvovaginal microbiome.

Question 16. In your daily life, do you regularly adopt the following behaviors?
Base: Women (3433 people)



Number of appropriate behaviors adopted on average



- Significant differences vs total - superior
- Significant differences vs total - inferior



Women

Chinese women adopt the most appropriate behaviors but a lot of them are taking vaginal douches.

Question 16. In your daily life, do you regularly adopt the following behaviors?
Base: Women (3433 people)

% Appropriate behavior	Total	USA	LATIN AMERICA	Brazil	Mexico	EUROPE	France	Spain	Portugal	CHINA
	base n=3433	n=547	n=1129	n=572	n=557	n=1283	n=523	n=516	n=244	n=474
Wear cotton underwear	85	82	88	84	92	82	80	83	84	89
Using a soap-free cleansing solution	52	34	48	44	52	57	56	50	63	63
Sleep without underwear	47	45	43	52	35	41	51	33	39	76
Take vaginal douches	55	85	48	40	56	62	69	64	53	19
Take probiotics and/or prebiotics (either orally or vaginally)	41	41	39	32	47	29	28	33	27	79

● Significant differences vs total - superior

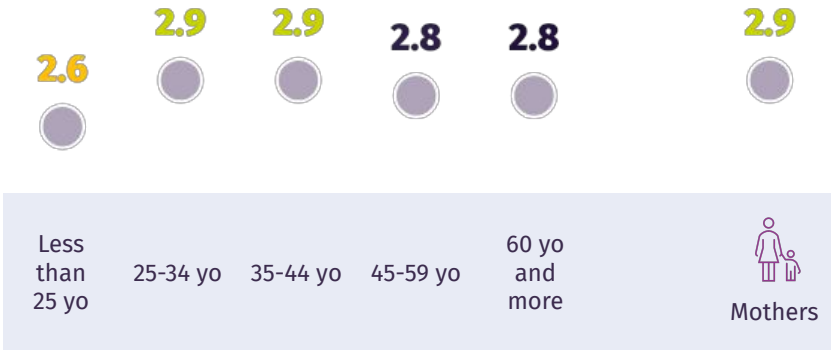
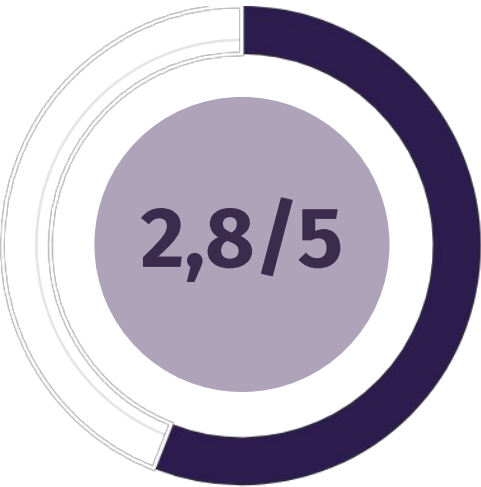
● Significant differences vs total - inferior



Women aged 25-44 yo are most likely to adopt appropriate behaviors for their vulvovaginal microbiome.



Question 16. In your daily life, do you regularly adopt the following behaviors?
Base: Women



Number of appropriate behaviors adopted on average

- Significant differences vs total - superior
- Significant differences vs total - inferior



Behaviors beneficial for the vulvovaginal microbiome are contrasted according to the age of women.



Question 16. In your daily life, do you regularly adopt the following behaviors?
Base: Women (3433 people)

% Appropriate behavior	Total	Less than 25 yo	25-34 yo	35-44 yo	45-59 yo	60 yo and more
	base n=3433	n=406	n=763	n=736	n=785	n=743
Wear cotton underwear	85	82	84	89	85	84
Using a soap-free cleansing solution	52	50	55	54	51	49
Sleep without underwear	47	49	55	46	43	43
Take vaginal douches	55	47	47	50	63	64
Take probiotics and/or prebiotics (either orally or vaginally)	41	33	47	45	37	38

● Significant differences vs total - superior

● Significant differences vs total - inferior

Thank you!
Biocodex Microbiota Institute

