

# Pilotstudy: feasibility and evaluation

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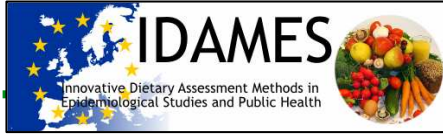
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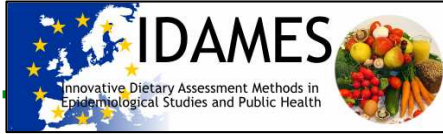




# Introduction & objective



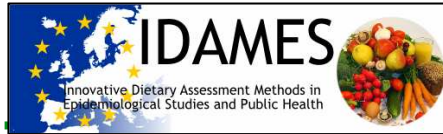
- research have indicated the methodological advantage to combine long-term and short-term instruments, including internet-technologies, but less is known about the feasibility of this approach



## Design



- completion of a web- or paper-based self-administered **European Food Propensity Questionnaire (EFPQ)** and three telephone-administered **24 hour dietary recalls (24HDR)** in 400 participants from five ongoing cohort studies in **Estonia, Italy, Spain, Norway, Germany**
- analysis of feasibility & comparison to the **Calibration of Methods (COM) study** conducted in **EPIC-Norfolk (UK)** with one 24HDR, three 7-day diaries and two FFQs



# Development of web-based EFPQ



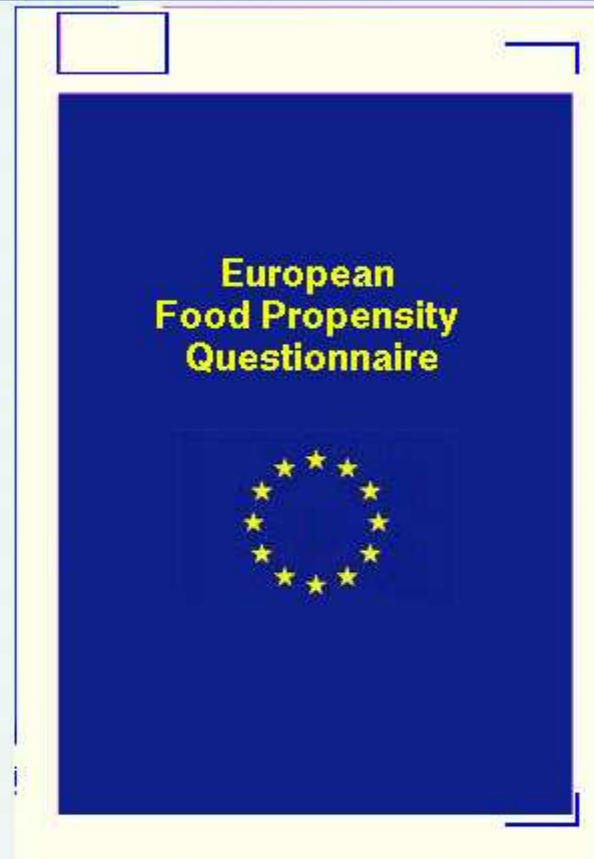
- developed on the basis of a validated German-specific 102-item FFQ applied in the **EPIC-Potsdam cohort** for the second dietary assessment that was placed on the web
- by a **web-based working procedure** European experts reviewed and modified an English version of the FFQ appropriately to the dietary habits in their countries; the common European version then was translated & placed on the web
- final EFPQ queries about the **frequency of consumption** of 116 foods during the preceding year, demonstrated with **graphically displayed** portion sizes

## Internet based assessment tools in Epidemiology

European Food Propensity Questionnaire (EFPQ)

EPIC Potsdam - Food frequency questionnaire (FFQ)

**common 6-languages  
Food Propensity  
Questionnaire:  
English, Italian,  
Norwegian, Spanish,  
Basque, Estonian,  
German**



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**EFPQ: <https://nugo.dife.de/efbo/portal/en>**

# Internet based assessment tools in Epidemiology

other language versions



 21:39:31

For study participants

Dear participant, thank you for your contribution to the research on diet and health. Please login with the user name and password you have received from the study office, using the form below. You will be connected to the right questionnaire. There you will receive further information about filling the online forms and whom to ask in case you need assistance.

## Login for the questionnaire

User ID:  -  -

Password:

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### [For Scientists](#)

View the Questionnaires and Web-Forms available on this Portal

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### [For Managers and Administrators](#)

Access to the management tools for authorized users

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# European Food Propensity Questionnaire (EFPQ)

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current time: Friday, 27 March 2009 - 21:48:18

[General information](#)[Bread and Milk products](#)[Fruit and Vegetables](#)[Rice, pasta and egg](#)[Meat and Fish](#)[Mixed dishes](#)[Cake and Sweets](#)[Cakes](#)[Sweets](#)[Beverages](#)[Fats](#)[Portions](#)[Supplements & Medication](#)[Comments](#)

## Sweets

Cookies, biscuits (3 pieces)



- never
- once a month or less frequent
- 2-3 times a month
- 1-2 times a week
- 3-4 times a week
- 5 times a week or more frequent

Chocolate and chocolate candy (50g)



- Never
- once a month or less frequent
- 2-3 times a month
- 1-2 times a week
- 3-4 times a week
- 5-6 times a week
- 1 time a day or more frequent

Sweets and candy (1 handful)



- Never
- once a month or less frequent
- 2-3 times a month
- 1-2 times a week
- 3-4 times a week
- 5-6 times a week
- 1 time a day or more frequent

[Back](#)[Continue](#)[to top](#)



- ▶ General information
- ▼ Bread and Milk products
- ▼ Fruit and Vegetables
- ▶ Rice, pasta and egg
- ▼ Meat and Fish
- ▶ Mixed dishes
- ▶ **Cake and Sweets**
  - ▶ Cakes
  - Sweets
- ▼ Beverages
- ▼ Fats
- ▶ Portions
- ▶ Supplements & Medication
- ▶ Comments

## Sweets

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## Questionario europeo di propensione alimentare (EFPQ)

- ▶ Informazioni generali
- ▼ Pane e latticini
- ▼ Frutta e verdura
- Riso, pasta e uova**
- ▼ Carne e pesce
- ▶ Piatti misti
- ▼ Torte e dolci
- ▼ Bevande
- ▼ Grassi
- ▶ Porzioni
- Integratori alimentari e Medicinali
- ▶ Commenti

### Riso, pasta e uova

Riso (una porzione)



- Mai
- 1 volta al mese o meno
- 2-3 volte al mese
- 1-2 volte alla settimana
- 3-4 volte alla settimana
- 5 volte alla settimana o più

Altri cereali (couscous, polenta, orzo, farro)  
(una porzione)



- Mai
- 1 volta al mese o meno
- 2-3 volte al mese
- 1-2 volte alla settimana
- 3-4 volte alla settimana
- 5 volte alla settimana o più

Pasta (una porzione)



- Mai
- 1 volta al mese o meno
- 2-3 volte al mese
- 1-2 volte alla settimana
- 3-4 volte alla settimana
- 5 volte alla settimana o più

Uova, sode o fritte, frittata, omelette  
(intere)



- Mai
- 1 volta al mese o meno
- 2-3 volte al mese
- 1-2 volte alla settimana
- 3-4 volte alla settimana
- 5 volte alla settimana o più

◀ Indietro

▶ Continua

▲  
in cima

Versione 1.0, [last modified on 20 Apr 2009]  
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dell'Istituto Tedesco di Nutrizione Umana di Potsdam-Rehbrücke (DIFE) © 2008-2009  
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## Europeisk matvaneskjema (EFPQ)

- Generell informasjon
- Bred og melkeprodukter
- Frukt og grønnsaker
- Ris, pasta og egg
- Kjøtt og fisk
- Blandede retter
- Kaker og søtsaker
- Drikke**
  - Vann og leskedrikker
  - Juice
  - Kaffe og te**
  - Alkoholholdig drikke
- Fett
- Porsjon
- Kosttilskudd og medisiner
- Kommentarer

### Kaffe og te

Vanlig kaffe (1 kopp)



- |   |   |
|---|---|
| <input type="radio"/> Aldri                             | <input type="radio"/> 3-4 ganger per dag          |
| <input type="radio"/> En gang i måneden eller sjeldnere | <input type="radio"/> 5-6 ganger per dag          |
| <input type="radio"/> 2-3 ganger i måneden              | <input type="radio"/> 7-8 ganger per dag          |
| <input type="radio"/> 1-3 ganger i uka                  | <input type="radio"/> 9-10 ganger per dag         |
| <input type="radio"/> 4-6 ganger i uka                  | <input type="radio"/> 11 ganger per dag eller mer |
| <input type="radio"/> 1-2 ganger per dag                |   |

Koffeinfri kaffe (1 kopp)



- |   |   |
|---|---|
| <input type="radio"/> Aldri                             | <input type="radio"/> 3-4 ganger per dag          |
| <input type="radio"/> En gang i måneden eller sjeldnere | <input type="radio"/> 5-6 ganger per dag          |
| <input type="radio"/> 2-3 ganger i måneden              | <input type="radio"/> 7-8 ganger per dag          |
| <input type="radio"/> 1-3 ganger i uka                  | <input type="radio"/> 9-10 ganger per dag         |
| <input type="radio"/> 4-6 ganger i uka                  | <input type="radio"/> 11 ganger per dag eller mer |
| <input type="radio"/> 1-2 ganger per dag                |   |

Te, sort eller grønn (1 kopp)



- |   |   |
|---|---|
| <input type="radio"/> Aldri                             | <input type="radio"/> 3-4 ganger per dag          |
| <input type="radio"/> En gang i måneden eller sjeldnere | <input type="radio"/> 5-6 ganger per dag          |
| <input type="radio"/> 2-3 ganger i måneden              | <input type="radio"/> 7-8 ganger per dag          |
| <input type="radio"/> 1-3 ganger i uka                  | <input type="radio"/> 9-10 ganger per dag         |
| <input type="radio"/> 4-6 ganger i uka                  | <input type="radio"/> 11 ganger per dag eller mer |
| <input type="radio"/> 1-2 ganger per dag                |   |

Fruktté, urtté (1 kopp)



- |   |   |
|---|---|
| <input type="radio"/> Aldri                             | <input type="radio"/> 3-4 ganger per dag          |
| <input type="radio"/> En gang i måneden eller sjeldnere | <input type="radio"/> 5-6 ganger per dag          |
| <input type="radio"/> 2-3 ganger i måneden              | <input type="radio"/> 7-8 ganger per dag          |
| <input type="radio"/> 1-3 ganger i uka                  | <input type="radio"/> 9-10 ganger per dag         |
| <input type="radio"/> 4-6 ganger i uka                  | <input type="radio"/> 11 ganger per dag eller mer |
| <input type="radio"/> 1-2 ganger per dag                |   |

### Hvordan drikker du vanligvis din kaffe eller te? (flere valg er tillatt)

Kaffe

- |  |                                     |  |
|--|-------------------------------------|--|
| <input type="checkbox"/> drikker ikke kaffe  | <input type="checkbox"/> sort       | <input type="checkbox"/> med melk                    |
| <input type="checkbox"/> med melkeerstatning | <input type="checkbox"/> med sukker | <input type="checkbox"/> med suketter, søtningsstoff |

Te, sort, grønn

- |                                       |                                     |  |
|---------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> Drikker ikke | <input type="checkbox"/> sort       | <input type="checkbox"/> med melk                    |
| <input type="checkbox"/> med honning  | <input type="checkbox"/> med sukker | <input type="checkbox"/> med suketter, søtningsstoff |

# European Food Propensity Questionnaire (EFPQ)

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current time: Friday, 27 March 2009 - 21:59:49

 I do not wish to evaluate this questionnaire. (Selecting this box will directly bring you to the Logout page)

Please evaluate the questionnaire on a scale from 1 (brilliant) to 6 (abysmal) in the following categories:

Clarity of the questions

 1  2  3  4  5  6

Clarity of the explanations

 1  2  3  4  5  6

Visual elements ( Colors, font and font size, pictures, placing of the elements)

 1  2  3  4  5  6

User friendliness (Clarity, navigation, logical structure)

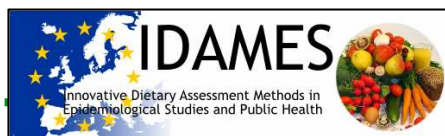
 1  2  3  4  5  6

Difficulties with estimating the usual intake of individual foods or a food group during the last 12 months

- No, everything could be estimated without problems  
 Yes, I had difficulties with the following items:

Expenditure of time for the completion of the questionnaire

- less than 20 minutes  
 between 20 and 40 minutes



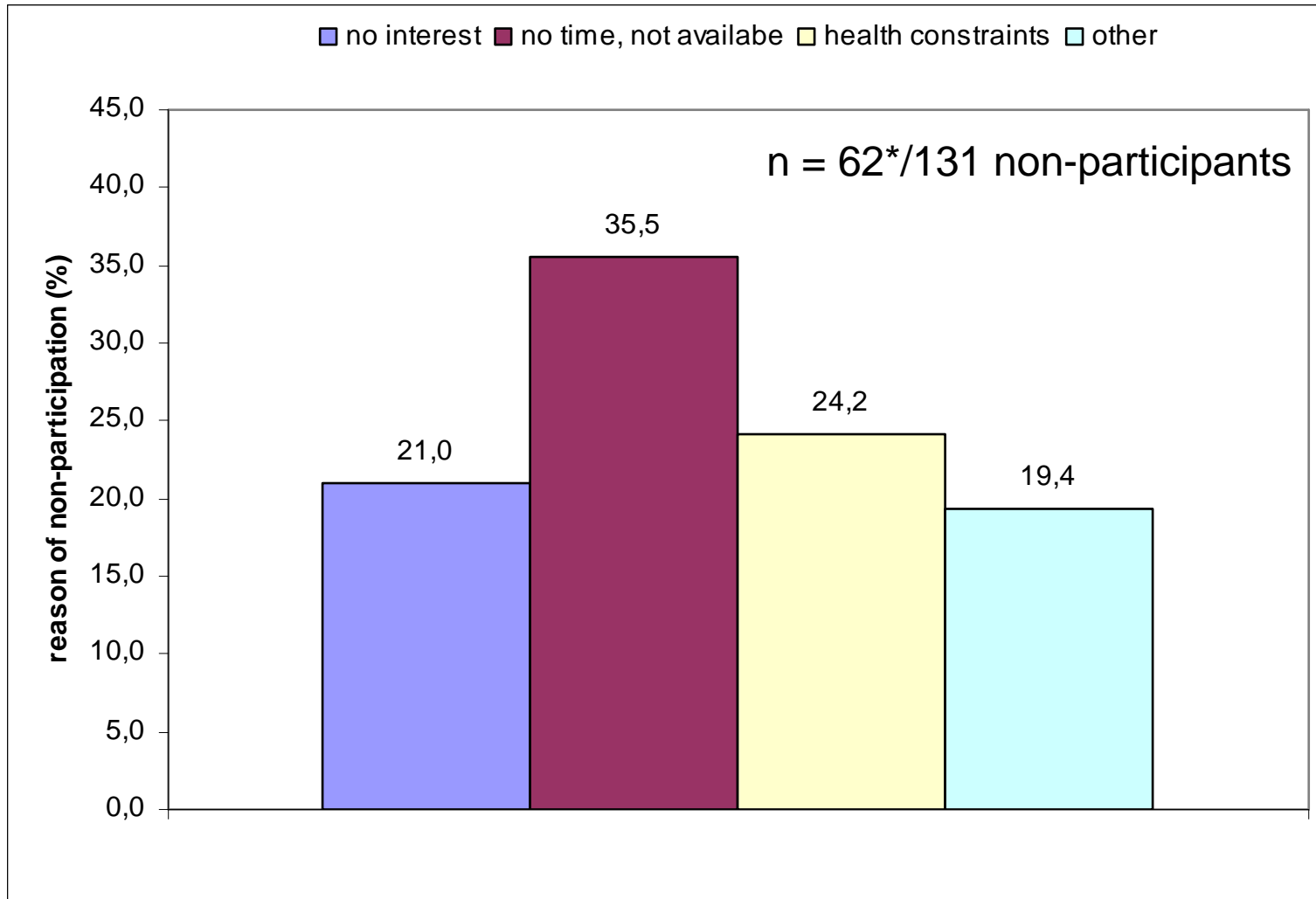
# Response & participation rates

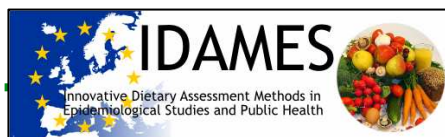


**Table 1: Total response and participation rates and participation rates for the European Food Propensity Questionnaire (EFPQ) by IDAMES centre**

IDAMES-centre	Total response rate		Total participation rate		participation rate for Web-based-EFPQ		participation rate for Paper-EFPQ	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Florence (I)</b>	66	82.5	48	60.0	26	54.2	22	45.8
<b>Potsdam (D)</b>	74	92.5	55	68.8	19	34.5	36	65.5
<b>San Sebastian (E)</b>	72	90.0	59	73.8	11	18.6	48	81.4
<b>Tartu** (EE)</b>	77	96.3	70	87.5	65	92.9	5	7.1
<b>Tromsoe (NOR)</b>	60	75.0	37	46.3	25	67.6	12	32.4

\*\*recruitment within baseline interviews





# General characteristics



**Table 2: General characteristics of study participants by web-based and Paper-based EFPQ and IDAMES centre**

Characteristic	Web-based-EFPQ (n = 146)			Paper-EFPQ (n = 123)		
	Age (y)	Female	University or equivalent degree	Age (y)	Female	University or equivalent degree
IDAMES-centre	Mean (SD)	n (%)		Mean (SD)	n (%)	
Florence (I)	63.3 (6.5)		5 (71.4)	66.0 (5.6)		1 (6.7)
Potsdam (D)	57.0 (6.9)	7 (36.8)	11 (57.9)	62.5 (5.9)	22 (61.1)	9 (25.0)
San Sebastian (E)	57.1 (5.6)	9 (56.3)	2 (12.5)	61.3 (6.0)	27 (57.4)	2 (4.3)
Tartu (EE)**	33.0 (12.0)	24 (36.9)	n.a.	54.6 (13.8)	4 (80.0)	n.a.
Tromsoe (NOR)	54,95	23 (100.0)	12 (52.2)	58,83	12 (100.0)	1 (8.3)

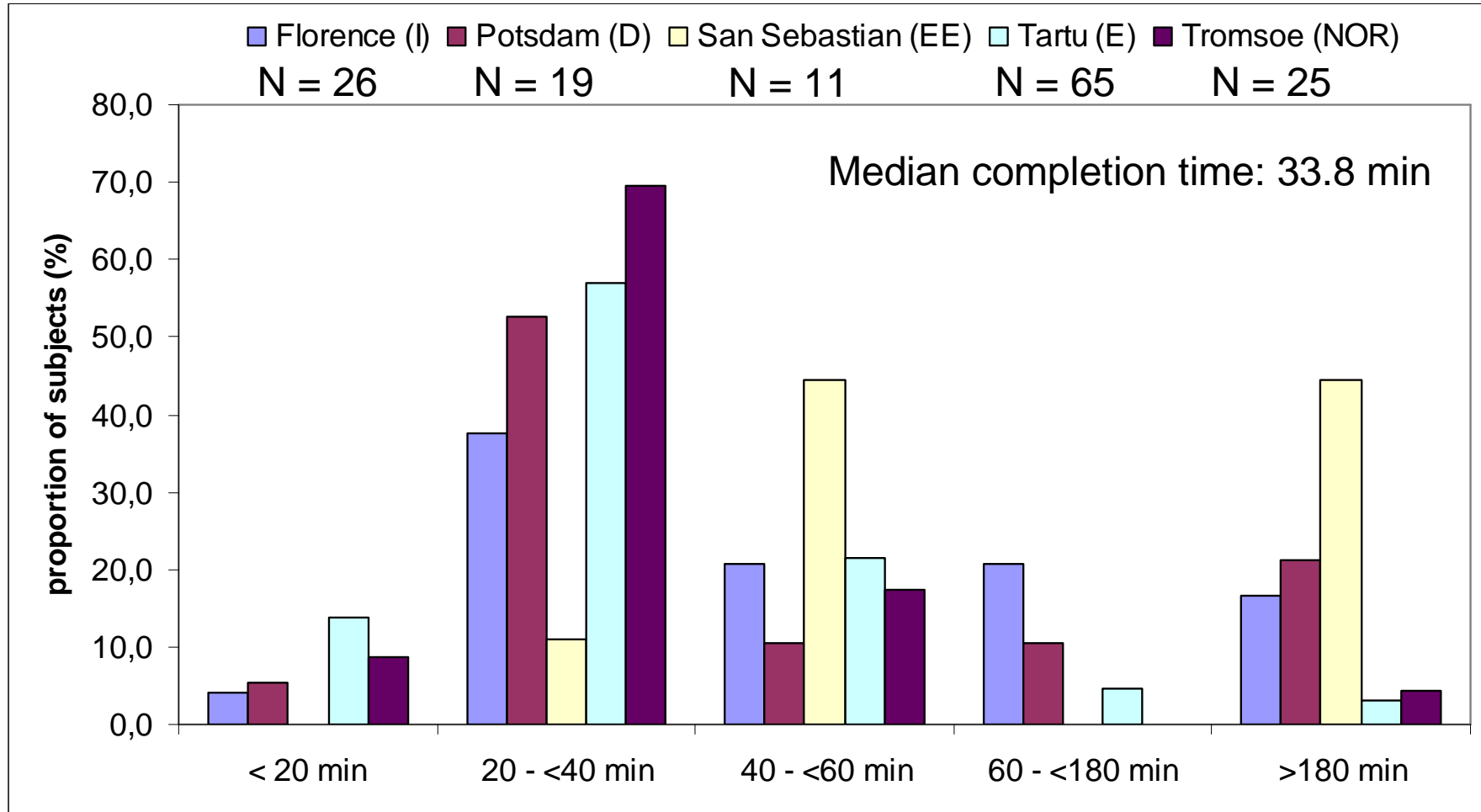
\*\*recruitment within baseline interviews

**Table 3: Current participation rates for the 24 Hour dietary recalls by IDAMES centre\***

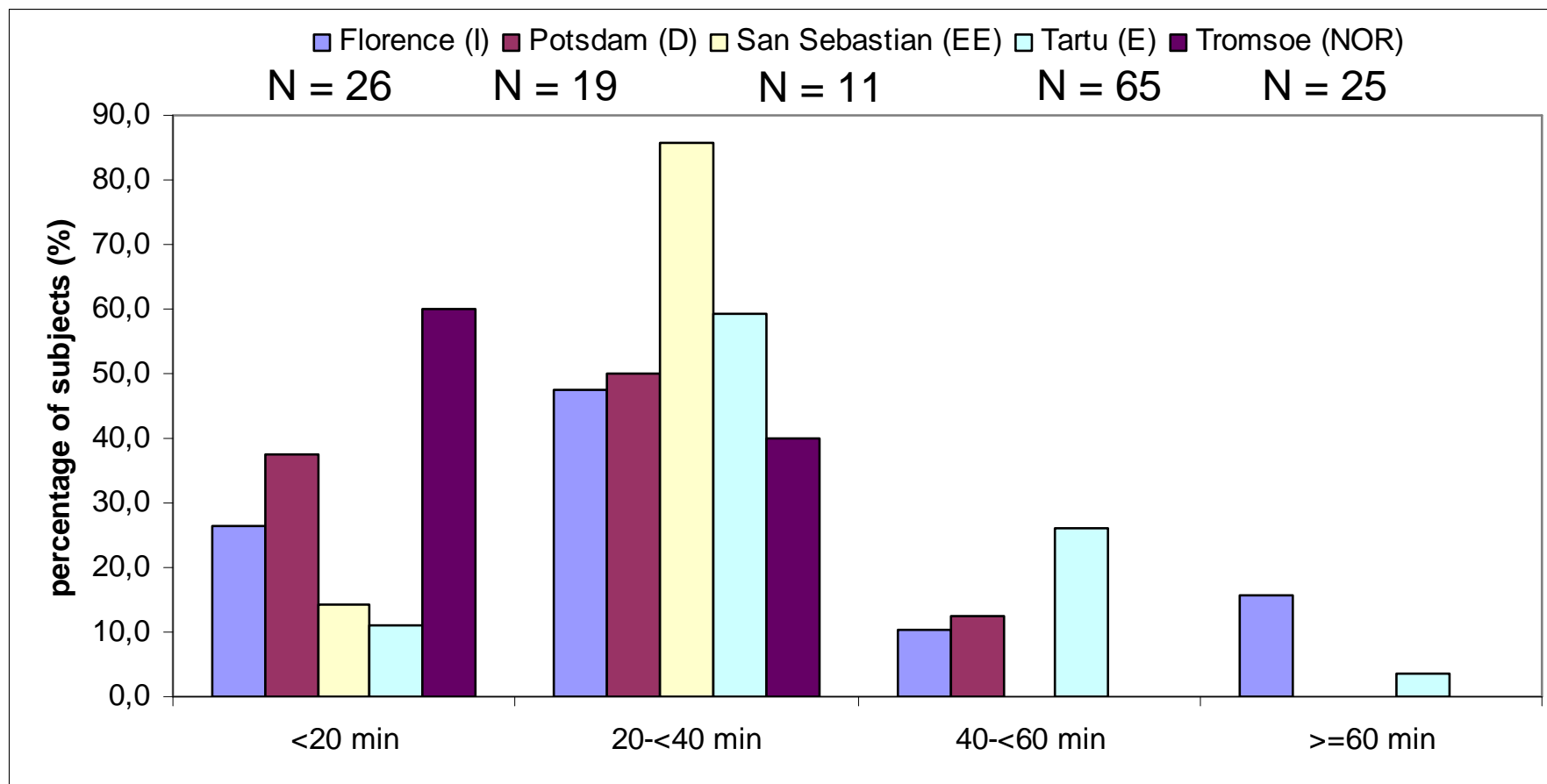
IDAMES-centre	First 24 HDR			Second 24 HDR			Third 24 HDR		
	<i>n</i>	%	Number of contact attempts <i>mean</i> ( <i>max</i> )	<i>n</i>	%	Number of contact attempts <i>mean</i> ( <i>max</i> )	<i>n</i>	%	Number of contact attempts <i>mean</i> ( <i>max</i> )
<b>Florence (I)</b>	44	88.0	1.4 (4)	31	62.0	1.6 (5)	3	6.0	1.0 (1)
<b>Potsdam (D)</b>	55	100.0	2.4 (13)	50	90.9	2.5 (7)	44	80.0	6.9 (5)
<b>San Sebastian (E)</b>	19	8.5	3.0 (5)	-	-	-	-	-	-
<b>Tartu (EE)</b>	70	100	0.9 (10)	64	91.4	0.8 (6)	29	41.4	0.8 (4)
<b>Tromsø (NOR)</b>	24	68.6	2.0 (5)	11	31.4	1.4 (3)	-	-	-
	<b>Diary 1</b>			<b>Diary 2</b>			<b>Diary 3</b>		
<b>Norfolk (UK)</b>	195	100	-	194	99.5	-	159	81.5	-

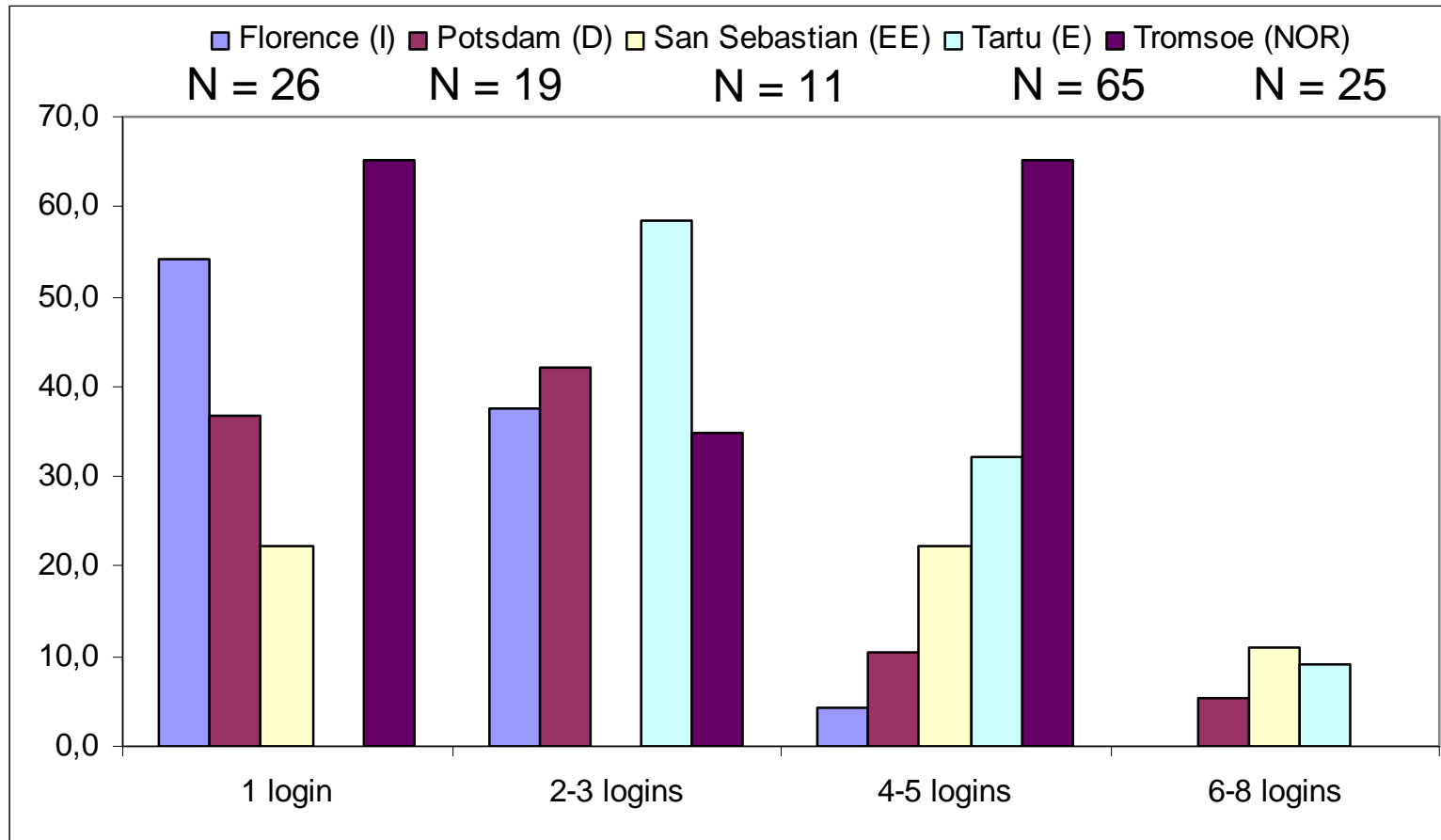
\*ongoing dietary assessment

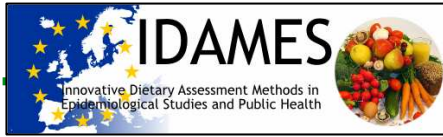
# Completion time for web-based EFPQ



# Subjective completion time of web-based EFPQ



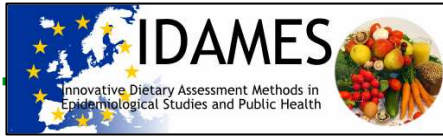




## Missing & implausible data



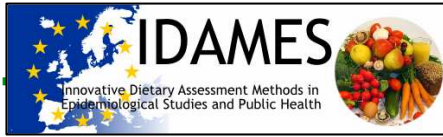
- 80-90% of the paper-based EFPQs contained missing or implausible data → recontact was needed
- implausible dietary data entries have been **observed in the** the web-based EFFQ, too:
  - questions about frequency of consumption about alcohol, mixed dishes
  - 30.9% of subjects reported to have difficulties in estimating their food intake



## summary



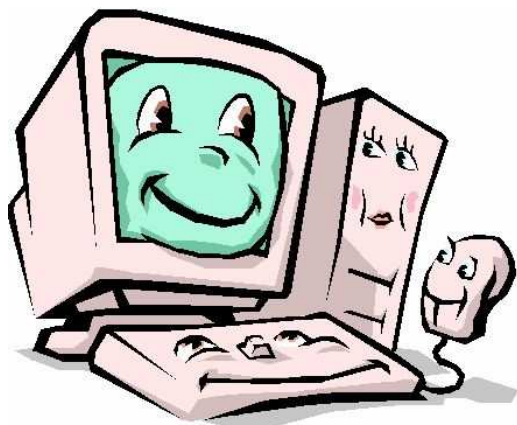
- participation rate for the overall approach was moderate and differed between the centres
- participation in the 24HDRs decreased across the data collection rounds
- the web-based EFPQ was feasible & flexible in terms of time & completion and well accepted among its users
- this study supports the feasibility of using multiple dietary assessment methods within culturally different study populations, including internet-based instruments.



## Future perspectives



- further development of the EFPQ is needed to refine its methodology for an enlarged application in other countries
- generating a better understanding of the design and feasibility of approaches with several instruments
  - which and how many short-term instruments are needed?



All WP5partners:

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Heather Ward

Gianluca Tognon

Simonetta Salvini

Pilar Amiano

Dagrun Engeset

Taie Kaasik

**Thank you  
for your attention!**

European Food Propensity  
Questionnaire/EFPQ :

<https://nugo.dife.de/efbo/portal/de>