Interaction between patients and general practitioners and social inequalities in health

The French INTERMEDE Project

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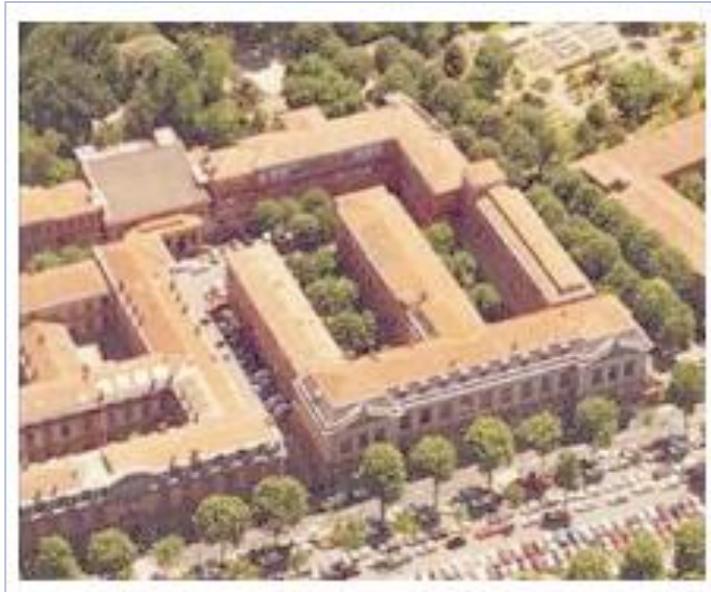
Toulouse, France

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▸ **Team 5: Cancer and chronic diseases: social inequalities in health, access to primary and secondary care**

  ▸ Directed by Professor Thierry Lang

Context

▸ **Social inequalities in health persisting and even worsening in France**

  ▸ Little knowledge of the role of the health services in the maintenance or production of health inequalities

▸ **Interaction between patients and general practitioners (GPs)**

  ▸ A key element in the efficiency and usage of health services

    ▸ Compliance, satisfaction (P Kinnersley *et al.* 1999; Krupat *et al.* 2001), diagnosis, health status (Willems *et al.* 2005)

The INTERMEDE Project

- **Aim of the project**
  - To explore facets of the patient-physician interaction, in the context of primary care, which may generate health inequalities
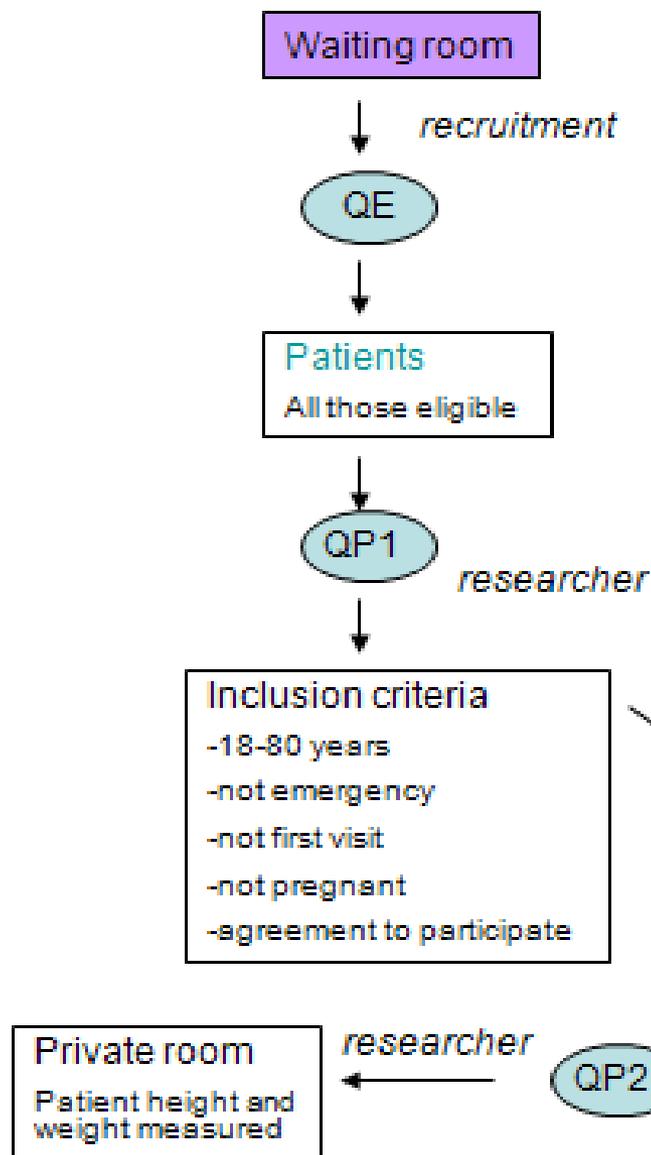
- **Research hypothesis**
  - This interaction might be of lesser quality with patients from lower educational level and thus lead to mis-understanding between patients and physician, leading to care of lesser quality
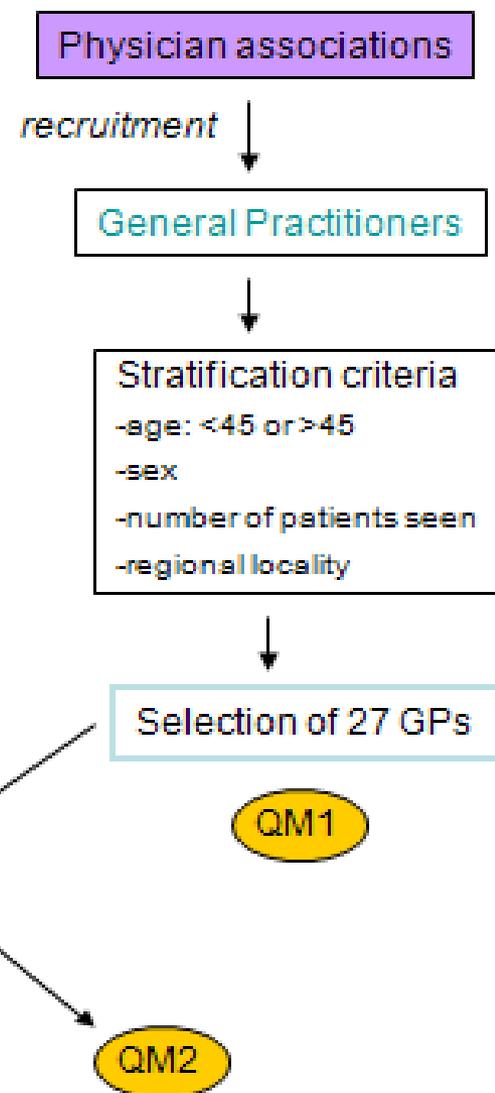
The INTERMEDE Project

- **A multidisciplinary project**
    - Epidemiologists, sociologists, linguists

- **Three regions of France**
    - Pays de la Loire, Ile de France and Midi-Pyrénées

- **Two phases**
    - **Qualitative**
        - September-October 2006
        - 11 GPs
        - Ethnographic observational design followed by semi-structured interviews conducted post consultation with patients and physicians separately
    - **Quantitative**
        - September-October 2007
        - 27 volunteer GPs, 585 "pairs" of patient-GP
        - Multiple questionnaires pre and post-consultation

Kelly-Irving, M., C. Rolland, A. Afrite, C. Cases, P. Dourgnon, P. Lombrail, J. Pascal, and T. Lang. 2009. "Patient-physician interaction in general practice and health inequalities in a multidisciplinary study: design, methods and feasibility in the French INTERMEDE study." *BMC Health Services Research* 9: 8.

Patients' data collection procedure

Waiting room

↓ *recruitment*

(QE)

↓

Patients
All those eligible

↓

(QP1)

researcher

↓

Inclusion criteria
-18-80 years
-not emergency
-not first visit
-not pregnant
-agreement to participate

Private room
Patient height and weight measured

researcher ← (QP2)

GPs' data collection procedure

Physician associations

recruitment ↓

General Practitioners

↓

Stratification criteria
-age: <45 or >45
-sex
-number of patients seen
-regional locality

↓

Selection of 27 GPs

(QM1)

Consultation

Mirrored questionnaires

(QM2)

Dimensions of interest

- **Agreement between patients and GPs**
  - *I. On cardiovascular risk factors' management*
    - Action undertaken, information and advice given
      - *Example*:
        - **Patient:** During the consultation, did your doctor measure your blood pressure? Yes/No
        - **GP:** During the consultation did you measure the patient's blood pressure? Yes/No

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        - **Patient:** During the consultation, did your doctor measure your blood pressure? Yes/No
        - **GP:** During the consultation did you measure the patient's blood pressure? Yes/No

  - *II. On patient's health status*

Patient's health status

▶ **Patient's assessment**

   ▸ How would you describe your general health ?

     Three-variable category

       Very good/good

       Average

       Bad/very bad

▶ **GP's assessment**

   ▸ How would you describe your patient's general health ?

     Three-variable category

       Very good/good

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▸ **GP's assessment**

   ▸ How would you describe your patient's general health ?

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       Average
       Bad/very bad

▸ **Agreement**

▸ **Disagreement**

   ▸ Patient evaluates their health as being worse than the doctor's evaluation

   ▸ Doctor evaluates patient's health as being worse than the patient's evaluation

Statistical analysis

- Kappa statistics

- Multilevel logistic regression analysis
  - Doctor-level effect

Patients characteristics

Patients	Men % (n)	Women % (n)	p
Sex	38.8 (227)	61.2 (358)	
Region			
Pays de la Loire	38.2 (66)	61.9 (107)	
Ile de France	36.0 (77)	64.0 (137)	
Midi-Pyrénées	42.4 (84)	57.6 (114)	ns
Age groups (years)			
18-34	24.8 (56)	22.9 (82)	
35-49	22.6 (51)	31.0 (111)	
50-64	34.5 (78)	25.4 (91)	
65+	18.1 (41)	20.7 (74)	p<0.05
Educational level			
Advanced level and plus	43.0 (92)	47.6 (165)	
Up to General Certificate Secondary Education	39.3 (84)	30.3 (105)	
No qualification	17.8 (38)	22.2 (77)	ns
Complementary Insurance			
Yes	91.4 (203)	91.3 (325)	
No	8.6 (19)	8.7 (31)	ns

Characteristics of the 27 GPs : 63% men, mean age 52 years old, majority in group practice and in sector 1 (standardised French National Health Service fee)

Agreement between patients and GPs
Kappa Coefficient

Low agreement (Kappa <0.41)	% Agreement	Kappa +/SD
Advices given on exercise	82.9%	0.34 +/-0.04*
Advices given on nutrition	84.9%	0.36 +/-0.04*
Patient's health status	69.2%	0.33 +/-0.04*
Moderate agreement (Kappa 0.41-0.60)		
Information given on hypercholesterolemia	96.6%	0.48 +/-0.04*
Information given on hyperglycaemia	97.6%	0.49+/-0.04*
Advices given on weight loss	89.6%	0.56 +/-0.04*
Information given on overweight	90.2%	0.57 +/-0.04*
Substantial agreement (Kappa 0.61-0.80)		
Auscultation undertaken	81.8%	0.61 +/0.04*
Advices given on cigarette consumption	84.4%	0.63+/-0.04*
Advices given on alcohol consumption given	94.0%	0.66+/-0.04*
Information given on high blood pressure	94.7%	0.66 +/-0.04*
Almost perfect agreement (Kappa>0.80)		
Weight measured	90.3%	0.81 +/-0.04*
Blood pressure measured	94.2%	0.84 +/-0.04*

*p<0,001

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Is agreement between patients and GPs on cardiovascular-risk management influenced by the patient's educational level?

Schieber, A. C., M. Kelly-Irving, C. Rolland, A. Afrite, C. Cases, P. Dourgnon, P. Lombrail, J. Pascal, and T. Lang. 2011. "Do doctors and patients agree on cardiovascular-risk management recommendations post-consultation? The INTERMEDE study." **British Journal of General Practice** 61(584): 178-82.

Agreement between patients and GPs on cardiovascular-risk management

- Comprehension between patients and GPs may be influenced by patients' demographic characteristics, such as age and educational level

- Main limitation
  - The "no diploma" category represented by 62% patients older than 60 years old
  - The "no diploma" category underrepresented compared to the French population

- Next step: to explore the role of the gender concordance in the GP-patient agreement on the content of the consultation

Is perceived social distance between doctors and patients related to their agreement on patient's health status?

Schieber AC, Kelly-Irving M, Delpierre C, Lepage B, Bensafi A, Afrité A, Pascal J, Cases C, Lombrail P, Lang T, for the INTERMEDE group. Is perceived social distance between the patient and the general practitioner related to their disagreement on patient's health status? *Patient Education and Counseling. [Under publication]*

Kelly-Irving, M., D. Delpierre, A. C. Schieber, B. Lepage, C. Rolland, A. Afrité, J. Pascal, C. Cases, P. Lombrail, and T. Lang. 2011. "Do General Practitioners overestimate the health of their patients with lower education?" *Social Science & Medicine* 73: 1416-21.

Perceived social position (PSP)

Described as "a composite measure of SES", including aspects such as education, occupation, income, wealth measures, life satisfaction measures, and measures of psychological functioning and as a good predictor of health (Webster and Driskell 1978; Singh-Manoux *et al.* 2003)

Perceived social position (PSP)

Lowest social position
in society

Highest social position
in society

|—|—|—|—|—|—|—|—|—|—|

Perceived social position (PSP)

Lowest social position
in society

Highest social position
in society

▶ **Patient assessment**
  ▶ His/her own PSP
  ▶ His/her GP's PSP

▶ **GP assessment**
  ▶ His/her own PSP
  ▶ His/her patient's PSP

Perceived social distance (PSD)

Lowest social position
in society

Highest social position
in society

- **Patient assessment**
  - His/her own PSP
  - His/her GP's PSP

  **=
  PSD
  by the patient**

- **GP assessment**
  - His/her own PSP
  - His/her patient's PSP

  **=
  PSD
  by the GP**

Perceived social distance (PSD)

Perceived social distance % (n)	By the patient	By the general practitioner
No distance perceived	21.3 (110)	11.5 (67)
Doctor's social position perceived as higher	75.6 (390)	86.2 (504)
Patient's social position perceived as higher	3.1 (16)	2.4 (14)
Total	100.0 (516)	100.0 (585)
p=0.001		

Perceived social distance (PSD)

Perceived social distance % (n)	By the general practitioner			
By the patient	No distance perceived	Doctor's social position perceived as higher	Patient's social position perceived as higher	Total % (n)
No distance perceived	17.3 (19)	77.3 (85)	5.5 (6)	100.0 (110)
Doctor's social position perceived as higher	9.0 (35)	89.5 (349)	1.5 (6)	100.0 (390)
Patient's social position perceived as higher	31.3 (5)	68.8 (11)	0.0 (0)	100.0 (16)
Total (n)	59	445	12	516
Agreement on perceived social distance		*Kappa=0.11*	*p=0.001*	

Agreement/disagreement on perceived health status and perceived social distance by the patient

Perceived social distance by the patient (N=514)	No distance perceived % (n)	Doctor's social position perceived as higher % (n)	Patient's social position perceived as higher % (n)	p
Agreement	75.5 (83)	68.8 (267)	87.5 (14)	0.226
Patient evaluates their health as being worse than than the doctor's evaluation	12.7 (14)	20.4 (79)	12.5 (2)	0.154
Doctor evaluates patient's health as being worse than the patient's evaluation	11.8 (13)	10.8 (42)	0.0 (0)	0.417

Agreement/disagreement on perceived health status and perceived social distance by the general practitioner

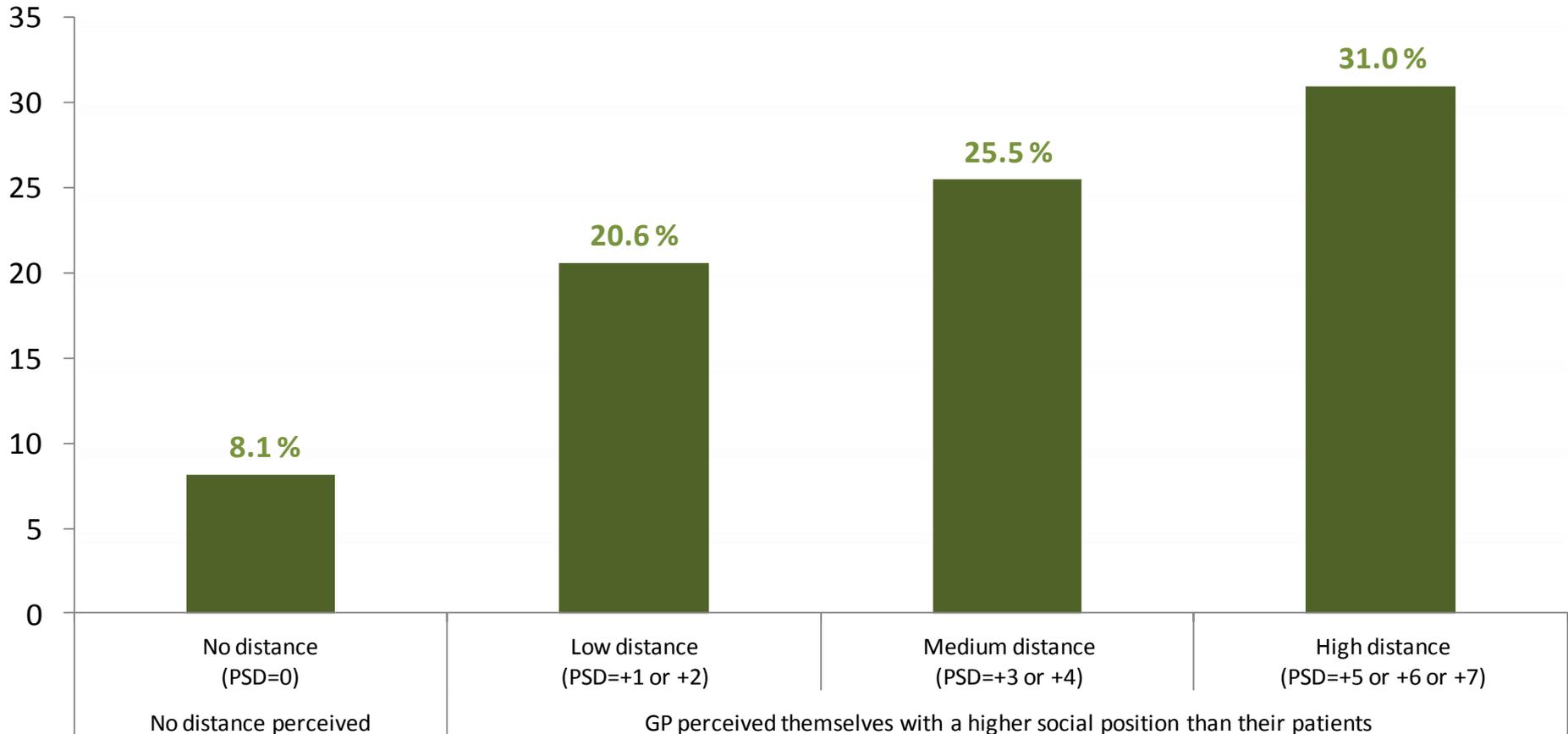| Perceived social distance by the general practitioner (N=581)	No distance perceived % (n)	Doctor's social position perceived as higher % (n)	Patient's social position perceived as higher % (n)	p
Agreement	85.1 (57)	67.0 (335)	71.4 (10)	0.026
Patient evaluates their health as being worse than than the doctor's evaluation	7.5 (5)	21.2 (106)	14.3 (2)	0.007
Doctor evaluates patient's health as being worse than the patient's evaluation	7.5 (5)	11.8 (59)	14.3 (2)	0.281

Disagreement whereby patients rated their health as being worse than their GP's evaluation and degree of social distance perceived by the general practitioner

Patient rates their health as being worse than the doctor's evaluation (% disagreement)

n=503

p=0.010

Multivariate multilevel logistic regression

Patient rates their health as being worse than the doctor's evaluation N=480	OR	95% CI	p value
Perceived social distance by the general practitioner			
No distance	1.0		
Low distance	2.9	1.0 - 8.6	0.055
Medium distance	3.4	1.1 - 10.2	0.031
High distance	3.8	1.1 - 13.1	0.035
Doctor level variables*			
Doctor sex			
Male	1.0		
Female	0.6	0.3 - 1.1	0.125
Fees			
Standardised French National Health	1.0		
Physician variable fee	0.3	0.1 - 1.0	0.054
Region			
Pays de la Loire	1.0		
Ile de France	1.0	0.5 - 1.9	0.926
Midi-Pyrénées	0.5	0.2 - 1.0	0.053
Patient level variables*			
Patient sex			
Male	1.0		
Female	1.6	0.9 - 2.7	0.082
Educational level			
Advanced level and plus	1.0		
Up to General Certificate Secondary	0.9	0.5 - 1.6	0.741
No qualification	1.9	1.0 - 3.7	0.052
Chronic disease			
No	1.0		
Yes	2.5	1.4 - 4.3	0.002
Frequency of consultation			
< Every three months	1.0		
Once every three months	1.9	1.0 - 3.6	0.049
At least once a month	1.8	0.9 - 3.7	0.096

* Adjustement on patients' and doctors' age ns

Discussion

- Limitation
  - Selection biases
  - Sample size
  - PSD deducted from 2 assessments

Discussion

▸ Some facets of the management of cardiovascular risk factors appear to be dealt with more comfortably by both patients and GPs, whereas others are characterised by lack of clarity and misunderstanding

    ▸ Patient-GP agreement as a "practical, useful and relevant indicator of the adequacy and effectiveness of information sharing among patients and doctors" (Liaw *et al.* 1996)

▸ The more the GP perceived a distance between himself/herself and his/her patient, the more the GP tended to evaluate the patient's health positively relative to the patient's own evaluation

    ▸ Conversely, the two actors were more likely to agree when no distance was perceived by the doctor

▸ PSD played a stronger role than the "objective indicators" of the patient's social context, as the education level (Kelly *et al.*, 2011)

Discussion

▸ Knowing that self-rated health is a strong indicator of morbidity and mortality (Mossey JM, Shapiro E, 1982; DeSalvo *et al.* 2006) and that patients with a low education level who have health problems have lower expectations of their health (Delpierre *et al.* 2009, Kelly-Irving *et al.* 2011)

   ▸ Such patients may therefore be subjected to a double burden making them more vulnerable to unequal treatment and follow-up within the health system

▸ A shared identity between patients and physicians facilitating more positive health care interactions (Street and O'Malley 2008)

▸ Role of GP's own perception (Beach *et al.* 2006, Cegala and Post 2009, Ariss 2009)

Perspectives

▸ **Integration of mixed methods**

  ▸ "The class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts, or language into a single study" (Johnson and Onwuegbuzie, 2004, Tashakkori & Teddlie, 1998)

▸ **Challenge of integration at 5 steps of the study**

  ▸ 1. Research questions

  ▸ 2. Units of analysis

  ▸ 3. Samples for study

  ▸ 4. Instrumentation and data collection methods

  ▸ 5. Analytic strategies +++

Perspectives

- **Methodology used for the integration of the qualitative and the quantitative results**
  - A *modified Delphi* consensus method
  - Iterative multistage process
    - **Step 1:** administration of a questionnaire to all members of the 5 teams, analyze of convergent and divergent results, and generation of a new synthesis with communal conclusions, communal hypothesis and isolated observation
    - **Step 2:** analyze of agreement/disagreement
    - **Step 3:** meeting, validation of results around 4 axes
      - ☐ Characterisation of the patient-doctor interaction
      - ☐ Place of the preventive care in the primary care
      - ☐ Role of gender in the patient-doctor interaction
      - ☐ Role of social context in the patient-doctor interaction
    - **Step 4:** Validation of final report, seminar with GPs

Conclusion

- **Strengths of a multidisciplinary approach**

  - To explore the complex patient-doctor interaction and understand potential mechanisms leading to social inequalities in health

- **Role of the health system in the reduction of social inequalities in health**

  - Opportunities of actions in primary care

Thank you for listening…