



Quality of doctor-patient communication in
cardiovascular diseases
and secondary preventive adherence

The role of gender

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Cardiovascular diseases and secondary preventive behaviours

- ▶ Cardiovascular diseases in Luxembourg
 - The leading cause of mortality
 - Major reason for hospital admission (2012)
- ▶ Main risk factors
 - Diabetes, hypertension, hypercholesterolemia, overweight
- ▶ Common instructions
 - Planning follow-up visits
 - Taking medication
 - Changing lifestyle - eating habits, physical activity, tobacco cessation...

Doctor-patient communication and adherence to preventive behaviours

- ▶ Results from a study conducted in Luxembourg (Baumann & al., 2016)
- ▶ Quality of communication was significantly associated with:
 - Increased consumption of fruit & vegetables
 - Reduction of salt intake
 - Reduction or cessation of sugar consumption
- ▶ No link with declared physical activity, smoking, and fat consumption

Are these effects different regarding gender?

Objectives

Identify the relationship between the quality of practitioner-patient communication and patients' adherence to preventive eating behaviours with respect to their:

- Cardiovascular risk factors
- Gender

Methods

- ▶ Design
 - ▶ Follow-up study

- ▶ Sample
 - ▶ All patients admitted for a coronary angiography in the “Institut National de Chirurgie Cardiaque et de Cardiologie Interventionnelle » in 2008/2009
 - ▶ N=4391

- ▶ Procedure
 - In 2008/2009, before angiography, 4 391 completed a questionnaire asking about their risk factors
 - Five years later - 2013/2014, 1289 questionnaires were completed at home (29.4% of the initial sample)

Variables assessed



Cardiovascular RF

- Hypertension
 - Diabetes
 - Hypercholesterolemia
 - Overweight
 - Obesity
- } BMI based on declared weight and height

Evolution of consumption in the past 12 months

- Salt
- Sugar
- Fat
- Fruits & vegetables

Quality of the communication with the medical practitioner (P'Com-5 items)

P'Com - 5 items *

My medical practitioner

- ▶ ... takes the time to listen to me
- ▶ ... Gives me incentive to comply with the treatment
- ▶ ... Gives me advice on prevention (diet, physical activity...)
- ▶ ... explains to me what the treatment does
- ▶ ... Gives me information on the side effects of medication

Scale from 1 (not satisfied at all) to 10 (very satisfied)

* (Cronbach α = 0.870; 68.3% of the variance explained by the first factor of the principal component analysis)

Statistical analyses

- ▶ Descriptive: means, percentages

- ▶ Logistic regression (SAS 9.4)
 - Probability of improvement of each behaviour regarding cardiovascular risk factor
 - $OR > 1$: Positive relationship
 - Level 3 interaction between:
 - P'Com-5 mean
 - Gender
 - Presence/absence of the considered risk factor



Findings

Description of the sample (n=1289)

	Men	Women	<i>p</i>
N	911 (70.7%)	378 (29.3%)	
Age	68.1 (± 10.6)	71.5 (± 12.3)	<0.0001 ***
Marital status			
Married	80.4 %	52.9 %	<0.0001 ***
Angina pectoris	47.3 %	45.2 %	0.497
Acute myocardial infarction	10.2 %	7.7 %	0.157
Ischemic heart disease	13.1 %	10.3 %	0.171

Declared risk factors in 2008/09

	Men (%)	Women (%)	<i>P</i>
Overweight	47.7	36.2	0.0002 ***
Hypercholesterolemia	45.6	51.1	0.094
Hypertension	39.3	49.4	0.002 **
Obesity	30.2	31.1	0.750
Diabetes	29.9	28.5	0.647

Declared changes between 2008/09 and 2013/14

	Men	Women	<i>P</i>
Weight change			
Loss	18.5	19.9	0.021 *
Gain	17.3	23.4	
No change	64.2	56.7	
Changes in eating habits			
Reduced or stopped consuming fats	70.4	75.5	0.074
Increased consumption of fruits and vegetables	64.0	67.3	0.264
Reduced or stopped consuming sugar	61.8	65.1	0.300
Reduced or stopped consuming salt	55.1	65.0	0.0019 **

Quality of communication and preventive eating behaviours

1. Focus on hypertension

		Patients with hypertension					Patients without hypertension				
Preventive behaviour	Gender	OR	SE	IC 95%		<i>p</i>	OR	SE	IC 95%		<i>p</i>
				Inf	Sup				Inf	Sup	
↘ Salt intake	Male	1.086	0.036	1.017	1.159	0.014 *	1.020	0.034	0.955	1.089	0.564
	Female	1.139	0.042	1.060	1.223	0.000 ***	1.025	0.040	0.950	1.106	0.524
↗ Fruits & vegetables	Male	1.080	0.035	1.015	1.151	0.016 *	1.075	0.035	1.008	1.146	0.027 *
	Female	1.098	0.038	1.026	1.175	0.007 **	1.095	0.042	1.016	1.180	0.018 *

Effects of the quality of communication on preventive eating behaviours

2. Focus on diabetes

Preventive behavior	Gender	Patients with diabetes					Patients without diabetes				
		OR	SE	IC 95%		p	OR	SE	IC 95%		p
				Inf	Sup				Inf	Sup	
↘ Sugar intake	Male	1.167	0.045	1.082	1.259	<.0001 ***	0.998	0.032	0.937	1.064	0.960
	Female	1.212	0.067	1.088	1.349	0.001 ***	1.005	0.035	0.939	1.075	0.894
↗ Fruits & vegetables	Male	1.109	0.039	1.036	1.187	0.003 **	1.063	0.034	0.999	1.131	0.053
	Female	1.105	0.048	1.015	1.204	0.022 *	1.086	0.036	1.017	1.160	0.014 *

Effects of the quality of communication on preventive eating behaviours

3. Focus on hypercholesterolemia

Preventive behaviour	Gender	Patients with cholesterolemia					Patients without cholesterolemia				
		OR	SE	IC 95%		p	OR	SE	IC 95%		p
				Inf	Sup				Inf	Sup	
↘ Sugar	Male	1.055	0.035	0.989	1.125	0.104	1.018	0.034	0.953	1.088	0.592
	Female	1.096	0.041	1.019	1.179	0.010 *	1.000	0.037	0.930	1.076	0.997
↗ fruits & vegetables	Male	1.084	0.035	1.017	1.155	0.013 *	1.055	0.035	0.988	1.126	0.113
	Female	1.113	0.040	1.038	1.194	0.003 **	1.081	0.040	1.005	1.162	0.036 *
↘ fat	Male	1.031	0.037	0.962	1.105	0.384	0.986	0.036	0.919	1.059	0.698
	Female	1.083	0.044	1.000	1.172	0.050 *	1.003	0.040	0.928	1.084	0.940

Effects of the quality of communication on preventive eating behaviours

3. The case of overweight

Preventive behaviour	Gender	Patients with overweight					Patients without overweight				
		OR	SE	IC 95%		p	OR	SE	IC 95%		p
				Inf	Sup				Inf	Sup	
↘ sugar	Male	1.022	0.034	0.958	1.090	0.515	0.987	0.035	0.920	1.059	0.710
	Female	1.075	0.043	0.995	1.162	0.066	0.979	0.039	0.906	1.058	0.591
↗ fruits & vegetables	Male	1.060	0.034	0.995	1.130	0.071	1.035	0.037	0.966	1.109	0.326
	Female	1.106	0.042	1.026	1.192	0.008 **	1.051	0.040	0.976	1.133	0.187
↘ fat	Male	0.999	0.035	0.932	1.071	0.976	1.010	0.039	0.936	1.089	0.808
	Female	1.108	0.050	1.013	1.211	0.024 *	0.977	0.040	0.903	1.059	0.574

Effects of the quality of communication on preventive eating behaviours

3. The case of obesity

		Patients with obesity					Patients without obesity				
Preventive behaviour	Gender	OR	SE	IC 95%		p	OR	SE	IC 95%		p
				Inf	Sup				Inf	Sup	
↘ sugar	Male	1.081	0.038	1.010	1.158	0.025 *	0.987	0.035	0.920	1.059	0.710
	Female	1.063	0.044	0.981	1.152	0.135	0.979	0.039	0.906	1.058	0.591
↗ fruits & vegetables	Male	1.120	0.038	1.048	1.198	0.001 ***	1.035	0.037	0.966	1.109	0.326
	Female	1.117	0.045	1.031	1.210	0.007 **	1.051	0.040	0.976	1.133	0.187
↘ fat	Male	1.036	0.038	0.964	1.114	0.333	1.010	0.039	0.936	1.089	0.808
	Female	1.042	0.045	0.956	1.134	0.350	0.977	0.040	0.903	1.059	0.574

Discussion

- ▶ Especially in women, quality of the communication had an overall effect on the adoption of secondary preventive eating behaviours
- ▶ Increase of fruits and vegetables consumption was the adopted preventive behaviour associated with most risk factors

Implications for practice and policy

- ▶ Develop ways to rapidly understanding men/women's visit-related expectations and concerns?
 - ▶ Direct questioning ("Is there anything in particular you were hoping I would do today?")
 - ▶ Polite hypothesis testing ("You look like there's something still on your mind?")
 - ▶ Vigorous exploration of the patient's explanatory model ("What do you think has caused your problem? Why do you think it started when it did?").

Thank you.

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