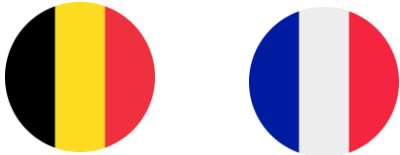


Knowledge and professional practices
toward dentin hypersensitivity
A BELGIUM - FRANCE SURVEY

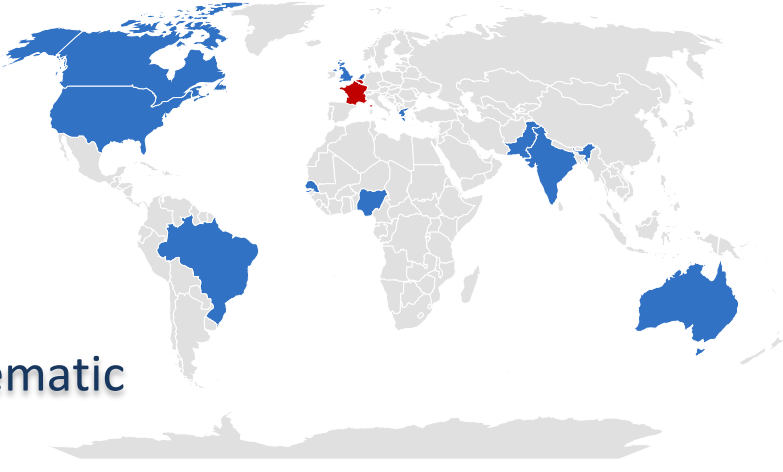


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BACKGROUND

- Dentin hypersensitivity (DH) negatively affects daily functioning and oral health–related quality of life (OHRQoL).
- Studies conducted describing knowledge, opinions and practices toward DH pathogenesis, diagnosis and management, concluded that DH constitutes a significant clinical challenge for dental practitioners (DPs).
- Assessing knowledge and practices toward DH may appear crucial as it may directly impact health outcomes by promoting early diagnosis and interventions and reducing the negative impact of DH on quality of life (QoL).
- Yet there is a lack of data in in the French-speaking part of Europe on the topic; this situation is particularly problematic as there is neither European guidelines nor consensus toward DH diagnosis and management.



OBJECTIVES

To assess knowledge, opinions and practices of dental practitioners regarding DH in France (Fr) and in the French-speaking part of Belgium (Be).

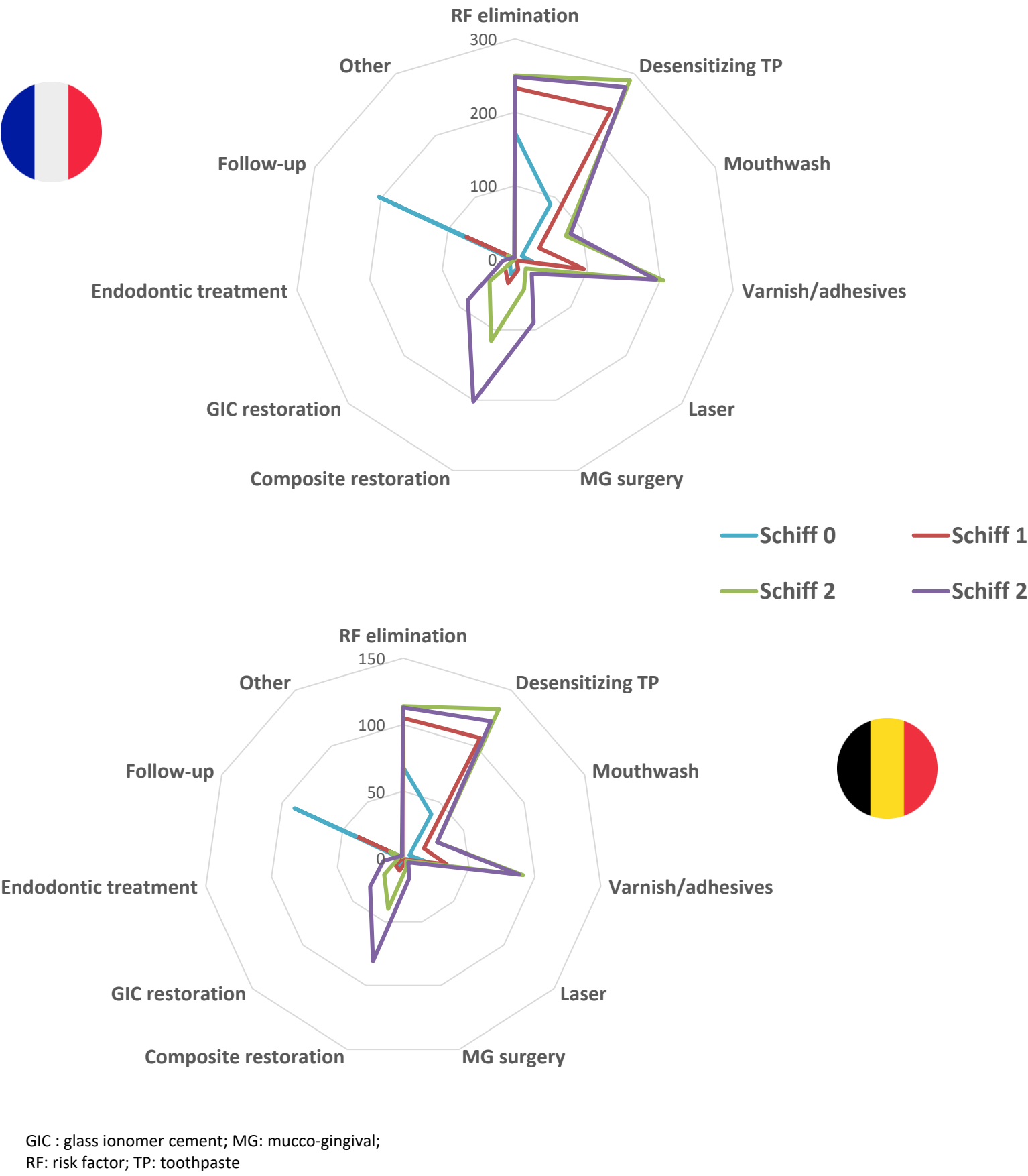
METHODS

- A practice-based, cross-sectional, questionnaire study was designed according to CHERRIES (checklist for reporting results of internet E-surveys).
- A questionnaire (22 items) was specifically developed for the project and administrated to the members of the the ReCOL network (n=1,063) (a French-speaking dental practice-based research network created in 2019) and the Belgian Dental Medicine Society (n=3,869).
 - > -> SurveyMonkey® online questionnaire; single URL, unique to the survey; from 01/04/2025 to 20/06/2025
- After descriptive analysis, statistical tests (χ^2 * and linear model ANOVA**) were used to assess differences within and between France and Belgium.

RESULTS

	 Respondents n = 331	General population N = 48,978**	 Respondents n = 158	General population N = 10,966*
Male - Female	48.2 - 51.8 %	49.5 - 50.5 %	41.1 - 58.9 %	47.9 - 52.1%
Age - Median (IQR)	43 (18)	44.2	49 (23)	-
Age - Minimum - Maximum	24 - 72	-	24 - 79	-
Private practice	79.7 %	82.2 %	88.3 %	-
Scientific articles toward DH – Yes - No	27.8 - 72.2 %		36.1 - 63.9%	-

DH management



	 Citation frequency n (%)	 Comparison France - Belgium (p-value)***
DH description (single-choice)		
Short, sharp pain arising from an exposed dentin, to evaporative, thermal, tactile, osmotic or chemical stimuli and that cannot be ascribed to any other dental defect or disease.	304 (91.8)	141 (89.2)
Sharp, severe, radiating pain of long duration and varying intensity occurring spontaneously or following a hot or cold stimulus. In the latter case, the pain may linger even after the stimulus is removed.	20 (6.1)	11 (7)
Intermittent, sharp, stabbing, shooting pain in the cheek, lips, gums, or chin on one side being able to build in strength, decrease and begin again, and then abruptly end. It can be triggered by stimuli as light as a breeze or a touch on the face.	7 (2.1)	6 (3.8)
DH mechanisms of pain transmission (multiple-choice)		
Fluid flow within dentine tubules causing nerve stimulation	293 (88.5)	133 (84.2)
Stimulation of pulpal nerves	106 (32)	33 (20.9)
Stimulation of odontoblasts via exposed dentine	118 (35.6)	30 (19)
Stimulation of cold receptors in the dental pulp	80 (24.2)	27 (17.1)
I do not know	9 (2.7)	8 (5.1)
Combinations of options		
Median (IQR)	2 (1)	1 (1)
Range	0-4	0-4
DH triggering factors (multiple-choice)		
Cold	331 (100)	158 (100)
Sugar	265 (80.1)	128 (81)
Mechanical stimulus	257 (77.6)	117 (74.1)
Acid	249 (75.2)	114 (72.2)
Hot	216 (65.3)	110 (69.6)
Combinations of options		
Median (IQR)	4 (2)	4 (2)
Range	1-5	1-5
DH predisposing factors (multiple-choice)		
Iatrogenic toothbrushing	317 (95.8)	149 (94.3)
Gingival recession	310 (93.7)	143 (90.5)
Erosion	257 (77.6)	121 (76.6)
Abrasive toothpaste	256 (77.7)	116 (73.4)
Acidic diet	263 (79.5)	114 (72.2)
Excessive tooth whitening	225 (68)	92 (58.2)
Recent scaling and root planning	213 (64.4)	91 (57.6)
Periodontal disease	207 (62.5)	73 (46.2)
Abfraction	192 (58)	73 (46.2)
Bruxism	119 (36)	63 (39.9)
Recent periodontal surgery	137 (41.4)	56 (35.4)
Dental caries	79 (23.9)	45 (28.5)
Occlusal trauma/habits	104 (31.4)	41 (25.9)
Combinations of options		
Median (IQR)	8 (4)	7 (5)
Range	1-13	1-13

IQR: interquartile range; NA: not applicable; Not all respondents answered all questions; *: χ^2 except linear model ANOVA marked with *

MOREOVER:

- DH diagnosis:
 - 17 % of respondents (whatever the country) declare not to screen DH systematically during routine examination (47.4 % in Fr and 39.3 % in Be would do so).
 - Only 36.5 % in Fr and 48.3 % in Be feel very confident or confident.
- DH management:
 - 56.7 % of respondents in Fr and 64.8 % in Be feel confident.
 - Age is the characteristic that may influence the most DH management, with younger respondents being more conservative (ex: less MG surgery for Schiff 3 to air blast test (p=0.037)).
- Majority of respondents (Fr 58.7%; Be: 54.5%) declared that their DH initial education was insufficient and showed interest for further education (Fr: 68.9 %; Be: 80.7 %; p<0.001).
- Most respondents of both countries acknowledge DH impact on QoL (Fr: 96.8 %; Be: 91 %).

CONCLUSION

- The study, the first of its nature in France and Belgium, shows a lack of theoretical knowledge toward DH.
- It highlights the need for enhanced dental education (initial and continuing) toward DH but also for updated diagnostic, preventive and therapeutic recommendations at both national and international levels.

ACKNOWLEDGEMENTS

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