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Oral Care Needs Amongst Disadvantaged Migrants in France

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ABSTRACT

Background: Disadvantaged migrant populations face risk factors that can affect their oral health amongst other health issues. The purpose of this study was to explore the oral care needs of these populations and to identify the obstacles they might encounter in accessing dental care.

Methods: A cross-sectional study using secondary data was carried out in the Centre Médical Louis Guilloux in Rennes, France, a health centre offering dental consults to migrants. The data were obtained by clinical oral examination and analysed according to various criteria: reason for consultation, diagnosis, treatment plan, drug prescriptions, and referrals to other practitioners.

Results: A high prevalence of decay was observed amongst the patients (72.3%). Fifty-nine patients were identified as needing major oral health care amongst the 130 files that were analysed. The lack of proficiency in the host country's language was associated with a major need for oral care ($P < .02$).

Conclusions: This study highlights that disadvantaged migrants face important oral care needs in France. It suggests alternative actions that should be carried out to improve their access to dental care, including access to interpreting.

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Introduction

In the 1951 Refugee Convention, the United Nations Organization states that refugees must have access to health services in their host country,[1] including dental care. For nearly a decade, European countries have been facing an unprecedented refugee crisis, raising major public health issues and challenging the ability of host countries to deliver appropriate care to those people.[2,3] In 2017, 261,700 people migrated to France, nearly half of whom (about 100,000) were asylum-seekers.[4] These people are in potential need of oral care, prevention, and education.[5,6] However, a recent literature review identified a lack of data on migrants' health needs in Europe, especially in the oral health dimension.[7]

The notion of "migrants," as defined by the United Nation Migration Agency,[8] encompasses a wide range of different legal situations: asylum-seekers, who applied for asylum in the host country; refugees whose asylum application was accepted; and also undocumented migrants, whose application for asylum has been rejected or who have never applied for asylum. Those situations also encompass different social status, including people facing precariousness, that can be considered as disadvantaged.[9]

In France, disadvantaged migrants may benefit from 2 distinct complementary public health insurances schemes: CSS (complémentaire Santé Solidaire) for legal residents and AME (Aide Médicale d'Etat) for illegal migrants who have been residents for at least 3 months.[10] However, those public plans are

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insufficient to tackle all the barriers disadvantaged migrants may face to access health care. In this situation, migrants may benefit from innovative facilities providing primary care services, developed either by public hospitals (PASS Permanences d'accès aux soins de santé)[11] or nonprofit organisations.

The Réseau Louis Guilloux (RLG), founded in 1991, in Rennes, France, is one of these organisations. Its aim is to promote health to vulnerable populations of all origins living in the region of Brittany, France. In the Centre Médical Louis Guilloux (CMLG), the RLG provides medical consults to migrant people: refugees, asylum-seekers, and undocumented migrants. The CMLG offers health checkups and refers patients to other health professionals to carry out further care or complementary exams. Since 2016, approximately 1000 new patients were received per year for those medical consults (885 new patients in 2016, 977 in 2017, 1018 in 2018, and 861 in 2019). In December 2016, a dental consultation dedicated to migrants was opened within the CMLG. Dentists involved in this organisation carry out oral checkups and collect epidemiologic data. They do not perform oral treatments within the facility and refer the patients to either public or private oral care providers for necessary care.

There is a need to improve knowledge on disadvantaged migrants' oral health status and treatment needs. Moreover, better understanding of their sociodemographic characteristics as well as living circumstances may help implement strategies to meet those needs.[5,12] The purpose of this study was to evaluate the oral health status of those patients, investigate their needs for oral care, and identify factors that might be associated with those needs.

Methods

A cross-sectional study was carried out using secondary data collected from CMLG dental consults' patients. The study protocol was analysed and validated by the Rennes University Hospital ethics committee (notice n°20.143).

The study included patients who were registered on the online agenda (Google Agenda) for a dental consultation between December 2, 2016 (opening date of the dental consultation), and September 6, 2019 (end of data collection). Data were extracted from those patients' files on Access and Médaplix database software. Exclusion criteria were incomplete files and/or nonmigrant patients, defined in this context as a patient having French nationality.

Oral examinations were performed by 2 dentists with 15 years' experience on a medical examination table, using a probe and a mirror, under ceiling lighting. Teeth were not cleaned or dried before the exam. Only cavitated dental caries were recorded (caries classified as 5 or 6 according the International Caries Classification and Assessment System), for both permanent and primary teeth. Information concerning the oral sphere was registered in an online document on Médaplix software (word processor). In addition, the administrative file on Access software recorded patient's background information: sex, date of birth, age, country of origin, spoken languages, legal status (asylum-seeker; refugee; European Union citizen; illegal immigrant; unaccompanied underage children; and those with a residence permit "private life and family" or "subsidiary protection," which concerns persons whose asylum application was rejected but who were authorised to stay in France country because of the risks they might face in their country of origin), social security rights, family status (single, with family), accommodation (fixed, temporary, absent), and date of entry in France. General pathologies were also implemented in Access software. Patients' medical history was used to classify them according to the American Society of Anesthesiologist (ASA) Classification.[13]

After anonymisation, all of the data were extracted from the Access and Médaplix files and coded. The extraction was performed by a single examiner (CP) after a calibration process conducted by 3 of the researchers (CP, VM, and AC) on the first 15 files. Oral diseases' diagnostics were classified according to the 11th revision of the International Classification of Diseases (ICD-11) and binary coded (yes/no). Twelve diagnostic codes were used, including dental caries, disorders of tooth development, disease of pulp or periapical tissues, missing tooth, dislocation of tooth, calculus, periodontal disease, fracture of skull or facial bones, dermatological lesions, cellulitis, disease of salivary glands, disorders of orofacial complex, and temporomandibular joint disorders. The total number of untreated cavitated caries lesions (ICDAS 5/6) was recorded.

Variables concerning treatment plan were classified according to the French classification of medical acts (Classification Commune des Actes Médicaux de l'Assurance Maladie). Treatments were coded in 13 wide groups: scaling, sealants, topic fluoride application, restorative treatments, endodontic treatments, dental extractions (1 or 2 teeth, more than 2 teeth), occlusal appliances, fixed prosthetics, removable prosthetics, prosthetics repair, dentofacial orthopedic treatments, and periodontal treatments). Drug prescriptions (pain reliever, antibiotic, antiseptic mouthwash) and referral patterns for further care (private practice dentists, hospital dental care centre, and radiology office) were also categorised.

Eventually, in order to evaluate the need for oral care, a binary variable "major need for oral care" was created. Patients were considered positive for this variable when they presented at least one of the following criteria: 4 or more untreated cavitated dental caries, 3 or more teeth needing extraction, need for prosthetic treatment (removable and/or fixed prosthesis), and need for periodontal treatment (excluding simple scaling). These criteria were selected to differentiate patients who might need multiple treatment sessions and potentially more complex technical facilities from patients who might be cared for under more simple conditions.

Data were collated in Microsoft Excel software (version 16.34) and analysed with RStudio software (version 3.6.1). Relationships between "major need for oral care" and other qualitative variables were assessed, using chi-square for qualitative variables. For qualitative variables with multiple items (spoken languages and geographic origin), each item was considered as a dichotomic variable. A logistic regression model was used to evaluate the association between the major need for oral care (dependent variable, as previously defined) and the languages spoken (explanatory variable, categorical with 3 levels: French; Non-French; neither French nor English), adjusted for age and sex. The tests were

considered statistically significant when the *P* value was less than .05.

Results

Two hundred thirty-two patients consulted CMLG dental consultation during the inclusion period. One hundred patients were excluded for incomplete files: 60 were excluded due to lack of information concerning oral health status (the Médaplix file). This lack of data in the files is mainly explained by the inconsistency in the filling out of the files by the dentists at the start of the dental consultation and, more sporadically, technical difficulties to implementing the computer files. The other 40 exclusions were due to a lack of information in the administrative file (Access software), inducing an absence of data that were essential to the analysis, such as geographical origin or language spoken. Two patients were excluded for not being migrants (French citizens).

One hundred thirty patients were eventually included in this study. Men represented 64.6% of the population (n = 84) and the average age was 30.2 ± 15.3 years (range, 4 to 70 years). About a quarter of the population (24.6%, 32 patients) were minors (younger than 18 years old).

The population had varied geographic origins. The countries of origin have been grouped into 8 major geographic regions (Table 2). Twenty-one different languages were spoken. French was spoken by 27.7% of patients (n = 36), 10.8% were English-speakers (n = 14), and 61.5% spoke neither French nor English (n = 80).

Patients included in the study were mostly asylum-seekers (70%, n = 91). Further, 63.8% (n = 83) had open social security rights (covered by the French government). According to the ASA classification, half of the population (50.8%, n = 66) was free from general diseases (ASA I). Medical file analysis did not reveal any contraindication for oral care in private dental practices. Thirty-one subjects (23.8%) had been diagnosed with a psychiatric disease by CMLG doctors, and 52 had experienced physical or psychological violence (40%). A majority of the population was in France for less than 6 months when they consulted. The median length of stay in France before the first dental consultation was 172 days. Between December 2, 2016, and September 6, 2019, 149 dental consultations took place, an average of 1.15 appointments per patient. Missed appointments represented less than 10% of scheduled dental consultations at the CMLG. After their first medical consultation, 70 patients were considered eligible for interpreting service organised by CMLG for further medical consultations.

Forty-eight patients (36.9%) consulted for a dental emergency. Diagnosis, treatment plans, drug prescriptions, and the type of dental service to which they were referred after screening are presented in Table 1. Seventy-two percent of patients (n = 94) had dental caries and 17.7% (n = 23) had more than 3. Almost half of the population (49.2%, n = 64) had at least 1 tooth missing. A third (36.2%, n = 47) of the subjects needed scaling. Eighty-nine patients (69.2%) needed restorative treatments. Fifty-five patients (42.4%) needed tooth extraction, and 8.5% (n = 11) needed extraction of more than 2 teeth. Twenty-nine patients (22.3%) needed prosthetic treatments. A drug prescription had been delivered for 6 patients (4.6%). Finally, 95.4% (n = 124) of the patients who benefitted from dental consultation at the CMLG were referred for further dental care, mainly (82.3%, n = 107) to private dental practices.

Table 1 – Data from dental exams.

	n	%
Diagnosis (n = 129; 99.2%)		
Dental caries	94	72.3
≥4	23	17.7
<4	71	54.6
Disorders of tooth development	9	6.9
Disease of pulp or periapical tissues	31	23.8
Missing tooth	64	49.2
Dislocation of tooth	2	1.5
Calculus	42	32.3
Periodontal disease	10	7.7
Fracture of skull or facial bones	1	0.8
Dermatological lesions	2	1.5
Cellulitis	2	1.54
Disease of salivary glands	1	0.8
Disorders of orofacial complex	11	8.5
Temporomandibular joint disorders	2	1.5
Treatments (n = 126; 96.9%)		
Scaling	47	36.2
Sealants	4	3.1
Topic fluoride application	16	12.3
Restorative treatment	90	69,.2
Endodontic treatment	32	24.6
Extraction of 1 or 2 teeth	44	33.9
Extraction of more than 2 teeth	11	8.5
Occlusal appliance	3	2.3
Fixed prosthesis	5	3.9
Removable prosthesis	25	19.2
Prosthetics repair	2	1.5
Dentofacial orthopedic treatment	4	3.1
Periodontal treatment	3	2.3
Drug prescription (n = 6; 4.6%)		
Pain reliever	4	3.1
Antibiotic	4	3.1
Mouthwash	1	0.8
Referral (n = 124; 95.4%)		
Private dental practice	107	82.3
Hospital dental care centre	17	13.1
Radiology office	5	3.9
Major need for oral care (binary)	59	45.4

The group “major need for oral care” included 59 patients (45.4%). The study of the association between sociodemographic data and oral health condition is shown in Table 2. Gender, age, legal status, social security rights, family status, accommodation, length of stay in France before the consultation, general health (ASA classification status), psychiatric illness, and violence experienced were not associated with "major oral care needs." On the other hand, geographic origin and spoken languages were significantly associated with higher oral care needs ($P < .02$). Patients of sub-Saharan origin were less likely to have a major need for oral care (30.2%, n = 13), whilst patients from the Caucasus were more likely to (64.5%, n = 20), as compared to the entire population (45.4%, n = 59).

Statistical analysis showed that having a major need for oral care was associated with not speaking French

Table 2 – Association between patients' background variables and major need for oral care.

Sociodemographic data		n	%	Major need for oral care		P
				n	(%)	
Gender	Male	84	64.6	37	44.0	.679
	Female	46	35.4	22	47.8	
Age	Major (>18 years old)	98	75.4	43	43.9	.546
	Minor	32	24.6	16	50.0	
Geographic origin	Sub-Saharan Africa	43	33.1	13	**30.2***	**.015***
	Caucasus	31	23.9	20	**64.5***	**.014***
	Middle East	23	17.7	11	47.8	.795
	Europe (except EU)	12	9.2	6	50.0	.736
	Asia	10	7.7	5	50.0	.760
	EU	7	5.4	2	28.6	NA
	Latin America	2	1.5	1	50.0	NA
	Northern Africa	2	1.5	1	50.0	NA
Spoken languages	French	36	27.7	10	**27.2***	**.018***
	English	14	10.8	4	28.6	.292
	None of either	80	61.5	45	**56.3***	**.004***
Legal status	Asylum-seekers	91	70.0	39	42.9	.852
	Others	29	30.0	13	44.8	
Social security rights	CMU/AME	83	69.2	41	49.4	.147
	Unopen rights	37	30.1	13	35.1	
Family status	With family	61	56.5	32	52.5	.307
	Alone	47	43.5	20	42.6	
Accommodation	Fixed/temporary	68	63.6	29	42.6	.909
	Absence	39	36.4	16	41.0	
Length of stay	<6 months	63	51.2	33	52.4	.176
	≥6 months	60	48.8	23	38.3	
ASA classification	I	66	50.8	29	43.9	.888
	II	43	33.1	21	48.8	
	III	21	16.1	9	42.9	
Psychiatric illness	Yes	31	23.8	11	35.5	.222
	No	99	76.2	48	48.5	
Violence experienced	Yes	52	40.0	26	50.0	.388
	No	78	60.0	33	42.3	

AME, Aide Médicale d'Etat; ASA, American Society of Anesthesiologists; CMU, Couverture Maladie Universelle; NA, not applicable.

* Significant between two groups by chi-square test.

(adjusted odds ratio, 3.04; P = .0105) and speaking neither French nor English (adjusted odds ratio, 3.24; P = .0027) (Table 3).

Discussion

This study is the first of its kind to display clinical data on the need for oral care in a migrant population in France. The high prevalence of untreated cavitated dental caries observed (72.3%) is coherent with the results from a study conducted in Belgium.[14] Even if no association was found between the length of stay in France prior to the dental consultation and the oral health status needs of this population, it is possible to hypothesise that changes in nutritional and oral hygiene behaviours related to the precarious circumstances of the migratory journey and residence in the host country may explain this high prevalence.

A study recently conducted in Norway highlights that migrants who have experienced violence can have posttraumatic stress disorder (PTSD), making oral examinations and care more complicated.[15] In this study, no association was observed between having been subjected to violence or torture and poorer oral health. This absence of association may be explained by the fact that this study mainly included recently arrived migrants (median length of stay in France before dental examination was 172 days). Influence of PTSD-related dental anxiety on dental status may take more time to be observed.

Table 3 – Odds ratio for major need for oral care in relation to spoken languages.

Spoken language	Crude odds ratio	P	Adjusted odds ratio*	P
French (Ref.)	–	–	–	–
Non-French	2.83	.0177	3.04	.0105
Neither French nor English	3.13	.0036	3.24	.0027

* Model was adjusted for age (continuous) and sex (male; female).

Results from this study showed that migrants who accessed the CMLG's dental consultation have a high need for oral care. Treatment needs ranged from scaling to more complex and time-consuming treatments such as restorative and endodontic treatments, multiple tooth extractions, and prosthetic and periodontal treatments.

The dentists who were involved in this consultation hypothesised, on the basis of their clinical experience, that the patients who were more in need of oral care may also have other factors of difficulty in accessing such care. This hypothesis prompted the creation of the variable "major need for oral care." Despite the arbitrary nature of this variable, it can be considered as effective and useful to categorise patients according to the resources that will be needed to improve their oral health: Dental care of patients categorised as being in "major need for oral care" will require more time and technical facilities, implicate more risks, and finally imply higher needs for effective dentist–patient communication.[16] From that perspective, the association between the need for oral care and linguistic proficiency appeared critical to evaluate.

Exploration of associations between the "major need for oral care" variable and sociodemographic data revealed that it was dependent of the geographic origin, especially for patients from Caucasus (who presented higher need for oral care) and Sub-Saharan Africa (who presented lower need). Those results are coherent with ethnicity-related caries experience highlighted in a study conducted amongst adults in the UK.[17] They might be explained by origin-related habits and lifestyle that have an impact on oral health. This hypothesis is supported by the updated Global Burden of Disease estimates for 2017 study, which shows higher prevalence of untreated dental caries in Causasus compared to Sub-Saharan Africa.[18]

In addition, the part of the population in "major need for oral care" was also more prone to a lack of proficiency in French and English. This linguistic barrier may impede their access to oral health care. Indeed, language-related disparities in accessing medical care have been established in previous studies.[19,20] An association between the lack of proficiency in a host country's language and access to oral care was also observed in a study on children's access to oral care in the United States.[21] In addition, the population consulting the CMLG faces social precariousness, which also constitutes an obstacle to access to general medical and oral care.[22]

Findings from this study should be interpreted with caution. First, its design does not permit evaluation of the impact of patients' background on their oral health status. Also, the limited number of subjects included in the study (N = 130) should be considered when interpreting the associations revealed through the statistical analysis. In comparison, the high number of patients excluded (n = 102) might appear important. However, the fact that the patients were excluded due to files' incompleteness, unrelated to their oral or sociodemographic data, should minimise the risk of selection bias. This study is also affected by a selection bias related to the referral of the patients to the dental consultation by a medical doctor. Finally, number of dental caries might also have been underestimated as a result of evaluation bias related to the clinical examinations conditions and to the fact that only cavitated lesions were recorded.

Despite the limitations mentioned, this study shows that the part of this population who faces a major need for oral care is also experiencing more linguistic obstacles to access it. This finding, which is coherent with a recently published review of the literature,[23] highlights the need to develop actions to promote oral health adapted to a non–French-speaking public.

First, migrants should be able to benefit from interpreting services for their dental care appointments. Such interpreter-mediated dental consultations have been shown to facilitate communication and therefore promote empowerment of the patients.[24]

Another strategy could consist in the development of dental care facilities dedicated to those patients. Canadian non-profit community dental clinics that have been established to deliver care for patients without health social coverage could be an example worth following. However, their sustainability over time might be jeopardised without reliable public revenues.[25] Hospital-based dental care could be developed as well, through structures like PASS (Permanences d'Accès aux Soins de Santé).[26]

Nowadays, most of the patients who benefitted from CMLG's dental consultation are then referred to private practices. Further research is needed to identify how well this strategy responds to this population's important need for oral care. However, it has been observed that some dentists can be reluctant to receive precarious patients in their private practices, arguing the risk of missed appointments.[26] As the case may be, the development of an allowance for the dentists in case of missed appointments, as previously carried out in Belgium, could be considered.[14]

Regardless of the strategy being pursued to enhance access to oral care, dedicated dental consultation remains a useful tool, allowing dental checkups, prevention actions, and referrals of patients. It therefore constitutes a key actor in the development of oral health promotion for migrant populations, on both the practical and the local health policy dimensions.

Conclusions

This study highlights the extent of the need for oral care in a disadvantaged migrant population in France. Those needs appear increased within a part of this population lacking proficiency in the host country's language. This highlights the need to develop interpreting in dentistry. Stakeholders and policymakers should consider those findings when implementing strategies to facilitate access to oral care for this population and subsequently tackle what appears as a socially determined inequality in oral health.

Conflict of interest

None disclosed.

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Author contributions

CP, PJ, VB, VM, and AC designed the study; CP collected the data; CP, EB, VM, and AC conducted the statistical analysis; CP, VM, and AC took the lead in writing the manuscript; and all the authors provided critical feedback and helped shape the manuscript.

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