

ORAL HEALTH CARE FOR REFUGEES: SMILES WITHOUT BORDER A NARRATIVE REVIEW

by Jana Publication & Research

Submission date: 09-Oct-2025 10:02AM (UTC+0300)

Submission ID: 2769520230

File name: IJAR-54243.pdf (671.01K)

Word count: 4728

Character count: 22951

ORAL HEALTH CARE FOR REFUGEES: “SMILES WITHOUT BORDER” A NARRATIVE REVIEW

INTRODUCTION

When peace is broken and the systems that keep society safe are not working, women and children are the ones who suffer the most. The years of war and fighting have caused a serious crisis where people don't have access to food, clean water, and basic services like healthcare and medicine.¹ Conflicts destroys people, families, and communities, creating many refugees and people who have left their homes. It also breaks human rights and the rules that protect people in emergencies.²

The number of immigrants and refugees have increased dramatically in recent years all over the world. The biggest numbers come from countries in Eastern Europe, Africa, Asia, and Latin America.³ According to the United Nations High Commissioner for Refugees (UNHCR), the number of people who have been forced to leave their homes worldwide went from 70.8 million in 2018 to 100 million by 2022. This increase is probably because of the situation in Afghanistan after the US left, and new conflicts in Ukraine, Ethiopia, and Myanmar.⁴ The health of refugees and migrants is closely connected to factors like employments, income, education, and residence. Refugees and migrants are among the most vulnerable groups in society, and they often face hatred, unfair treatment, bad living and working conditions, and limited access to general health services.⁵

Many refugees come from places where there is poor disease control, diagnosis, and treatment, and war or conflict has broken down the health care system. For example, refugee children often suffer from malnutrition, anaemia and poor growth, hepatitis, intestinal worms and dental problems etc... The countries that refugees come from reflect the current political situation in the world.⁶

26

27

28 **METHODS**

29 Related articles were searched using ³¹ databases such as ScienceDirect, Scopus, PubMed, and
30 Google Scholar from inception. All studies, published from 2004 - 2023 were included in the
31 study. Relevant articles in the topic and abstract were assessed and included in the study.

32 **Oral care for Refugees: Factors for consider**

33 *Role of Country of Origin*

34 Refugee children from East African countries, like Somalia and Ethiopia, have lower rates of
35 tooth decay when compared to Eastern European countries. This is because their traditional
36 diet has very little ¹¹ sugar, and their cultural practices, such as using chewing sticks, help
37 prevent tooth decay.⁶

38 *Role of Diet*

39 Several factors affect the development of tooth decay, and one of the main causes is how
40 much sugar someone eats. For example, in some ¹⁶ Latino households, it's common to calm a
41 ¹⁶ crying baby by giving them a bottle of sweetened milk or juice. Because of this, it's more
42 helpful to provide specific advice about the risks of letting a child drink sugary liquids from a
43 ¹⁶ bottle for long periods, including cow's milk and juice.⁷

44 *The role of acculturation*

45 A key factor that can slow down the acceptance ¹¹ of health messages is the common belief in
46 fatalism about certain health issues, especially dental problems like tooth decay. One study
47 found that Chinese immigrants often try home remedies first and only visit a dentist when all
48 else fails. These cultural beliefs need thorough conversations and clear information for

families to understand the importance of preventing dental issues.⁷This lack of action is a major public health and ethical concern, especially since providing equal healthcare is important for achieving fairness and well-being.⁸

Oral health is multifaceted in nature and includes physical, mental, and social aspects.⁹ The absence of dental assessments in basic care makes refugees more at risk, and the lack of dentists being involved in the care curtails the importance given to oral health.¹⁰ The rate of tooth decay in refugee children, even in high-income countries, ranges from 27% to 65%.⁹ Changes in eating habits and oral hygiene caused by the difficult conditions of migration and living in a new country might explain this high rate of tooth decay.¹¹

Studies looked at the oral health of patients and checked what oral care they needed. They found several factors that were connected to these needs. Here are the findings:

*Systematic Review*¹⁰

A detailed review of 14 studies showed that eight studies focused on oral health and found that caries prevalence between 50% and 100% of people. In six general health studies, the rate was between 3% and 65%. The more aged someone was, the more likely they had caries. Education level had the opposite effect — the lower the education, the higher the caries rate.

*Scoping Review*¹

Forty-five studies in this review, revealed that untreated caries was more common among migrants, refugees, and internally displaced people compared to those in the host community. In children, Early Childhood Caries (ECC) was more common among those who had experienced abuse, neglect, or were in protective care.

Refugees from the Asia Pacific, Africa, the Middle East, and Syria living in Canada were studied^{12,13,14}

The chance of reporting dental problems increased in the first two years after arrival and then decreased between two and four years. Women were more likely to report dental problems than men (OR 1.34). Immigrants who had received social assistance or reported being discriminated against were more likely to report dental problems over time. Those with household income of \$40,000 or less had lower chances of reporting dental problems.

For children under 18, with better self-rated physical health ($p=0.002$) and mental health ($p=0.044$) had better oral health. Children who had access to oral care insurance — whether it was full or partial coverage ($p=0.001$ and $p=0.028$, respectively) — had better self-rated oral health compared to those without insurance.

Refugees from East Africa and Asia living in the USA^{15,16}

Children aged 18 or younger - Asian refugees needed urgent (46.1%) and emergent (13.2%) dental treatment more often than African refugees (30.0% and 9.9%); this difference was significant ($p=0.032$). Young children between the ages of 2 to 5 required surgery under general anaesthesia in 15.3% of cases ($p=0.002$).

Refugees aged 18 to 60 - A one-point increase in the mother's KCOH score meant her child had 10% fewer filled surfaces on average. A one-point increase in the mother's COHI score meant her child had 42% fewer filled surfaces. Mothers who brushed their teeth for "salat" (prayer) had children with 92% fewer filled surfaces compared to mothers who brushed to prevent disease. Children who never brushed their teeth had 7.07 times more filled surfaces and 4.08 times more decayed and filled surfaces than those who brushed twice a day or more.

*Refugees from Sub-Saharan and Caucasian regions living in Rennes (France)*¹¹

Children aged 4 to 7 - 72% had dental caries, and 17.7% had more than 3. Almost half (49.2%) had at least one missing tooth. A third (36.2%) needed scaling. More than half needed

restorative treatments. 42.4% needed tooth extraction, with 8.5% needing more than two teeth removed. 22.3% needed prosthetic treatments. Children from Sub-Saharan regions were less likely to have major oral care needs (30.2%), while those from the Caucasus were more likely to (64.5%) compared to the overall population (45.4%).

Refugees living in Switzerland⁴

Fifty-eight studies were included in the review - Caries rates among refugees ranged from 4.6% to 98.7%, and gingivitis from 5.7% to 100%, showing a wide range in oral health. Regarding access to dental care, 17% to 72% of refugees had never visited a dentist.

Refugees from Africa living in Victoria (Australia)¹⁸

Children aged 0 to 18 - 46.1% had visible caries, and 51.6% had caries experience (dmft/DMFT > 0). African children with primary teeth were less likely to have any caries experience ($p = 0.017$), had a lower mean dmft score, and were less likely to have severe caries ($p = 0.004$) compared to children with primary teeth born in other countries.

Refugees from Syria living in Turkey¹⁹

Children (5,12&15 years) - The 5-year-old children had the highest percentage of tooth extraction, which was 42.2%. For the 12-year-olds-33.5% of the fissure sealants were in first molars, and 52.8% were in premolars. Restorative treatments were the most common dental service for the 15-year-olds, making up 44.4% of all caries-related dental services, Of these 68.2% were applied to the posterior teeth.

Refugees from Tibet living in Bylakuppe, Karnataka, India²⁰

Children (11-13 years) - The mean number of sextants with healthy periodontal tissue, bleeding, and calculus was 2.02 ± 2.0 for the Tibetan children and 2.49 ± 2.40 for the non-Tibetan children ($p < 0.05$).

119 *Refugees from Syria living in Bekka, Lebanon*⁹

120 Children (4 – 15 years) – 57% of children reported having current dental pain. Out of these,
121 55% had moderate to severe pain (scores 4–10), and 38% had this pain for more than a
122 month. About 8.9% had dental abscesses. Children who have been displaced for more than
123 five years, along with their age and gender, were more likely to have more decayed teeth
124 compared to others.

125 **ORAL HEALTH RELATED QUALITY OF LIFE (OHRQOL)**

126 In the field of oral health, the term oral health-related quality of life (OHRQoL) includes how
127 a person feels about their own oral health, in addition to what a dentist finds during an
128 exam.¹⁰ The refugee experience often includes displacement, conflict, human rights issues,
129 family separation, and long periods without access to basic needs or services. A study found
130 that almost half of Syrian men in refugee camps suffer from anxiety or depression, and most
131 refugees say their health is 'bad' or 'very bad'.²¹

132 **Following studies have evaluated OHRQoL:**

133 *Refugees from Eritrea, Cameroon, Myanmar, Turkey, Nepal, Iraq, and Afghanistan living*
134 *in Texas, USA*²²

135 Children <12 years- study found differences in the changes in the DMFT/dmft and
136 MOHRQoL-P scores from baseline to the three- and six-month follow-up visits between
137 groups were not significant ($p > 0.05$).

138 *Refugees from Arab and Sub-Saharan origin living in Melilla, Spain*¹⁵

139 Children aged 4–16 years – The overall average OHIP-14 score for all patients was 11.25,
140 which shows an acceptable self-perception of oral health.

141 *Refugees from Syria living in Kirikhan (Turkey)*²³

142 22 parents – The P-CPQ-8 score revealed that oral symptoms were the main concern for
143 parents, especially dental pain. Mothers had higher P-CPQ-8 scores across all areas compared
144 to fathers.

145 *Refugees from Syria living in Azara camp (Jordan)*¹⁶

146 Refugees aged over 16 years – The average OHRQoL score was 56.55. Factors linked to
147 OHRQoL scores included age ($p=0.048$), how often they brushed their teeth ($p = 0.001$), and
148 whether they visited a dentist in the past year ($p=0.004$).

149 **UTILIZATION OF DENTAL SERVICES**

150 The inverse care law in dental care shows that people who need dental treatment the most
151 often have the least access to it.²⁵ Even though many people understand the importance of
152 good oral health for overall health this understanding does not always translate into access to
153 care.²⁶

154 In the model developed by Penchansky and Thomas, access is seen as how well a patient fit
155 with the healthcare system, which is influenced by several factors like accessibility,
156 availability, acceptability, affordability, and accommodation.²⁷

157 Studies that evaluate access to dental care and the barriers or facilitators contributing to access

158 *Systematic Review*²⁷

159 Nine papers were included in this review- Both the characteristics of the population and the
160 healthcare system affect dental care access. The most common barriers to dental care for this
161 group are affordability, awareness, and accommodation.

162 *Systematic Review*²⁸

163 Nine studies were included in this review. Refugees in Sweden are more likely to use
164 dental services if they are older ($p'.$ $p<0.001$). Preference for English language for

communication and level of education showed significant associations with increased access to dental care ($p<0.001$).

Scoping Review²⁹

Seven studies were included in the review on nutrition interventions in refugee settings aimed at restoring healthy body weight. A significant improvement in weight-for-height was seen in all the study children, and a 90% reduction in anaemia was achieved.

Mexican and Somali Refugees living in the USA^{30,31}

Refugees aged over 18 years—The proxy for increased access to dental care was significantly positively linked with understanding and speaking English ($p<0.001$).

A study looked at how well people remember information about oral health and how their habits change. Four types of knowledge were found: increased general knowledge about oral health (40.6%) and better brushing practices (37.5%). When it comes to changing oral hygiene behaviours, there were four main areas: more frequent flossing (50%), better brushing habits (43.8%), improved brushing techniques (12.5%), and overall oral care (9.4%).

Refugees from Algeria, Canada, Australia, and the USA living in Halle (Saale), Germany³²

On average, there were 568 people, with about 1.44 treatment cases and 2.53 dentist visits per person. Most visited the dentist due to localized (43.2%) or non-localized (32.0%) pain. The most common issue was tooth decay.

Refugees in New South Wales (Australia)³³

At baseline, only 50% of staff felt confident in providing Trauma of Informed Care (TIC) to refugees and asylum seekers. After training, 97% felt confident in understanding and delivering treatment.

Refugees from Syria in Turkey³⁴

Aged 18 years- reported that 71. 9% hadn't visited a dentist in the last year, and 82. 8% hadn't gone in over 12 months. Most had no trouble getting oral and dental hygiene products (68. 4%), but about 62. 6% had trouble getting dental treatment.

Refugees from Syria in Zatari camp, Jordan³⁴

Women who had never heard of dental implants were more than men ($p<0.001$). A small group, 6. 2%, believed that implants need more care than natural teeth, while 47. 6% thought that diseases could affect the success of implants. Friends were the most common source of information, with 61. 4% of the people getting their information from them.

Refugees from Central Africa who are living in Gado-Badzeré (Cameroon)³⁵

Aged 6 to 80 years- showed poor knowledge about oral health. 42. 6% of those who visited the health post for their oral health problems were not satisfied with the care they received.

ACCULTURATION AND ORAL HEALTH LITERACY IMPACT ON ORAL HEALTH

Acculturation is the process of adapting to a new culture when people from different backgrounds come into regular contact. It can influence lifestyle, behaviours, and social norms, and it is often connected with socioeconomic changes.³¹ According to the "cultural marginality model," refugees with moderate levels of acculturation may lose some of the beneficial traditional dental practices they had before, without fully adopting the preventive practices of their new environment.³⁷

Oral health literacy is the ability of individuals to get, understand, and use basic oral health information and services to make good health decisions. Health literacy can be divided into two types: functional, which is the ability to read and understand health-related information,

211 and comprehensive, which is the ability to use health knowledge to make informed decisions
212 about one's health.³⁸

213 Studies looking at how refugees adjust to new cultures and their understanding of oral
214 health:

215 *Refugees from Somalia, Iraq, and Syria living in Massachusetts, USA*^{37,38}

216 People who had better health literacy were 2.0 times more likely to get preventive care
217 ($p=0.02$). Those who could read words better were 1.8 times more likely to get preventive
218 care ($p=0.04$).

219 **Maternal dental health and its relationship to caries experience among refugees**

220 Refugees from Mosul, Iraq living in Mamyza province, Iraq³⁹

221 Seventy-nine pre-school children – The mothers' knowledge oral health was low, and 63% of
222 the children's had tooth decay. Five-year-olds had more tooth decay (77. 8%) than four-year-
223 olds (51. 20%). The main reasons for the high tooth decay were frequent eating of sweets,
224 help with brushing teeth, and irregular dental visit.

225 **A TELE-HEALTH APPROACH TO ADDRESS REFUGEES' URGENT ORAL**
226 **HEALTH CARE**⁴⁰

227 This telehealth approach connects patients with doctors when they had a main problem.
228 By handling their urgent dental needs quickly, they were less likely to go to the county's
229 emergency room during the pandemic.

230 **ADVANTAGES**

231 • Technology and software made it possible to have remote check-ups, triage, and quick or
232 timely evaluation of dental issues.

• Refugee patients learned about how to navigate healthcare and what to expect from providers through a teach-back method.

⁸ • The time saved through the telehealth screening process allowed for an extra urgent care session (3 instead of twice a year), where 120 patients received multiple procedures in one session.

• This was especially significant because the pandemic had shut down clinics, making it hard to provide care for this vulnerable group.

CHALLENGES

• The dentist had to frequently access the online link, which increased their workload.

⁸ • More time was needed for communication and training between the dentist, dental team, urgent care clinic organizers, and all those using the tool.

CONCLUSION

As a result, it is likely that refugees face a high level of oral health issues. This is even more true in low and middle-income countries. A major reason for differences in oral health is ¹⁹ limited access to dental care. The difficulties in accessing proper oral healthcare for this growing group raise public health and ethical concerns, such as fairness in healthcare distribution and respecting individuals' choices. Understanding the common oral health ³ problems among refugees and asylum seekers can help policymakers plan better treatments and strategies that fit into the healthcare systems of host countries, which are often already under heavy strain when many refugees arrive suddenly.

Conflict of interest: No conflict/competing interest

Funding: Not applicable

Ethical approval: Not applicable

256 Patient Consent: Not applicable

258 REFERENCES

- 259 1. Folayan MO, Schroth RJ, Ayouni I, Nguweneza A, Arheiam A, Al-Batayneh OB et al. A
260 scoping review linking early childhood caries to violence, neglect, internally displaced,
261 migrant and refugee status. BMC Oral Health. 2023;23(1):747.
- 262 2. Lafta, R. K., & Al-Nuaimi, M. A. War or health: a four-decade armed conflict in
263 Iraq. Medicine, Conflict and Survival. 2019;35(3), 209–226.
- 264 3. Angelillo IF, Nobile CG, Pavia M. Oral health status and treatment needs in immigrants
265 and refugees in Italy. Eur J Epidemiol. 1996;12(4):359-65.
- 266 4. Banihashem Rad SA, Esteves Oliveira M, Maklennan A, Castiglia P, Campus G. Higher
267 prevalence of dental caries and periodontal problems among refugees: A scoping review.
268 J Glob Health. 2023; 13:04111.
- 269 5. Ribas-Pérez D, SevillanoGarcés D, Rodríguez Menacho D, Hernandez-Franch PV,
270 Barbero Navarro I, CastañoSéiquer A. cross-sectional Study on Oral Health-Related
271 Quality of Life Using OHIP-14 in Migrants Children in Melilla (Spain). Children
272 (Basel). 2023;10(7):1168.
- 273 6. Cote S, Geltman P, Nunn M, Lituri K, Henshaw M, Garcia RI. Dental caries of refugee
274 children compared with US children. Pediatrics. 2004;114(6): e733-40.
- 275 7. Crespo E. The importance of oral health in immigrant and refugee children. Children
276 (Basel). 2019;6(9):102.
- 277 8. Murphy J, Scully C. Oral healthcare implications of mass migration. Dent Update.
278 2015;42(10):965-8, 970-1.

- 279 9. Joury E, Meer R, Chedid JCA, Shibly O. Burden of oral diseases and impact of
280 protracted displacement: A cross-sectional study on Syrian refugee children in
281 Lebanon. *Br Dent J*. 2021 May 13. doi: 10.1038/s41415-021-2960-9.
- 282 10. Bhusari S, Ilechukwu C, Elwishahy A, Horstick O, Winkler V, Antia K. Dental caries
283 among Refugees in Europe: A systematic literature review. *Int J Environ Res Public*
284 *Health*. 2020;17(24):9510.
- 285 11. Pichemin C, Boyer E, Jarno P, Bertaud V, Meuric V, Couatarmanach A. Oral care needs
286 amongst disadvantaged migrants in France. *Int Dent J*. 2022;72(4):559-64.
- 287 12. Calvasina P, Muntaner C, Quiñonez C. The deterioration of Canadian immigrants' oral
288 health: analysis of the Longitudinal Survey of Immigrants to Canada. *Community Dent*
289 *Oral Epidemiol*. 2015;43(5):424-32.
- 290 13. Moreau AM, Hennous F, Dabbagh B, Ferraz Dos Santos B. Oral health status of refugee
291 children in Montreal. *J Immigr Minor Health*. 2019;21(4):693-98.
- 292 14. Alzaghouli A, Rahimpoor-Marnani P, Yunis K, Alamgir A, Alghalyini B, Tamim H.
293 Characteristics of self-rated oral health among Syrian refugee parents in Ontario. *Int J*
294 *Dent*. 2023;4136520.
- 295 15. Ogawa JT, Kiang J, Watts DJ, Hirway P, Lewis C. Oral health and dental clinic
296 attendance in pediatric refugees. *Pediatr Dent*. 2019;41(1):31-34.
- 297 16. Flynn PM, Petersen A, Entinger J, Shire A. The Association of social determinants of
298 health with Somali refugee mother-child caries. *J Immigr Minor Health*. 2021;23(3):615-
299 23.
- 300 17. Pichemin C, Boyer E, Jarno P, Bertaud V, Meuric V, Couatarmanach A. Oral care needs
301 amongst disadvantaged migrants in France. *Int Dent J*. 2022;72(4):559-64.

- 302 18. Quach A, Laemmle-Ruff IL, Polizzi T, Paxton GA. Gaps in smiles and services: a cross-
303 sectional study of dental caries in refugee-background children. *BMC Oral Health*. 2015;
304 15:10.
- 305 19. Cubukcu CE, Celik ZC, Ata GD, Ozkaya G. Caries-related and Preventive Dental Care
306 of 5-, 12-, and 15-year-old Syrians in Bursa, Türkiye. *Int J ClinPediatr Dent*.
307 2023;16(1):64-67.
- 308 20. Sivakumar V, Jain J, Haridas R, Paliyal S, Rodrigues S, Jose M. Oral health status of
309 Tibetan and local school children: A Comparative Study. *J ClinDiagn Res*. 2016;10(11):
310 ZC29-ZC33.
- 311 21. Abu-Awwad M, Al-Omouh S, Shqaidef A, Hilal N, Hassona Y. Oral health-related
312 quality of life among Syrian refugees in Jordan: A cross-sectional study. *Int Dent J*.
313 2020;70(1):45-52.
- 314 22. Alrashdi M, Cervantes Mendez MJ, Farokhi MR. A randomized clinical trial Preventive
315 outreach targeting dental caries and oral-health-related quality of life for refugee
316 children. *Int J Environ Res Public Health*. 2021;18(4):1686.
- 317 23. Pani SC, Al-Sibai SA, Rao AS, Kazimoglu SN, Mosadomi HA. Parental perception of
318 oral health-related quality of life of Syrian refugee children. *J IntSocPrev Community*
319 *Dent*. 2017;7(4):191-96.
- 320 24. Abu-Awwad M, Al-Omouh S, Shqaidef A, Hilal N, Hassona Y. Oral health-related
321 quality of life among Syrian refugees in Jordan: A cross-sectional study. *Int Dent J*.
322 2020;70(1):45-52.
- 323 25. Nurelhuda NM, Keboa MT, Lawrence HP, Nicolau B, Macdonald ME. Advancing our
324 understanding of dental care pathways of refugees and asylum seekers in Canada: A
325 Qualitative Study. *Int J Environ Res Public Health*. 2021;18(16):8874.

- 326 26. Kidane YS, Ziegler S, Keck V, Benson-Martin J, Jahn A, Gebresilassie T, Beiersmann
327 C. Eritrean Refugees' and asylum-seekers' attitude towards and access to oral healthcare
328 in Heidelberg, Germany: A qualitative study. *Int J Environ Res Public Health*.
329 2021;18(21):11559.
- 330 27. Paisi M, Baines R, Burns L, Plessas A, Radford P, Shawe J, Witton R. Barriers and
331 facilitators to dental care access among asylum seekers and refugees in highly developed
332 countries: A systematic review. *BMC Oral Health*. 2020;20(1):337.
- 333 28. Veginadu P, Gussy M, Calache H, Masood M. Disparities in spatial accessibility to
334 public dental services relative to estimated need for oral health care among refugee
335 populations in Victoria. *Community Dent Oral Epidemiol*. 2023;51(3):565-74.
- 336 29. Abuhaloob L, Carson S, Richards D, Freeman R. Community-based nutrition
337 intervention to promote oral health and restore healthy body weight in refugee children:
338 a scoping review. *Community Dent Health*. 2018 ;35(2):81-8.
- 339 30. Ponce-Gonzalez IM, Cheadle AD, Parchman ML. Correlation of oral health education
340 by community health workers with changes in oral health practices in migrant
341 populations in Washington State. *J Prim Care Community Health*. 2021;12:
342 21501327211002417.
- 343 31. Hunter-Adams J, Cochran J, Laird LD, Paasche-Orlow MK, Geltman PL. Acculturation
344 and a potential relationship with oral health outcomes among Somali refugees in
345 Massachusetts. *J Immigr Minor Health*. 2018;20(2):351-59.
- 346 32. Freiberg A, Wienke A, Bauer L, Niedermaier A, Führer A. Dental care for asylum-
347 seekers in Germany: A retrospective hospital-based study. *Int J Environ Res Public*
348 *Health*. 2020;17(8):2672.

33. Kelton S, Marcus K, Liston G, Masoe A, Sohn W. Refugee and Asylum Seeker Trauma Informed Care Training for Oral Healthcare Professionals in NSW, Australia. *Front Oral Health*. 2022 31; 3:907758.
34. Duman C, Uslu FS, Çakmak S, Aytekin ŞI, Apaydın T, Egil E. Accessibility to dental services by immigrant and refugee children residing in Turkey. *Int J Paediatr Dent*. 2023;33(5):423-30.
35. Salim NA, Meyad FH, Al-Abdallah MM, Abu-Awwad M, Satterthwaite JD. Knowledge and awareness of dental implants among Syrian refugees: A cross sectional study in Zaatari camp. *BMC Oral Health*. 2021;21(1):442.
36. Michael A, Bruno K, Tetu AT, Tambo E, Mark K, Sudeshni N. Oral health delivery in refugee camps in East region of Cameroon. *Afr Health Sci*. 2023;23(2):606-15.
37. Geltman PL, Hunter Adams J, Penrose KL, Cochran J, Rybin D, Doros G, et al. Health literacy, acculturation, and the use of preventive oral health care by Somali refugees living in Massachusetts. *J Immigr Minor Health*. 2014;16(4):622-30.
38. Elkerdany A, Gurenlian J, Freudenthal J. Measuring oral health literacy of Refugees: associations with dental care utilization and oral health self-efficacy. *J Dent Hyg*. 2020;94(2):9-17.
39. Noaman BR, Khalid RF, Fattah LD. Maternal dental health knowledge and its relation to the dental caries experience of their children in Mamyzawa camp of Refugees in Erbil, Iraq. *Acta Med Acad*. 2019;48(3):294-302.
40. Farokhi MR, Kester N, Grubestic R, Worabo H. A telehealth approach to address refugees' urgent oral health care. *J Dent Educ*. 2022 Dec;86 Suppl 3:1763-1766.

374

375

UNDER PEER REVIEW IN IJAR

ORAL HEALTH CARE FOR REFUGEES: SMILES WITHOUT BORDER A NARRATIVE REVIEW

ORIGINALITY REPORT

29%

SIMILARITY INDEX

21%

INTERNET SOURCES

27%

PUBLICATIONS

2%

STUDENT PAPERS

PRIMARY SOURCES

1

www.researchgate.net

Internet Source

3%

2

link.springer.com

Internet Source

3%

3

www.mdpi.com

Internet Source

3%

4

bmcoralhealth.biomedcentral.com

Internet Source

1%

5

boris.unibe.ch

Internet Source

1%

6

Camille Pichemin, Emile Boyer, Pascal Jarno, Valérie Bertaud, Vincent Meuric, Antoine Couatarmanach. "Oral Care Needs Amongst Disadvantaged Migrants in France", International Dental Journal, 2022

Publication

1%

7

www.nature.com

Internet Source

1%

8

Moshtagh R. Farokhi, Nurani Kester, Ruth Grubestic, Heidi Worabo. "A telehealth approach to address refugees' urgent oral health care", Journal of Dental Education, 2022

Publication

1%

9	Paola Calvasina, Carles Muntaner, Carlos Quiñonez. "The deterioration of Canadian immigrants' oral health: analysis of the Longitudinal Survey of Immigrants to Canada", Community Dentistry and Oral Epidemiology, 2015 Publication	1 %
10	www.ncbi.nlm.nih.gov Internet Source	1 %
11	mdpi-res.com Internet Source	1 %
12	Aseel Alzaghou, Parmin Rahimpour-Marnani, Khalid Yunis, Akm Alamgir, Baraa Alghalyini, Hala Tamim. "Characteristics of Self-Rated Oral Health among Syrian Refugee Parents in Ontario", International Journal of Dentistry, 2023 Publication	1 %
13	Italo Francesco Angelillo, Carmelo Giuseppe A. Nobile, Maria Pavia. "Oral health status and treatment needs in immigrants and refugees in Italy", European Journal of Epidemiology, 1996 Publication	1 %
14	calenda.org Internet Source	1 %
15	journals.lww.com Internet Source	1 %
16	Crespo. "The Importance of Oral Health in Immigrant and Refugee Children", Children, 2019 Publication	1 %

17	S. Cote, P. Geltman, M. Nunn, K. Lituri, M. Henshaw, R. I. Garcia. "Dental Caries of Refugee Children Compared With US Children", PEDIATRICS, 2004 Publication	1 %
18	ris.cdu.edu.au Internet Source	1 %
19	D. Prasanna Balaji, Pinar Dinç Kalayci, Seshadri Ramkumar. "Advances in Sports Science and Technology - Proceedings of the International Conference on Renaissance", CRC Press, 2025 Publication	<1 %
20	Submitted to University of Dundee Student Paper	<1 %
21	Submitted to Trident Technical College Student Paper	<1 %
22	gredos.usal.es Internet Source	<1 %
23	Anna Freiberg, Andreas Wienke, Lena Bauer, Andreas Niedermaier, Amand Führer. "Dental Care for Asylum-Seekers in Germany: A Retrospective Hospital-Based Study", International Journal of Environmental Research and Public Health, 2020 Publication	<1 %
24	www.drroyspencer.com Internet Source	<1 %
25	Riggs, Elisha, Sadna Rajan, Sue Casey, and Nicky Kilpatrick. "Refugee child oral health", Oral Diseases, 2016. Publication	<1 %

26

[pmc.ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov)

Internet Source

<1 %

27

Rana Dahlan, Babak Bohlouli, Bukola Salami, Humam Saltaji, Maryam Amin. "Parental acculturation and oral health of children among immigrants", Journal of Public Health Dentistry, 2021

Publication

<1 %

28

[worldwidescience.org](https://www.worldwidescience.org)

Internet Source

<1 %

29

Hao Zhang, Xiaoli Zeng, Yiwei Jiang, Wei Xu, Xun Wang, Cunrong Li, Ying Zhang, Yuehua Liu, Yan Wang. "The disparity in caries and sealants between migrant and native children in Shanghai: A cross-sectional study", International Journal of Dental Hygiene, 2019

Publication

<1 %

30

MHD Bahaa Aldin Alhaffar, MHD Alaa Aldin Alhaffar, sandor janos. "Oral Health Status and Dental Problems Among the Refugees in Karatepe Refugee Camp in Lesvos, Greece: a Cross-sectional Study", Research Square Platform LLC, 2022

Publication

<1 %

31

Seth Asare Okyere, Stephen Kofi Diko, Louis Kusi Frimpong, Matthew Abunyewah, Stephen Leonard Mensah. "Routledge Handbook of Resilient Urban Planning for Small and Medium-Sized Cities", Routledge, 2025

Publication

<1 %

32

acikerisim.atlas.edu.tr

Internet Source

<1 %

33

bda.247lib.com

Internet Source

<1 %

34

www.science.gov

Internet Source

<1 %

35

www.unboundmedicine.com

Internet Source

<1 %

36

Katharina Fink, Kais Alkayed, Franz Sebastian Schwindling, Vera Wiesmüller. "Oral Health-Related Quality of Life among Refugees: A Questionnaire-Based Study", Healthcare, 2024

Publication

<1 %

37

Murad Alrashdi, Maria Jose Cervantes Mendez, Moshtagh R. Farokhi. "A Randomized Clinical Trial Preventive Outreach Targeting Dental Caries and Oral-Health-Related Quality of Life for Refugee Children", International Journal of Environmental Research and Public Health, 2021

Publication

<1 %

38

Seyed Ahmad Banihashem Rad, Marcella Esteves Oliveira, Anastasia Maklennan, Paolo Castiglia, Guglielmo Campus. "Higher prevalence of dental caries and periodontal problems among refugees: A scoping review", Journal of Global Health, 2023

Publication

<1 %

39

Morenike Oluwatoyin Folayan, Robert J. Schroth, Imen Ayouni, Arthemon Nguweneza et al. "A scoping review linking early childhood caries to violence, neglect, internally displaced, migrant and refugee status", BMC Oral Health, 2023

Publication

<1 %

40

Priscilla M. Flynn, Ashley Petersen, Jodie Entinger, Abdulkadir Shire. "The Association of Social Determinants of Health with Somali Refugee Mother–Child Caries", *Journal of Immigrant and Minority Health*, 2020

Publication

<1 %

41

Sneha Bhusari, Chiamaka Ilechukwu, Abdelrahman Elwishahy, Olaf Horstick, Volker Winkler, Khatia Antia. "Dental Caries among Refugees in Europe: A Systematic Literature Review", *International Journal of Environmental Research and Public Health*, 2020

Publication

<1 %

Exclude quotes On

Exclude matches Off

Exclude bibliography On