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## Impact of a single information session with oral hygiene instructions on unaccompanied minor asylum seekers living in Switzerland

#### KEYWORDS

Adolescent asylum seekers

Oral health education

Oral health promotion

#### SUMMARY

Asylum-seeking adolescents who have passed the age of mandatory schooling may not have had the opportunity to receive oral hygiene instructions (OHI) similar to Swiss adolescents. Therefore, the aim of this study was to evaluate the impact of a single information session with OHI on both the knowledge about the consequences of lacking oral hygiene and the likelihood of implementing these instructions in unaccompanied adolescent asylum seekers living in Switzerland. Before and after a single information session with OHI, adolescent asylum seekers in two asylum centres (Menziken and Suhr, AG) were surveyed with written questionnaires. During the event, the consequences of lacking oral hygiene on oral health were explained and the Bass brushing technique was instructed and practised.

The present analysis included 30 male asylum seekers aged 15–18. In total, 90% (n = 27) cleaned their teeth daily and 70% (n = 13) had received previous OHI at their school (19.1%) or a doctor's practice (9.5%) in their country of origin or in Switzerland (19.1%), respectively. Following the event, 90% (n = 27) stated they had learned something new and 93.3% (n = 28) wanted to implement the instructions in their daily routine. While 63.3% (n = 19) of the respondents knew the consequences of lacking oral hygiene on oral health before the event, this value increased to 96.7% (n = 29) reaching statistical significance (p = 0.0039). In conclusion, the results of the present study suggest that the implementation of a single information session with OHI in asylum centres may improve the level of knowledge in adolescent asylum seekers and their oral health.

## Introduction

An earlier European refugee crisis, which reached a peak in 2015 before the Russian invasion of the Ukraine, presented the European Community with unprecedented challenges. An increase in migration took place at that time, especially from crisis areas in the Middle East and Africa (Global Trends Forced Displacement in 2019). Switzerland did, and still does, receive the highest proportional number of migrants among European countries and plays an important role in the reception of refugees. In order to cope with this task, Switzerland is called upon to develop strategies in various areas of social coexistence. These should integrate immigrants into the local society, give them access to medical care, to the labour market and housing, and guarantee security, especially for refugees. These considerations led to a triggering of civil society engagement in Europe in the most diverse areas, as well as the idea to carry out the study presented here.

Switzerland also faces economic challenges concerning human resources in terms of dental care. While school-age children and adolescents are educated annually by school dental services about maintaining oral health, adolescent asylum seekers who are no longer of school age do not have the opportunity to receive adequate oral hygiene instructions (OHI) according to Swiss standards. From both an ethical and a public health perspective, the question therefore arises as to whether and in what form the dental community should become more active in oral health care for adolescent asylum seekers in terms of preventive measures to contribute to their integration into society and access to dental care.

In order to assess whether such measures are necessary at all, it may be considered to determine how the oral health of immigrants and refugees stands, especially in comparison to the native population. The hypothesis that young people with a migration background have poor oral health has already been explored in previous investigations (ALMERICH-SILLA & MONTIEL-COMPANY 2007; BISSAR ET AL. 2007; COTE ET AL. 2004; CVIKL ET AL. 2014; JULIHN ET AL. 2010; LOCKER ET AL. 1998; SIVAKUMAR ET AL. 2016). Of particular interest was whether younger individuals already had poor oral health in their country of origin or whether it developed only during their stay in the country of immigration, and whether they had any knowledge of oral hygiene (OH). In addition, possible reasons for the oral conditions were investigated. This information, including differences between the various countries of origin, represents an important basis for integration into Swiss society in terms of adapted preventive measures. Adolescents with a migration background as an aggregated group have a higher caries prevalence or total caries experience as well as poorer oral health than the native population (ALMERICH-SILLA & MONTIEL-COMPANY 2007; BISSAR ET AL. 2007; COTE ET AL. 2004; CVIKL ET AL. 2014; JULIHN ET AL. 2010; LOCKER ET AL. 1998; SIVAKUMAR ET AL. 2016). This, on the other hand, appears to depend on the origin of the respective individuals: for example, adolescents of African origin had better oral health than the native society, whereas those from Eastern Europe had poorer oral health (COTE ET AL. 2004; JULIHN ET AL. 2010). Additionally, longitudinal studies continue to show a deterioration in oral health among adolescents with a migrant background during the period investigated (JULIHN ET AL. 2010). Moreover, an improvement in oral health through socio-economic advancement and use of public health dental measures was also discussed in the literature (LOCKER ET AL. 1998). Factors influencing oral health include dietary habits and OH in the country

of origin on the one hand, and acculturation and reduced access to dental care on the other (ALMERICH-SILLA & MONTIEL-COMPANY 2007; ANGELILLO ET AL. 1996; BISSAR ET AL. 2007; COTE ET AL. 2004; CVIKL ET AL. 2014; JULIHN ET AL. 2010; LOCKER ET AL. 1998; MARINO ET AL. 2001; SIVAKUMAR ET AL. 2016; VERED ET AL. 2003, 2008). Therefore, the World Health Organisation's (WHO) global strategy for improving oral health includes oral health promotion, which aims to develop self-care practices in children and adolescents (PETERSEN 2008). OHI are designed to achieve this goal. A wide range of studies were able to demonstrate that such instructions have a positive effect on the instructed. A positive influence was shown on the level of knowledge (GHAFFARI ET AL. 2018; KAY & LOCKER 1998; NAKRE & HARIKIRAN 2013), on behaviour (DE SILVA ET AL. 2016; GHAFFARI ET AL. 2018; MENEGAZ ET AL. 2018; NAKRE & HARIKIRAN 2013) as well as in the results of clinical studies (DE SILVA ET AL. 2016; MENEGAZ ET AL. 2018; NAKRE & HARIKIRAN 2013; RAMSEIER ET AL. 2007).

The WHO additionally states that globally, disadvantaged, and poor populations bear the greatest burden of oral diseases. Even in Western industrialized countries, although the general population has access to medical services, socially disadvantaged people and certain ethnic minorities still receive inadequate care (PETERSEN 2008). Current research aims to paint a picture of the impact of OHI on children, but scientific evidence on the impact on adolescents is limited. Furthermore, little is known about the impact on asylum seekers in general, and no study was identified on the impact of OHI on individuals from the countries of origin represented in this study.

These initial considerations led to the pilot project presented here, in which single information sessions with OHI were organised and carried out with unaccompanied minor asylum seekers in two asylum shelters in Menziken (AG) and Suhr (AG), Switzerland. The aim of this study was to show whether a single information session with OHI can have an impact on adolescent asylum seekers. Questionnaires completed by the attendees before and after the event were used to assess the impact on their level of knowledge. The results of this study should be used in the planning of oral health preventive measures for young asylum seekers.

## Materials and methods

In 2017, the social services of the Canton of Aargau held information sessions on request in two asylum centres where most of the approximately 120 unaccompanied minor asylum seekers living in the Canton of Aargau were housed at the time. The information sessions with OHI took place in May 2017 at the Menziken (AG) asylum centre with 22 participants and in June 2017 at the Suhr (AG) asylum centre with 9 participants, respectively. Several asylum workers were also present at each of the two locations. The study application with the number EKNZ 2017-00410 was submitted to and approved by the Ethics Committee of North-western and Central Switzerland.

In consultation with the managers of the two asylum centres, a maximum group size of 25 participants was set so that all attendees could be addressed individually, the technique demonstrated and practiced together. The instructions took place in rooms similar to classrooms, which were equipped with tables and chairs, projectors or televisions and washbasins.

## Course of the event

The course of the information session with OHI was the same at both centres. The duration of the entire event was about

60 minutes. Before the event began, all participants were informed about the event and how the surveys were conducted. After the initial information was provided, the attendees were asked to fill out the Informed Consent Form.

In order to assess the asylum seekers' previous knowledge on the topics of caries and gingivitis prevention as well as OH, all attendees were given a questionnaire to complete beforehand. Subsequently, theoretical knowledge about the development of caries and the consequences of poor OH was demonstrated by means of a PowerPoint presentation (Microsoft Corporation, Redmond, WA, USA). It was explained how caries can be prevented, and important topics of prophylaxis, such as nutrition, OH and fluoride, were discussed. When creating the PowerPoint presentation, care was taken to use as little text as possible but self-explanatory pictures in order to take into account the variability of the attendees' mostly low German language skills. During the session, small breaks were repeatedly taken to reconfirm that everything had been understood. If necessary, attendees who had been in Switzerland for a longer time and had a better knowledge of German translated for all those present.

For the instruction of OH, the Bass brushing technique was instructed with the help of images and short video sequences, with special emphasis on the systematic procedure, such as placing the toothbrush at a 45° angle and the small circular movements ([www.mundhygiene-instruktion.ch/de/selection.php?hilfsmittel=A](http://www.mundhygiene-instruktion.ch/de/selection.php?hilfsmittel=A)). The presentation was rounded off with a video of universal prevention messages published on the Swiss Red Cross website in 2014 with the aim of raising migrants' awareness of oral health.

In a subsequent practical part of the event, the previously instructed Bass brushing technique was practised with the toothbrushes (CH01430A meridol® toothbrush: 3 CS, GABA Schweiz AG, Therwil, Switzerland) and toothpastes (PL03419A elmex® SAC sample: 3 CS, GABA Schweiz AG, Therwil, Switzerland) as provided by CP GABA, Switzerland.

Immediately before the end of the event, a second multiple choice questionnaire was handed out to assess the impact of the knowledge attained.

### Statistical analysis

Statistical analyses were performed using RStudio (version 1.3.1093, RStudio Team [2020]. RStudio: Integrated Development Environment for R. RStudio, PBC, Boston, MA). Means, frequencies and standard deviations were calculated using descriptive statistics. Non-parametric comparisons between groups were made using the Kruskal-Wallis analysis of variance. Categorical data were analysed using Pearson's or McNemar's chi-squares tests and Fisher's exact tests. The significance level was set at  $p = 0.05$ .

### Results

A total of 31 male 15- to 18-year-old unaccompanied asylum seekers from two asylum centres in Menziken (AG) and Suhr (AG) attended the event. Of these, 30 participants were included in the analysis (Tab. I). One participant was excluded from the study since he had not answered the follow-up questionnaire. The countries of origin for the attendees were Eritrea (46.7%,  $n = 14$ ), Afghanistan (30.0%,  $n = 9$ ), Ethiopia (6.7%,  $n = 2$ ), Somalia (6.7%,  $n = 2$ ), Guinea (3.3%,  $n = 1$ ), and Gambia (3.3%,  $n = 1$ ). One attendee did not state his country of origin (3.3%,  $n = 1$ ).

### Descriptive analysis prior to the event

The results of the questionnaire, which was distributed to all attendees prior to the event, are presented in Table II. A total of 93.3% ( $n = 28$ ) of the respondents cleaned their teeth; two of them (7.1%) did not use a toothbrush. Other OH aids used were dental floss (53.6%,  $n = 15$ ), toothpick (46.4%,  $n = 13$ ) and other tools (14.3%,  $n = 4$ ). These responses didn't reveal any statistically significant difference between the two asylum centres ( $p > 0.05$ ). Therefore, the answers to these questions were

Tab. I Demographic data

		All $n = 30$ (100%)		A: Menziken $n = 21$ (70%)		B: Suhr $n = 9$ (30%)		p-values between A and B
		n	%	n	%	n	%	
Male		30	100.0	21.0	70.0	9.0	30.0	n.a.
Age	mean ± st. dev.	16.8 (±0.8)		16.9 (±0.8)		16.7 (±0.7)		0.607*
	min.–max.	15–18		15–18		15–17		N.A.
Country of origin	Afghanistan	9	30.0	3	10.0	6	20.1	
	Ethiopia	2	6.7	2	6.8	0	0	
	Somalia	2	6.7	1	3.3	1	3.3	
	Eritrea	14	46.7	13	43.3	1	3.3	0.034**
	Guinea	1	3.3	1	3.3	0	0.0	
	Gambia	1	3.3	0	0.0	1	3.3	
	Not specified	1	3.3	1	3.3	0	0.0	

\* Kruskal-Wallis rank sum test; \*\* Pearson's Chi-squared test ( $X^2 = 13.673$ , 6 degrees of freedom)

pooled for further analysis. The majority of all respondents reported using two oral hygiene aids in their daily OH routine (39.3%) (Fig. 1).

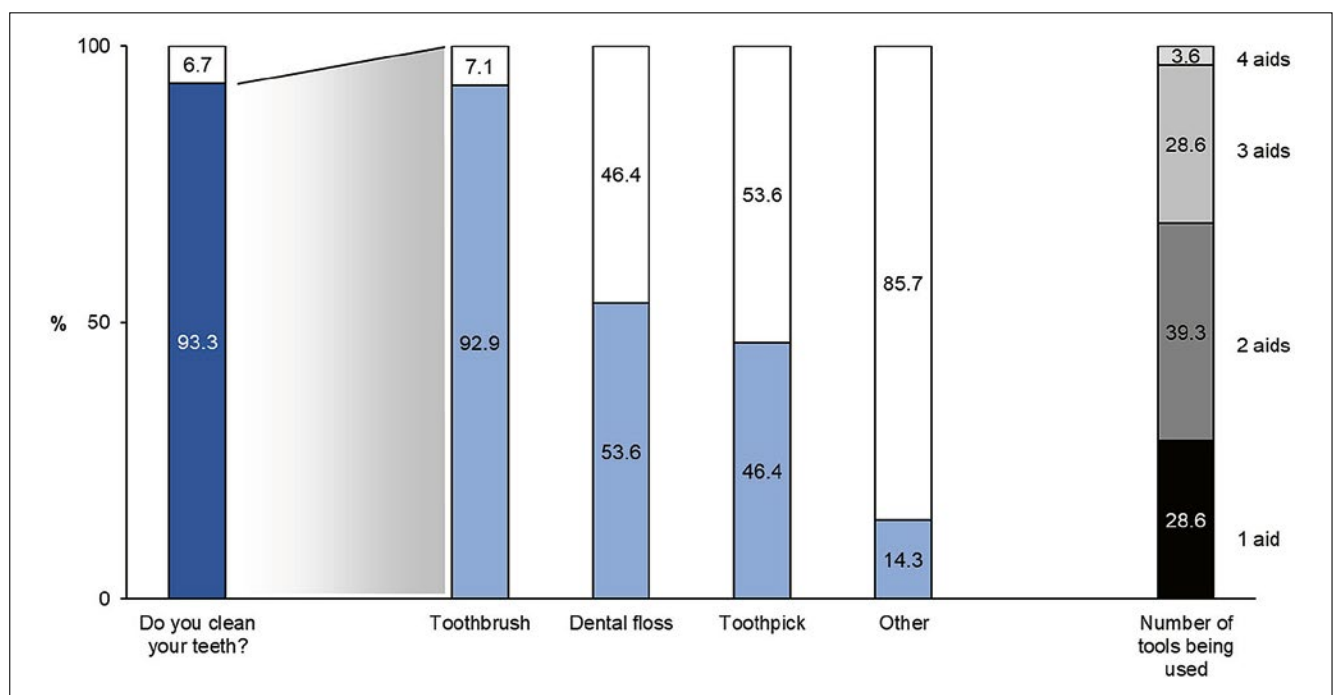
There were 27 participants (90.0%) who cleaned their teeth daily, but eight (26.7%) did not clean for more than one minute

per day. A total of 70.0% (n = 21) of the adolescents had already received OHI once (Tab. II). The most common locations of previous OHI were the school (19.1%) and Switzerland (19.1%), while 14.3% of respondents were instructed at home in their country of origin. Furthermore, some respondents (28.5%) did

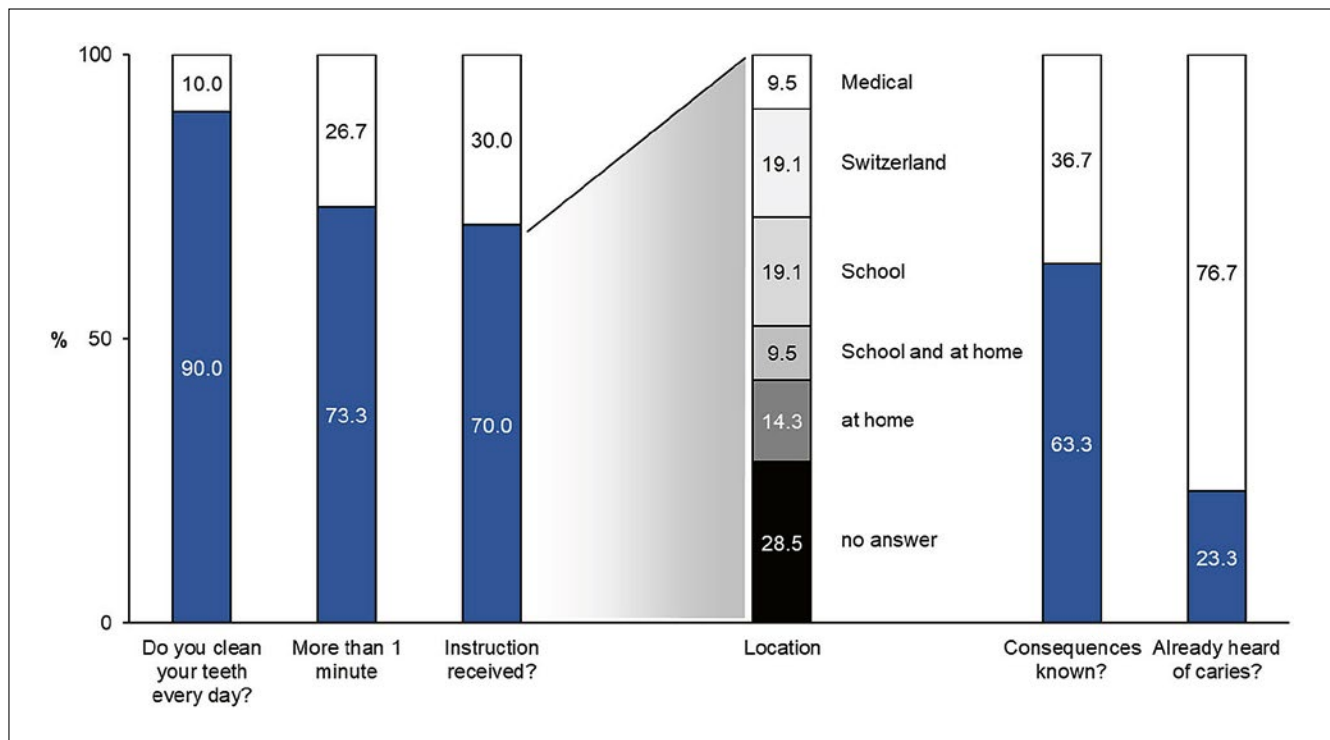
**Tab. II** Survey before the information event

	All n = 30 (100%)		A: Menziken n = 21 (70%)		B: Suhr n = 9 (30%)		p-values between A and B*
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)	
Do you own a toothbrush?	26 (86.7)	2 (6.7)	17 (81.0)	2 (9.5)	9 (100.0)	0 (0.0)	0.8224
Do you clean your teeth?	28 (93.3)	2 (6.7)	20 (95.2)	1 (4.8)	8 (88.9)	1 (11.1)	0.9999
If so, do you use:							
a) a toothbrush?	26 (92.9)	2 (7.1)	18 (90.0)	2 (10.0)	8 (100.0)	0 (0.0)	0.9076
b) tooth floss?	15 (53.6)	13 (46.4)	8 (40.0)	12 (60.0)	7 (87.5)	1 (12.5)	0.0633
c) a toothpick?	13 (46.4)	15 (53.6)	10 (50.0)	10 (50.0)	3 (37.5)	5 (62.5)	0.8574
d) other oral hygiene aids?	4 (14.3)	24 (85.7)	2 (10.0)	18 (90.0)	2 (25.0)	6 (75.0)	0.6694
Do you clean your teeth every day?	27 (90.0)	3 (10.0)	20 (95.2)	1 (4.8)	7 (77.8)	2 (22.2)	0.4256
Do you clean your teeth for more than one minute a day?	22 (73.3)	8 (26.7)	17 (81.0)	4 (19.0)	5 (55.6)	4 (44.4)	0.3217
Have you ever been shown how to clean your teeth?	21 (70.0)	9 (30.0)	15 (71.4)	6 (28.6)	6 (66.7)	3 (33.3)	0.9999
Do you know what happens to your teeth if you don't clean them?	19 (63.3)	11 (36.7)	13 (61.9)	8 (38.1)	6 (66.7)	3 (33.3)	0.9999
Have you ever heard of tooth decay?	7 (23.3)	23 (76.7)	6 (28.6)	15 (71.4)	1 (11.1)	8 (88.9)	0.5719

\* Pearson's Chi-squared tests (1 degree of freedom)



**Fig. 1** Pooled descriptive evaluation of the survey before the event on the use of different oral-hygiene aids for home oral hygiene.



**Fig. 2** Pooled descriptive analysis before the event survey on the duration of oral hygiene at home, the location of oral hygiene already received and knowledge of the consequences of insufficient oral hygiene.

**Tab. III** Survey after the information event

	All n = 30 (100%)		A: Menziken n = 21		B: Suhr n = 9		p-values between A and B*
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)	
Did you understand the presentation?	30 (100.0)	0 (0.0)	21 (100.0)	0 (0.0)	9 (100.0)	0 (0.0)	N.A.
Did you learn something new?	27 (90.0)	3 (10.0)	19 (90.5)	2 (9.5)	8 (88.9)	1 (11.1)	0.9999
Was the information valuable to you?	28 (93.3)	1 (3.3)	19 (90.5)	1 (4.8)	9 (100.0)	0 (0.0)	0.9999
Do you know what happens to your teeth if you don't clean them?	29 (96.7)	1 (3.3)	20 (95.2)	1 (4.8)	9 (100.0)	0 (0.0)	0.9999
Can you imagine cleaning your teeth from now on as you were shown today?	28 (93.3)	2 (6.7)	19 (90.5)	2 (9.5)	9 (100.0)	0 (0.0)	0.9999

\* Pearson's Chi-squared tests (1 degree of freedom)

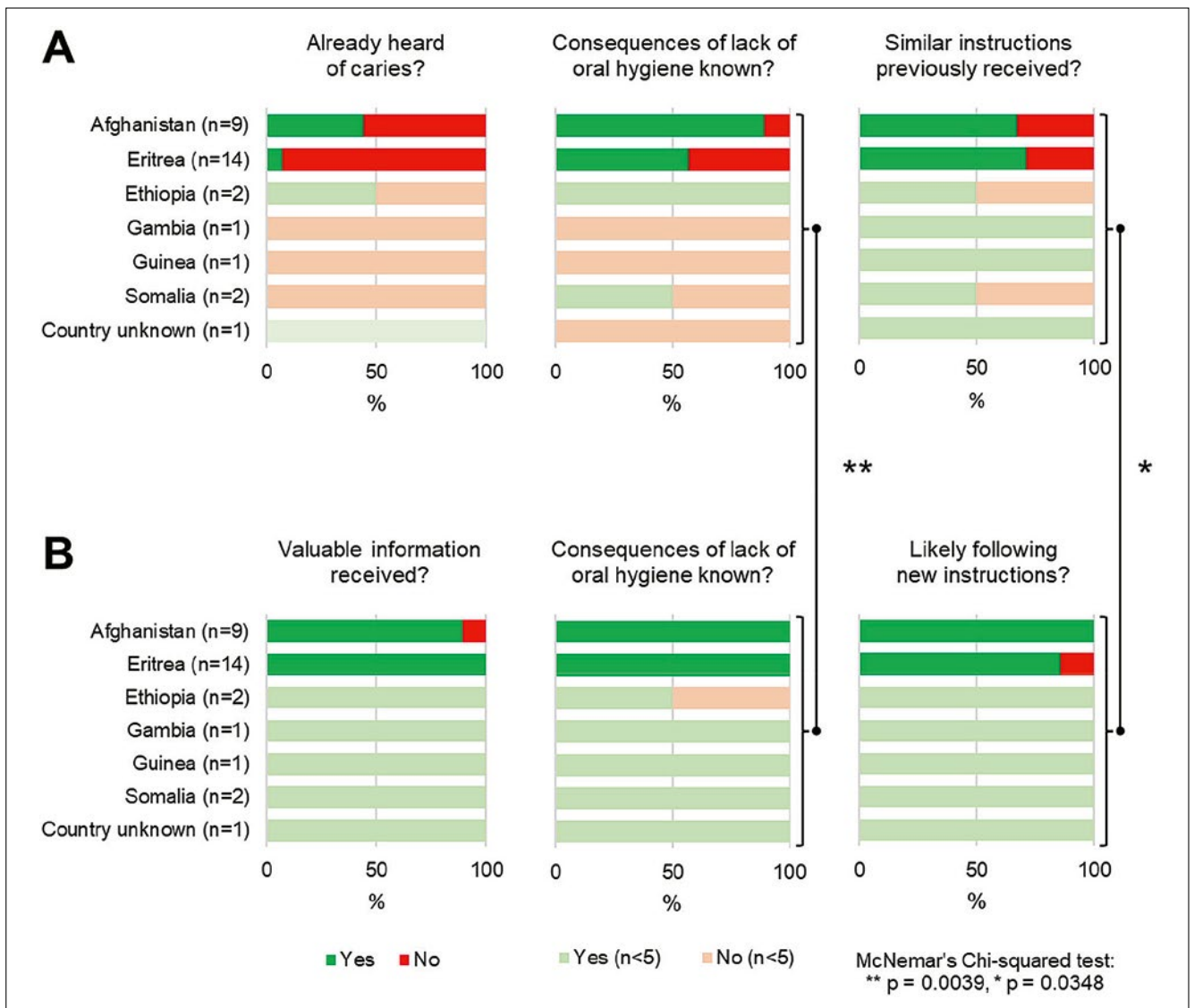
not specify where they had received previous instructions. The doctor's practice was also named by 9.5% of the respondents as the place where they received their first OHI (Fig. 2).

Prior to the information session, 63.3% (n = 19) of asylum seekers reported knowing what will happen to their oral health if they did not clean their teeth but 23.3% (n = 7) had not heard about tooth decay before (Tab. II). Awareness of the consequences of a lack of OH varied by country of origin. While most adolescents from Afghanistan stated that they were aware of the consequences, adolescents from Gambia, Guinea or Somalia were less aware of them (Fig. 3A).

### Descriptive analysis following the event

The answers to the second questionnaire, which was distributed after the event, are shown in Table III. As with the pre-event survey, the responses thereafter were without statistically significant difference between the two asylum centres ( $p > 0.05$ ). Therefore, the answers to these questions were again pooled for further analysis.

All respondents (100%, n = 30) stated that they understood the presentation and 90.0% (n = 27) learned something new. For 93.3% (n = 28) of the participants who answered the question, the information was valuable, and again 93.3% (n = 28) of the



**Fig. 3** Pooled evaluation of the survey before (A) and after (B) the event presented by country of origin. The consequences of the lack of oral hygiene became better known ( $p = 0.0039$ ). Likewise, the new instructions were more likely to be implemented following the event ( $p = 0.0348$ ).

asylum seekers interviewed could imagine continuing to clean their teeth in the same way as they were taught at the event.

At the time after the event, 96.7% ( $n = 29$ ) knew what would happen to their teeth if they did not clean them. Likewise, respondents from all countries of origin had found the information provided at the event valuable, were aware of the consequences of not practising OH, and could imagine implementing these OH measures every day as instructed (Fig. 3B).

#### Comparison of the results of both surveys

While 19 asylum seekers (63.3%) knew what would happen to their teeth if they did not clean them before the information session, this number increased to 29 of the respondents (96.7%) reaching statistical significance ( $p = 0.0039$ ) after the event (Fig. 3).

Of the three asylum seekers who individually stated that they had not learned anything new after the information session, two had already received OHI in Switzerland. They both cleaned their teeth daily and for more than one minute per day. The third had already received OHI in a doctor's practice but did not clean his teeth daily and for more than one minute per day.

The instruction session also increased the probability with statistical significance ( $p = 0.0348$ ) that the respondents would implement the instructions given, and regardless of their country of origin (Fig. 3).

#### Discussion

The present study is the result of a pilot project carried out in two Swiss asylum centres and includes the assessment of completed questionnaires filled out by young asylum seekers before and after an information session with OHI. The results revealed that even a single event can have a positive impact on the level of knowledge concerning the consequences of insufficient OH on oral health. While before the event 63.3% of the adolescents stated that they knew these consequences, 96.7% of the respondents knew about them, reaching statistical significance. Moreover, 90% of the attendees stated that they had learned something new, and 93.3% reported to clean their teeth in the future as shown in the instruction. Accordingly, it was concluded that even a small effort of a single information session with OHI may have a positive impact on the oral health of asylum-seeking adolescents.



The reason for the selection of our target group was to close a potential gap in the Swiss health care system, in order to help minors who have been released from mandatory schooling and who have not been able to benefit from school dental care and its preventive measures aiming to achieve better oral health. It is the hope that the adolescent asylum seekers will apply their newly acquired knowledge and personal skills to their daily lives through the instructions, thus positively impact their oral health.

In order to reach adolescent asylum seekers in Switzerland, it was necessary to contact the respective social services and subsequently the managers of the refugee administration. On the one hand, it may be reasonable to involve the caretakers in the asylum centres as multipliers of knowledge about OH measures by subsequently being able to carry out these instructions themselves; on the other hand, attempts are to be made to involve school dental care in the longer term to provide personnel for these instructions.

### Context with existing evidence

The positive impact of health promotion on oral health has been demonstrated in numerous studies with other target groups while being consistent with the results of the present study. Two different systematic reviews from 1998 and 2013 as well as one meta-analysis from 2018 confirm the improvement of knowledge after different programmes (GHAFFARI ET AL. 2018; KAY & LOCKER 1998; NAKRE & HARIKIRAN 2013). In particular, simple events using common language and audio-visual material appeared to be efficient while the impact of more complex approaches seems to be limited (KAY & LOCKER 1998). However, programmes that included practical exercises were preferred by participants over education-only programmes (NAKRE & HARIKIRAN 2013). To maintain long-term successes, instructions at regular follow-up may be considered (NAKRE & HARIKIRAN 2013) and intervals of three months have demonstrated the greatest impact over single OHI alone (GHAFFARI ET AL. 2018).

The newly attained knowledge results in an improvement of oral health behaviour as confirmed by most studies in this field of research (DE SILVA ET AL. 2016; GHAFFARI ET AL. 2018; MENEGAZ ET AL. 2018; NAKRE & HARIKIRAN 2013). Improvement may include longer and more frequent toothbrushing, a reduction in sugar intake or use of dental services (GHAFFARI ET AL. 2018; MENEGAZ ET AL. 2018; NAKRE & HARIKIRAN 2013). Only few studies found either no association between knowledge and behaviour change or no improvement in behaviour (KAY & LOCKER 1998; MENEGAZ ET AL. 2018; NAKRE & HARIKIRAN 2013). However, in the present study, the attendees stated that they could imagine implementing the newly learned toothbrushing techniques in their daily lives.

Following a longer observation period, behavioural change should eventually be reflected in clinical parameters. The results of most studies demonstrate an overall positive impact of OHI on oral health. Studies assessed caries development in deciduous teeth and in the permanent dentition as well as gingival health along with parameters such as dental biofilm accumulation and bleeding on probing (DE SILVA ET AL. 2016; MENEGAZ ET AL. 2018; NAKRE & HARIKIRAN 2013; RAMSEIER ET AL. 2007). Long-term investigations including educational interventions with supervised daily OH demonstrate a positive effect on the prevention of deciduous tooth decay (DE SILVA ET AL. 2016). Moreover, it was shown that even short educational interventions

can have a significant impact on oral health promotion while repeated instructions are suggested to be more effective (RAMSEIER ET AL. 2007).

The results of the present study may be interpreted as promising with regard to improving oral health of the target group being unaccompanied adolescent asylum seekers. However, these results need to be confirmed in further trials, as the impact of OHI on the oral health parameters were not investigated. The positive impact of interventions on the knowledge and oral health of adolescent asylum seekers has been demonstrated in other areas. Studies considering adolescent asylum seekers as a target group for prevention programmes are particularly common in the field of mental health (EL HARAKE ET AL. 2018; SARKADI ET AL. 2018). For example, in a six-week prevention programme, the symptoms of post-traumatic stress disorder and depression in unaccompanied minor asylum seekers decreased, among other things through knowledge transfer and instruction (SARKADI ET AL. 2018). In this context, the impact of a nutrition intervention within the context of a six-month programme on Syrian refugee children in Lebanon was investigated. The results demonstrate a positive impact of knowledge transfer and instruction on knowledge, attitudes, and anthropometric values, such as BMI (body mass index) or height in relation to the age of the study participants (EL HARAKE ET AL. 2018).

Studies targeting adolescent asylum seekers are scarce. In Switzerland, the focus is particularly on the integration of young asylum seekers into society through educational programmes. This is made clear in a comprehensive study by the University of Neuchâtel, which created an overview of the existing privately (co-)financed day-structuring educational programmes for young asylum seekers and documented the strengths and weaknesses of the projects. These projects can be divided in terms of content into those that mainly pursue a school or language approach and those that additionally offer practical focuses. It appears noteworthy to mention that almost all of these projects include language training in German, French and Italian ([www.migration-population.ch/sfm/home/publications/etudes-du-sfm.html](http://www.migration-population.ch/sfm/home/publications/etudes-du-sfm.html), last accessed: 12.04.2022).

### Strengths of the study

To the best of our knowledge, this is the first study to examine the impact of OH information sessions on the knowledge of adolescent asylum seekers in Switzerland. This finding includes several strengths, which are listed below.

This work highlights a current issue of the refugee movement to and within Europe and the necessity of integration as well as welfare by means of civil society measures. These measures should provide asylum seekers with equal opportunities and access to education, the labour market and medical care, but also reduce the financial burden on social services.

Current scientific evidence on the effects of OHI on adolescents is limited and incongruent. Unlike this study, Nylander and colleagues could not produce a justification for implementing their programme for adolescents (NYLANDER ET AL. 2001). Further, a systematic literature review by Ghaffari and colleagues demonstrated a non-significant lower effect of oral health programmes on adolescents compared to children on (GHAFFARI ET AL. 2018). To explain this lack of effectiveness, Brukiene and colleagues suggested that adolescents are a challenging target group for oral health education because of different stages of behavioural development and different cognitive

abilities (BRUKIENE & ALEKSEJUNIENE 2010). The present study, however, contributes somewhat to filling a knowledge gap. At this point it needs to be mentioned that the term “adolescents” does not refer to a clearly defined age group. The age of the target group of this study results from the age of 16 years to the age of majority, which is no longer compulsory school age in Switzerland, while other studies already included 12-year-olds in their study with adolescents.

Another strength of the present study lies in the structure of the event. On the one hand, in addition to lecturing using a PowerPoint presentation, OHI with exercises were also included in the programme. Furthermore, the fact that the event was a short programme of only about 60 minutes is of great advantage concerning future implementations. The material provided seems to be crucial for influencing behaviour beyond the duration of the programme. The toothbrushes and toothpastes provided should ensure that the asylum seekers are able to implement the OHI in everyday life.

### Weaknesses of the study

An obvious weakness of this study is that no effects on the oral health of the adolescent asylum seekers were determined. The study participants were only interviewed before and immediately after the event. Furthermore, no clinical parameters of the participants were examined and compared, or possible long-term successes of the single event were evaluated. Nevertheless, the overall aim of the study was to assess the initial impact of a single information session on the knowledge of adolescent asylum seekers which was demonstrated in a rather small sample size and in only to asylum centres in Switzerland. Since there were no differences between the answers from both centres, the data in this study were pooled when conducting the descriptive analysis. Moreover, in terms of the comparison of available data before and after the event, a specific McNemar's Chi-squared test was applied to control for dependence on an individual level.

### Relations to the Swiss asylum system

In the following, the Swiss asylum procedure will be briefly described in order to determine the whereabouts of the asylum seekers and the associated possible structures for implementing the prevention programmes – this with the aim of reaching as many young people of the risk group in Switzerland as possible.

After the initiation of this pilot study in 2017, the Swiss Asylum Act was revised, and an accelerated asylum procedure was introduced in March 2019. This significantly changed the procedure, which was now completed within 140 days in most cases. After filing an asylum application, the asylum seekers are distributed in six regions in federal asylum centres with a procedural function. Within a three-week preparatory phase, a decision is made as to whether another Dublin state is responsible for the asylum procedure of the applicants. If this is the case, the asylum seekers are assigned to a federal asylum centre without a procedural function and transferred to the responsible state within 140 days of the application being filed. If Switzerland is responsible for the asylum procedure, a decision is made after a hearing as to whether a decision can already be made. If further clarification is necessary, the asylum seeker is assigned to a canton according to a distribution key proportional to the population. Otherwise, a decision is made within eight days. In the case of a negative decision, the rejected asylum

seekers are assigned to a federal asylum centre without a procedural function and expelled within 140 days of filing the application. In the case of a positive decision or temporary admission, the applicant is also assigned to a canton by means of a distribution key ([www.sem.admin.ch/sem/de/home/asyl/asylverfahren.html](http://www.sem.admin.ch/sem/de/home/asyl/asylverfahren.html), last accessed: 12.04.2022).

After cantonal allocation, the cantons themselves and accordingly 26 different cantonal social centres are responsible for the accommodation and care of the admitted and the provisionally admitted asylum seekers and those who are in the extended procedure. Consequently, in order to reach all adolescent asylum seekers, it seems to make sense to implement an OHI programme at the federal level in the aforementioned federal asylum centres. However, it must be taken into account that due to the revised asylum law in 2019, asylum seekers, especially those who are to be integrated into Swiss society, only stay in these centres for a short period of time. Therefore, in order for young asylum seekers to be able to benefit from a prevention programme in the longer term, structures need to be found which can take care of the young people over a longer period of time. As previously mentioned, the cantonal social service of the canton of Aargau, which arranged contact with the managers of the refugee centres for adolescents, was contacted. It is conceivable to contact all 26 cantonal social services to potentially plan the training of caregivers as multipliers of knowledge about OH with the respective managers of the asylum centres. One possibility for providing staff for OHI to the caregivers or directly to the asylum seekers would be to ask the Foundation for school dental care instructors. School dental care is regulated by the cantons, and most cantons employ school dental care instructors for prophylaxis as part of school dental care, who are trained by the Foundation for School Dental Care Instructors ([www.schulzahnpflege.ch](http://www.schulzahnpflege.ch), last accessed: 12.04.2022). Therefore, it appears to be reasonable to ask for such a cantonal institution in order to simplify the necessary administrative work.

### Conclusion

With the results of the present study, the conclusions could be drawn that the implementation of information sessions with OHI may promote the oral health of adolescent asylum seekers. In the future, more such events could be held and re-evaluated to examine the impact on individual behaviour and oral health of asylum seekers, as well as to capture long-term outcomes through longitudinal studies.

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### Conflict of interest

The authors declare that there are no conflicts of interest in this study.



## Zusammenfassung

### Hintergrund und Ziel

Während Kinder und Jugendliche in Schweizer Schulen durch die Schulzahnpflege in der häuslichen Mundhygiene instruiert werden, haben asylsuchende Jugendliche, die das Alter der obligatorischen Schulpflicht überschritten haben, bisher nicht die Möglichkeit, in der Schweiz diese Präventionsmassnahmen mit systematischen Instruktionen zu erwerben. Als Ziel der hier vorliegenden Studie soll daher bei jugendlichen Asylsuchenden die Auswirkung einer Informationsveranstaltung mit Mundhygieneinstruktionen auf den Kenntnisstand über die Folgen einer fehlenden Mundhygiene und die Wahrscheinlichkeit der Umsetzung der Mundhygieneinstruktion evaluiert werden.

### Material und Methoden

Im Rahmen einer einmaligen Informationsveranstaltung mit anschliessender praktischer Mundhygieneinstruktionsübung wurden jugendliche Asylsuchende in zwei Asylzentren der Schweiz (Menziken und Suhr, AG) jeweils vor und nach der Veranstaltung mit einem schriftlichen Fragebogen befragt. In der Veranstaltung wurden die Folgen der fehlenden Mundhygiene auf die Mundgesundheit erklärt und die Anwendung der Bass-Technik zur häuslichen Mundhygiene instruiert und praktisch eingeübt.

### Resultate

Die Auswertung umfasste die Antworten von 30 männlichen Asylsuchenden im Alter von 15 bis 18 Jahren aus Eritrea, Afghanistan, Äthiopien, Somalia, Guinea und Gambia. Es reinigten 90% (n = 27) der Befragten ihre Zähne täglich, und 70% (n = 13) erhielten bereits eine Mundhygieneinstruktion, die sie in der Schule (19,1%) oder einer Arztpraxis (9,5%) ihres Herkunftslandes oder zuvor in der Schweiz (19,1%) erhielten. Nach der Veranstaltung gaben 90% (n = 27) an, etwas Neues gelernt zu haben, und 93,3% (n = 28) konnten sich vorstellen, die erlernten Instruktionen im Alltag umzusetzen. Während vor der Veranstaltung 63,3% (n = 19) der Befragten die Folgen einer fehlenden Mundhygiene kannten, stieg dieser Wert durch die Veranstaltung auf 96,7% (n = 29) mit statistischer Signifikanz (p = 0,0039).

### Schlussfolgerung

Die Resultate der vorliegenden Studie lassen die Schlussfolgerung zu, dass die Implementierung von Informationsveranstaltungen mit Mundhygieneinstruktionen zur Verbesserung des Kenntnisstandes von jugendlichen Asylsuchenden empfohlen werden kann.

## Résumé

### Contexte et objectif

Alors que dans les écoles suisses, les enfants et les adolescents sont instruits sur l'hygiène bucco-dentaire à domicile par le biais des soins dentaires scolaires, les jeunes requérants d'asile qui ont dépassé l'âge de la scolarité obligatoire n'ont jusqu'à présent pas la possibilité d'acquérir en Suisse ces mesures de prévention par des instructions systématiques. L'objectif de la présente étude est donc d'évaluer, chez les jeunes requérants d'asile, l'impact d'une séance d'information comprenant des instructions sur l'hygiène bucco-dentaire sur le niveau de connaissance des conséquences d'un manque d'hygiène bucco-dentaire et sur la probabilité de mise en œuvre des instructions d'hygiène bucco-dentaire.

### Matériel et méthodes

Dans le cadre d'une séance d'information unique suivie d'un exercice pratique d'instruction à l'hygiène buccale, de jeunes requérants d'asile de deux centres d'asile de Suisse (Menziken et Suhr, AG) ont été interrogés à l'aide d'un questionnaire écrit avant et après la séance. Lors de la manifestation, les conséquences du manque d'hygiène buccale sur la santé buccale ont été expliquées et l'application de la technique de Bass pour l'hygiène buccale à domicile a été instruite et mise en pratique.

### Résultats

L'évaluation a porté sur les réponses de 30 demandeurs d'asile masculins âgés de 15 à 18 ans, originaires d'Érythrée, d'Afghanistan, d'Éthiopie, de Somalie, de Guinée et de Gambie. Il s'est avéré que 90% (n = 27) des répondants se nettoyaient les dents quotidiennement et que 70% (n = 13) avaient déjà reçu des instructions sur l'hygiène buccale, à l'école (19,1%) ou dans un cabinet médical (9,5%) de leur pays d'origine ou auparavant en Suisse (19,1%). Après la manifestation, 90% (n = 27) ont indiqué avoir appris quelque chose de nouveau et 93,3% (n = 28) pouvaient s'imaginer mettre en pratique au quotidien les instructions apprises. Alors qu'avant la manifestation, 63,3% (n = 19) des personnes interrogées connaissaient les conséquences d'un manque d'hygiène buccale, ce chiffre est passé à 96,7% (n = 29) grâce à la manifestation, avec une signification statistique (p = 0,0039).

### Conclusion

Les résultats de la présente étude permettent de conclure que la mise en œuvre de séances d'information comprenant des instructions sur l'hygiène buccale peut être recommandée pour améliorer le niveau de connaissances des jeunes demandeurs d'asile.

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