

Volunteer Toothcare Project

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Abstract: ***Background:** It becomes obvious nowadays that the most important aspect of gaining good oral health is by education. The school based oral health education is approved to be the best way to achieve oral hygiene knowledge of the schoolchildren. Since that the low socioeconomic status affect negatively the oral health. Providing an oral health care preventive program in developing countries like Iraq is limited and are rarely gained by those categories. **Aim:** This paper reviewing the Toothcare Project which had been accomplished by volunteer personnel from the staff of Pediatric Dentistry Department, Ishik University-Erbil, fifth and fourth-grade dental students and Kurdistan Save Children Organization. **Method:** The Faculty of Dentistry and the organization collaborated to provide oral health knowledge and health care for the underserved categories of the society by serving dental care for their children through their schools who have been chosen by the Organization. The project included 6 schools. Dental services were a dental examination, fluoride application, dental education by discussion and demonstration and printed oral health education information. **Result:** 600 schoolchildren included in the project, dental students got to benefit from the volunteer work and the organization could achieve their humanitarian goal.*

Keywords: underserved children, oral hygiene knowledge, school-based dental education, volunteer dental services, volunteer dental students

1. Introduction

Children with poor oral health are twelve times more probable to have more restricted-activity days, as well as missing school, than children who do not, and annually, over 50 million hours are missed from school because of oral diseases (1). The behavior and attitudes of children are acquired and formed from social, economic, cultural and ethnic aspects throughout their lives, also affect their knowledge of health and prevention of disease, as well as oral diseases (2).

Oral health self efficacy and knowledge are modifiable through well-developed oral health promotion strategies and findings suggest that intervening on these factors early could help foster positive dental health habits for both children and parents (3). A dental health education [DHE] program, has its advantages on the oral hygiene status of the participant's improvement. The DHE includes publicity campaigns, infrequent talks at the primary schools, a presentation of dental health films, and there are many factors which are essential for effective DHE such as reinforcement and repetition of oral hygiene directions(4). That experiential learning can be used as a method for oral health education programs in order to obtain better oral hygiene; however, it should be repeated frequently(5). The home environment and socioeconomic factors have an impact on the oral health-related quality of life of schoolchildren, and it is important to take all these factors into consideration by health managers when planning oral health programs for this population (6). School-based oral health education intervention has an effect on dental knowledge of students(7).

The application of fluoride gel in schoolchildren using a toothbrush can be utilized as an option rather than traditional trays since the same salivary retention of fluoride is a result of using a lower dose(8,9). The AAPD advocates that oral

health care must be included in the design and provision of individual, community-based, and national health care programs to achieve comprehensive health care(10).

This paper explains the arrangement of the project that put in place to perform its steps. It outlines how the staff and students of Pediatric Dentistry Department and Kurdistan Save Children Organization have collaborated in visiting 6 schools, to accomplish the project. It then reviews, the evidence related to the different services that offered to the schoolchildren along the visiting period which last for one academic year, and describes in details the primary idea of the Toothcare as a volunteer work of dental assessment, prevention and education program which seeks to offer free dental services to disadvantaged children which had been performed by the fifth grade dental students and a number of fourth grade and third grade and its effect on these students. Educating the dental students the soul of the volunteer work, how to educate the schoolchildren about the importance and the way for good oral hygiene, examination, and prevention of dental caries, present the aims of this project. While this project was important for the social services, it had in addition to the advantage of building a soul of philanthropy in our students it is also provided lessons to the department about needed social programs in other areas in the future. The other advantage is helping the organization to achieve their goal in serving this category of the society as a humanitarian work.

The project had three phases: 1: Gaining collaboration between Ishik University and Kurdistan Save the Children Organization; 2: Accomplishing an agreement of the Ministry of Education for the schools in the target; 3: Preparing students and training them for the project.

2. Materials and Method

Gaining the collaboration between Ishik University and Kurdistan Save Children Organization

At the beginning of October 2016, a memorandum of understanding started between Ishik University/dean of students' office, and Kurdistan Save Children Organization in order to start the tooth care project. The Organization displayed its project of helping schoolchildren in need. The organization responsible for supplying the project with all the materials needed for all schools in addition to the transportation of the dental students and staff from the university to the schools and the opposite. The Dentistry faculty with their students took the responsibility of dental education and examination and topical fluoride application inside the schools.

Accomplishing the agreement of the Ministry of Education for the schools in target

The agreement of the Ministry of Education for visiting the ten schools gained in order to start the project, then the schools, in turn, took the agreement of the families for entering their children in the project.

Preparing and training the students for the project

After the announcement, the students who had the souls to be volunteers in this project were trained for their missions during the visit to the school. They trained how to examine the teeth inside the class, using the daylight which differs from the routine examination on the dental chair, in addition to the topical fluoride application and the oral hygiene education. The Toothcare project had the strategy to include all the fifth-grade students so that every student had a chance in the volunteer work. The visits of the schools were nearly once a month, and because of the examination periods and the holidays, sometimes the visits were twice monthly. Thus the project started in November, 2016 and ended in April, 2017.

The visited schools

Six schools had been covered with this project, all of them located in Saidawa Neighborhood in Erbil Governorate, which their population of a low economic status.

Participating Personnel:

For each school visit, three pediatric dentists and six students, in addition to the organization personnel who organized the students with the schools' teachers to perform quality project service.

Materials used:

- Disposable dental examination sets.
- Toothbrushes.
- Fluoride gel.
- Disposable glasses

Procedure:

The number of the examined schoolchildren was 600 students all included by the dental examination. The dental examination data collected and kept in a special file in the Pedodontic Department for future treatment. The families of the affected students were informed.

The Method used to perform each visit:

The staff visited the office of the school's manager, and discussed the duty of the visitors, and directed them to the way of preparing the students for examination. The dental students divided into 2 groups with the dental staff, each group entered a class with smiley faces to show children that 'we are coming for your happiness'.

Dental examination was performed student by student without crowding (figure 1). The visit included the demonstration of the correct brushing according to Bass toothbrushing method (figure 2). Then APF gel applied for all the children's teeth by using toothbrush then the child spat the excess in a disposable glass, measures took to prevent cross infection. Instructions about good oral hygiene, given orally by the dental students (figure 3), using many topics; build up self-esteem, causes of oral diseases, certain foods contribute to plaque formation, effect of trauma on the teeth, the importance of oral health, the connection between oral health and overall health, instructions for good oral hygiene and dietary education. The examined children have been rewarded with toothbrush and toothpaste for encouragement. All the class had the instructions about maintaining good oral health printed on papers (figure 4). All those procedures repeated for all classes of all the schools.

Assessing the benefit of the project:

To assess the benefit of the project for the students and the organization, questionnaires used for both the organization and the students. Thirty-six of the volunteer students shared to answer the questionnaire. To achieve the organization's impact to the help of the Dentistry faculty, and its impact of those works on the community, twenty-five members of the organization participate to answer.

The student's questionnaire contained five questions, the first was to assess the impact of the volunteer work on their feeling of responsibility to help people in need. The second question assessed if this volunteer work increased their scientific knowledge or not. The third question designed to assess if this volunteer work affected their studying time negatively. The fourth question assessed the student's interest in this project. The fifth question to assess the scientific knowledge that students got in school-based education and health services (table, 1).

The organization questionnaire of four items concentrated on how much they got benefits to accomplish their humanitarian work. The first question was about the quality of assistance that dentistry faculty, Ishik University provided. The second question is that how much they needed the dental volunteers in their school services. The third questions to assess if the community needs the dental care volunteers to provide services to the children that they are in need to. The fourth, how much the Community dental services is necessary to make our communities better (table, 2).

3. Result

The beneficiaries of this volunteer work were 600 schoolchildren. Children received oral health knowledge, the

correct way of brushing and topical fluoride application for their teeth. Other beneficiaries were the dental students and the organization.

Table 1 demonstrates the result of the questionnaire which was answered by the students to assess their benefit from the project. 36 students participated in answering the questionnaire. The project increases their responsibility to take some real measures to help others in need, which agreed by 97% of the students. This work provided the dental students with scientific benefits which is obvious from the percentage 92. Only 5% agreed that this work had a negative impact on their college studying hours. 100% agreed that they interested as volunteers in the school dental services. This work increased their scientific knowledge in school-based dental education and services which was agreed by 97% of the students.

Table 2 shows the impact of the assistance that the dentistry faculty, Ishik University submitted to help the organization in their humanitarian work. 30 members of the Kurdistan Save Children Organization answered the questionnaire. All the members of the organization agreed that the dental students and the staff were good assistants for their organization in providing services for the schools in the target. 100% of the organization's members believe that our community needs dental care volunteers and community dental service as they are necessary to make our communities better.

4. Discussion

Communities especially the children in need to oral health education to increase oral health knowledge along with the services that can be submitted by the health professionals and dentistry schools' students to promote community oral health which in turn affects the general health positively(1).

Six hundred schoolchildren included in this project, dental students got benefits from the Toothcare volunteer work in relation to their study. The organization reached their goal.

In this project, dental students acquired knowledge in school-based dental services as dental examination, fluoride application, and oral health instructions. A volunteer work like this achieved vision into an advanced technique of education in dentistry. This project improved knowledge of new dentists may have pending into practice. This project assured an undergraduate dental teaching. Delivered understanding into how training and education are related openly to primary care practice. In addition, the students learned to have the soul of philanthropy and helping people in need. The participation of the students had no negative impact on their education time, which indicates that there is no presence for any disadvantage to be a volunteer. The organization 'Kurdistan Save Children' could reach its goal which is helping poor people to gain good oral health by the help of Ishik University/Dentistry staff and students in providing dental care volunteers, which could provide community dental services which are necessary to make the community better.

5. Conclusion

The community needs a collaboration between many aspects of the society, oral health professionals, organizations, and volunteers to promote the oral health knowledge of the society especially the underserved population. The volunteer work 'Toothcare Project' of this project was beneficial to many aspects of the society. The schoolchildren, the dental students, and the organization.

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Figure 1: Dental examination



Figure 2: Demonstration of the correct brushing according to Bass toothbrushing method.



Figure 3: Instructions about good oral hygiene, given orally by the dental students



Figure 4: All the class had the instructions about maintaining good oral health printed on papers.

Table 1: Student's questionnaire to assess the impact of the project

Question No.	Questions	Number of Participants	Agree	Disagree
1	It is my responsibility to take some real measures to help others in need.	36	97% (35)	1% (1)
2	I got scientific benefit from this volunteer work		92%(33)	8% (3)
3	This work had bad impact on your collage studying hours.		5%(2)	95%(34)
4	I was interested as a volunteer in the school dental services		100%(36)	0
5	This work increased my scientific knowledge in school-based dental education and services		97% (35)	3% (1)

Table 2: The impact of the assistance that the dentistry faculty, Ishik University submitted to help the organization in their humanitarian work

No	Questions	Number of Participant	Agree	Disagree
1	The dentistry collage was good assistant for our organization in providing services for the schools in the target.	30	100% (30)	0
2	In the end of the project we discover that we can perform the mission alone without the dentistry collage		100% (30)	0
3	Our community needs dental care volunteers		100% (30)	0
4	Community dental service is		100%	0