

A survey on the knowledge, attitude and behavior of Greek elementary school students about oral health and dental care

Stylianos M. Piperakis, Anna Kritsi, Fotini Garagouni-Araiou and Xanthipi Gialama

Biology Unit, Department of Pre-School Education, University of Thessaly
Argonofton and Filellinon, 38221, Volos, GREECE

Abstract The objective of this study was to evaluate the knowledge, attitude and behavior of Greek elementary school students in terms of oral health and dental care. Data on students' oral health and dental treatment as well as, the factors that define these variables were collected and evaluated by a self-administered questionnaire for a sample of 595 students. The results revealed that irregular brushing was common. Apart from the use of toothbrush and toothpaste, extra aids for oral hygiene were also in use. The role of parents in supervising the oral hygiene habits of their children was concentrated only in giving advice. The students knew the causes of gingivitis and caries and how to protect their dental health. Also, they were aware of the mouth and dental structure on the general body health. Toothache was the driving reason of visiting the dentist. Irregular visits to the dentist were mentioned, even though they knew the importance of regular dental visits. The feeling of fear, in general, and fear of dental tools and dental wheel were referred to be the main reason for not visiting the dentist on a regular basis. Students were not encouraged by their parents for regular dental visits. The outcomes of this study show that Greek elementary students knowledge, attitude and behavior towards oral health and dental care need to be improved through oral health behavior programs.

Key words

Attitudes,
Behavior,
Greece,
Knowledge,
Oral health

Introduction

Over the last decades there has been a steep increase in monitoring oral health trends. Oral health is very important and it is necessary for children and young people to know certain things about oral hygiene.

The most common oral health problems are dental caries, periodontal diseases and dental traumas. All these can be prevented by tackling the risk behaviors. Programs and campaigns should aim at promoting the appropriate information and knowledge of oral hygiene, to improve attitudes in terms of oral health and last but not least to put all this knowledge and attitudes into practice¹⁾. Apart from all these, researchers have also to take into consideration the socio-economic factors²⁾.

A study among Jordanian students showed irregular hygiene habits and dental attendance. Even though the study population had a positive attitude towards the dentist, the feeling of fear in dental treatment was dominant³⁾. It was also found that the children's behavior may be influenced by parents' knowledge and attitude about the importance of oral health care and fear about dental treatment.

In a Chinese study it was found that 40% of the children brushed their teeth at least twice a day and that 46% had seen a dentist within the past year⁴⁾. Variations due to urbanisation were observed. Consumption of sugary foods, location of residence and frequency on dental visits were the most important independent variables. The investigators concluded that oral health behavior and dental caries experience in Chinese children need to be improved through oral health promotion programs. Similar findings were resulted from another study conducted in

Received on May 13, 2008

Accepted on June 30, 2008

Chinese adults⁵).

Oral health knowledge, attitudes and behavior was low among young children in India especially in slum areas⁶. Caries experience as well as intake of sugary food and soft drinks were more frequent in the slum areas therefore oral health promotion programs are necessary for increasing the level of knowledge and for changing attitudes in relation to oral health.

Independently of the latitude of the countries, i.e. Middle East and Europe, socio-economic status plays an important role in the prevention of oral health diseases. According to a study conducted in eight European countries, it was found that the influence of socioeconomic and behavioral factors such as experience of toothache, social class of the family and dental fear in children, influence their oral health hygiene⁷. Swedish children were the only exception, where the dental system offers both preventive and restorative treatment for all ages, whereas in other countries parents were responsible for arranging the treatments⁸. In much the same way another study revealed that the socio-cultural environment influences to a great extent the attitude towards oral health habits¹.

In a study on Northern Ireland it was found that children being socially deprived and disadvantaged had more experience of dental caries, less oral health knowledge and more unhealthy snacking opportunities⁹. Similarly, it was found that Brazilian children and females with low family income were prone to have caries².

Differences exist even within the same country depending on the socio-economic factors of each region⁸. This was also observed in a Greek study where it was observed increased frequencies of caries in the particular areas included in the investigation¹⁰. The researchers attributed their findings to the high number of poor immigrants residents on these areas.

These results indicate that there is always place for improvement; not only for the introduction of new oral health promotion programs but also that people in greater need should be targeted by way of assisting and promoting strategies for better oral health. Governments also need to take initiatives towards better education in schools, in order to minimize and prevent oral diseases.

A significant example of this is the study conducted by Livny *et al.*¹¹ By using a program that lasted four months, they found a significant decrease in consuming refreshments and pastries across the

study population. An improvement was also found in the tooth brushing practices (brushing more frequency), and on brushing skills by location (dentition surface). A recent Greek study reveals an important improvement in the caries status of 11.5 years old for the last ten years due to better education of the students on oral health matters¹².

Due to the fact that oral health is associated with the general health, it is necessary that programs for oral health protection be developed within the broader framework of general health promotion^{9,13}.

In this work we conducted a population based study with the primary aim of assessing knowledge, attitude and behavior of Greek elementary school students in terms of oral health and dental care. We also examined the factors that influence these variables.

Methods

A total of 595 students from 15 public schools in Central Greece participated and completed the questionnaire, 309 (52%) boys and 286 (48%) girls. They were attending elementary school (27.3% third grade, 21.9% fourth grade, 28.8% fifth grade and 21.9% sixth grade). The parents of the students gave their informed consent before the children were allowed to participate in the study.

A comprehensive questionnaire, which contained 37 items was used. Apart from the first four questions which were relative to background data, sex, age and parents' education level, the rest were designed to evaluate the knowledge, attitudes and behavior of young children regarding their oral health and dental treatment (Appendix). The questionnaire used was adopted mainly from Stenberg *et al.*⁸ after been adjusted to the Greek culture.

In order to evaluate students' *oral health knowledge*, the questionnaire contained items on the effects of brushing and using fluoride on the dentition, the meaning of bleeding gums and how to protect against it, the meaning of dental plaque and its effects, the number of deciduous and permanent teeth, the effect of pastries and refreshments on the dentition and the effects of caries on the appearance.

For assessing participants' *oral health behavior*, the questionnaire contained items concerning the frequency, duration, time and brushing aids participants use, and the parents' role in participants' oral hygiene and dental education. Furthermore, dental visits were evaluated by asking subjects the

Table 1 Oral hygiene habits among the study sample (n = 595)

	Frequency	Percentage (%)
Frequency of brushing		
Less than once a day	34	5.7
Once a day	162	27.3
Twice a day	238	40.1
More than twice	160	26.9
Materials used		
Toothbrush and paste	582	70.4
Dental floss	87	10.5
Mouthwash	131	15.8
Toothpicks	24	2.9
Brushing intervals		
At morning	378	36.4
At midday	181	17.4
Before bed	469	45.1
Other times	11	1.1
Duration of brushing		
Less than a minute	68	11.5
For a minute	187	31.7
For two minutes	162	27.5
More than two minutes	172	29.2
Role of parents in supervision of oral hygiene		
Parents watch	90	15.3
Parents do not watch only advise	387	65.7
Parents never cared	42	7.1
Mother watch	70	11.9

regularity and the reasons of the visits, if pain and economics affected the dental attendance, information on their first visit and the treatments they had during their last dental visit.

Assessments of participants' *dental attitudes* included questions on fear from dental treatment, feelings regarding the treatment, thoughts about involvement in the dental treatment, opinions about and attitudes toward the dentist and the dental care, attitudes towards dental care and body care in general and attitudes towards regular dental visits.

The questionnaire was designed in such way so subjects could respond to each item by ticking the appropriate response provided at the end of each item. Subjects had the opportunity to choose one or more responses from a provided list of options or write in their response for some items. In the beginning explanations were given about the way students could score their responses and extra explanations were given whenever it was need. Finishing their questionnaire, students had the opportunity

to go again throw the items in order to check their answers and if there were any unanswered questions. For four items, participants could choose more than one answer for the same item, and for that reason the numbers of the frequency columns of the tables of results sometimes do not equal the total sample number for those items.

The questionnaire was pre-tested with 50 school children who were requested to complete the questionnaire on two different occasions separated by ten days. The questionnaire was found suitable for application among the study population as there was high concurrence with the answers to the items on both occasions (Kappa test coefficient for all questions = 0.92).

Descriptive statistics were obtained and means, standard deviation, frequency distribution were calculated. The data were analyzed using the Statistical Package for Social Science 15.0 (SPSS 15.0, Inc., Chicago, IL).

Table 2 Awareness of periodontal health among the study population (n = 595)

	Frequency	Percentage (%)
Meaning of gingival bleeding		
Healthy gingival	41	7
Inflamed gingival	346	59.1
Gingival recession	47	8
Don't know	151	25.8
Prevention of gingivitis		
Toothbrush, toothpaste, dental floss	244	33.4
Using soft food	155	21.2
Using Vitamin C	157	1.5
Don't know	174	23.8
What does plaque mean		
Debris in the teeth	102	17.6
Staining on the teeth	242	41.7
Don't know	237	40.8
What does plaque cause		
Gingival inflammation	53	9.7
Staining on the teeth	69	12.6
Dental caries	174	31.7
Don't know	253	46.1

Results

Different age groups and genders demonstrated no significant differences in their responses ($P > 0.05$ by chi-square test). Therefore frequency tables present the subjects as a whole.

Approximately 6% of the study population brushed their teeth less than once a day, while 40% reported regular brushing (Table 1). The most popular method for cleaning their teeth was toothbrush and toothpaste. Also, extra aids were reported for oral hygiene such as mouthwash (16%), dental floss (11%) and toothpicks (3%). Approximately 45% brushed their teeth before going to bed, while 36% brushed their teeth in the morning. About 32% of the sample took a minute to brush their teeth, while 29% took more than two minutes (Table 1).

Students mentioned that their parents' role in supervision of oral hygiene was related to giving advice on the importance of brushing (66%). Only 15% reported being watched by parents during brushing, while 7% reported that their parents didn't care for their children's technique on brushing. Twelve percent of the study population reported being watched by their mother when brushing their teeth (Table 1).

When subjects were asked about the meaning of gingival bleeding almost 59% was aware that gingival bleeding reflects gingival inflammation. The rest did not know or gave wrong answers such as gingival bleeding reflects gingival recession or healthy gingival (Table 2). Around 33% of the study population knew that brushing and flossing help to prevent gingivitis, while 2% reported Vitamin C as a solution for not generating gingivitis. The rest did not know or gave wrong answers such as using soft food can prevent gingivitis.

Approximately 42% reported that plaque is the white staining on teeth, while the rest did not know or gave wrong answers such as, debris on teeth means plaque. In the question of the causes of dental plaque 32% of the study population reported caries as a result of dental plaque, almost 10% reported that it may cause gingivitis, and 13% reported that the white staining on the teeth are causes of dental plaque. The rest did not know the causes for dental plaque (Table 2).

Approximately 21% of the subjects knew the correct number of the deciduous teeth, while 49% knew the correct number of permanent teeth. Almost 82% of the sample population reported having none carious tooth and 53% reported having none filled

Table 3 Knowledge and awareness of dental and general health among the study sample (n = 595)

	Frequency	Percentage (%)
Does carries affect dental health?		
Yes	384	66.8
No	55	3.7
Don't know	136	9.2
Does pastries affect dental health?		
Yes	502	86.7
No	36	6.2
Don't know	41	7.1
Does refreshments affect dental health?		
Yes	374	65
No	93	16.2
Don't know	108	18.8
Relation between body and teeth health		
Yes	278	48.9
No	89	15.6
Don't know	202	35.5
Interesting on my teeth as any other organ of my body		
Yes	485	84.8
No	52	9.1
Don't know	35	6.1

tooth.

Forty six percent of the study population was well informed on the importance of tooth brushing for preventing dental decay. Approximately 50% of the study population knew the positive effects of fluoride on the dentition.

Approximately 67% of the sample population was aware on the effect of carious teeth on dental health. Most subjects knew that pastries (87%) and soft drinks (65%) have a negative impact on dental health. Approximately 49% of our participants were aware of the impact of mouth and dental structure on the general body health, while 85% reported that they are interesting on their teeth as they are for any other organ of their body (Table 3).

Many subjects (41%) reported that they visit the dentist on a regular basis, (i.e. every six to 12 months). Thirty one percent reported that they visit the dentist only when they have toothache, quite low number if we take into consideration that 84% of the study population were aware of the importance of regular dental visits.

Approximately 77% of the study population

reported that the last visit to the dentist was during the last year, while 10% reported that they have not visited the dentist for five years now. The main reason for the last visit to the dentist was toothache (36%), while 34% reported that they visited the dentist because s/he advised them so. Thirty four percent of the study population sought only examination and a routine check-up on their last visit to the dentist, while the rest reported having certain treatments (scaling, fluoride on their teeth, fillings, extractions). Fear was the dominant feeling of the first visit to the dentist, irrespective of the existence of dental pain. The most common reason for not visiting the dentist on a regular basis or cause of being scared visiting the dentist was the fear of the dental tools (24%). Moreover, fear of dental wheel (21%) and lack of toothache (18%) were among the reasons of not visiting the dentist on a regular basis.

Seventy eight percent of the sample population reported that their dentist explains the problems, 86% reported that their dentist takes care of the patient and 39% reported that their dentist cares about the treatment (Table 4).

Table 4 Attitudes towards professional dental care among the study sample (n = 595)

	Frequency	Percentage (%)
How often do you visit the dentist		
Regularly	239	41
Occasionally	116	19.9
When in dental pain	181	31
Never visit dentist	47	8.1
Reasons of your last visit		
Dental pain	196	35.5
Parents' and friends' advice	61	11.1
Dentist's advice	187	33.9
Other reasons	108	19.6
The management sought in your last visit		
Checkup	352	34.1
Take x-rays	42	4.1
Scaling	152	14.7
Having fluoride	138	13.4
Treat gums	37	3.6
Fillings	141	13.7
Crown or bridge	16	1.6
Orthodontic treatment	39	3.8
Extraction	76	7.4
Others	39	3.8
Reasons behind not visiting/dislike visiting the dentist		
Fear of dental tools	175	24.1
Fear of dental wheel	153	21.1
High cost	26	3.6
No dental clinic nearby	27	3.7
No time	73	10.1
No dental pain	127	17.5
Fear sitting in waiting room	65	9
Fear thinking of tomorrow's appointment	80	11
Dentist explains dental problem		
Yes	445	77.9
No	58	10.2
Do not know	68	11.9
Dentist cares about the patient		
Yes	491	86.1
No	19	3.3
Do not know	60	10.5
Dentist cares about treatment but not prevention		
Yes	224	39.2
No	143	25
Do not know	205	35.8

Discussion

The present study investigated the knowledge, attitude and behavior of oral health hygiene in school students from Central Greece. Our findings indicate

that there is a relationship between knowledge, attitude and behavior in oral health.

A high proportion of students in our study were found to brush their teeth twice a day, even though this endeavor was not supported by their parents.

This finding does not agree with the results from the study conducted by Artemi *et al.*¹⁴⁾ The increased brushing frequency that was detected in our study is presumably due to the change in awareness on oral health care during the last ten years.

The high number of irregular brushing intervals reported in our study could be attributed to the parents failure to organize or support their children's tooth brushing efforts or the lack of oral health education for both parents and children. It is not adequate for the parents to give only advices, but they should also be present and guide their children when they brush their teeth. Similar results were obtained from other researchers such as by Rajab *et al.*¹⁵⁾ in Jordanian children and adults.

Extra aids for oral hygiene such as dental floss and mouthwash were found to be rarely used, this was due to the fact that there is a lack of oral health education, oral behavior and also because of the cost for these aids. More than half of the study population was aware of the causes of gingival bleeding, result that agree with other findings¹⁶⁾.

We found that a high percentage of the students were aware of the effect of caries towards dental health, as well as that pastries and refreshments have a negative impact on their teeth. The percentage of children having carious and filled teeth was low, although lots of children consume hidden sugar between their main meals. These results coincide with the findings of the study conducted by Kalyvas *et al.*¹⁰⁾ in an urban community within Attica in Greece, who found that even though their participants had the appropriate knowledge towards oral health, they still kept unhealthy behaviors in their everyday life.

Although the subjects of our study were aware of the importance of regular dental visits, only a small amount reported regular dental attendance. The most common reasons of not attending the dentist on a regular basis were fear of dental tools, lack of toothache, no free time, thinking of tomorrow's appointment, lack of encouragement. It is known that parents attitudes towards dental health influences children's oral health behavior and dental attendance¹⁷⁾. Toothache was the main reason for avoiding dental attendance. These results coincided with the findings by Polychronopoulou *et al.*¹⁸⁾ Kunzelmann *et al.*¹⁹⁾ also reported that dental fear and pain has an effect on patient's perception of dentist and leads on avoiding regular dental attendances. Lack of appropriate oral health programs, for both

children and their parents attributes to the feeling of fear. Despite of this fear, our sample population reported positive attitudes towards their dentist. The concern and empathy the dentist shows to their patients helped to overcome their fear. These results agree with the findings by Karydis *et al.*²⁰⁾ who reported that dentist approach, such as good communication skills, understanding and empathy should be at the top of their priorities.

In conclusion, the knowledge, attitude and behavior among the Greek elementary school students towards oral health and dental care could be further improved through public education programs for both children and their parents.

References

- 1) Smyth, E., Caamano, F. and Fernandez-Riveiro, P.: Oral health knowledge, attitudes and practice in 12-year-old schoolchildren. *Med Oral Patol Oral Cir Bucal* **12**: 614–620, 2007.
- 2) Pereira, S.M., Tagliaferro, E.P., Ambrosano, G.M., Cortelazzi, K.L., Meneghim Mde, C. and Pereira, A.C.: Dental caries in 12-year-old schoolchildren and its relationship with socioeconomic and behavioural variables. *Oral Health Prev Dent* **5**: 299–306, 2007.
- 3) Al-Omiri, M.K., Board, J., Al-Wahadni, A.M. and Saeed, K.N.: Oral health attitudes, knowledge and behaviour among school children in North Jordan. *Journal of Dental Education* **70**: 179–187, 2006.
- 4) Peng, B., Petersen, P.E., Fan, M.W. and Tai, B.J.: Oral health status and oral health behaviour of 12-year-old urban schoolchildren in the People's Republic of China. *Community Dent Health* **14**: 238–244, 1997.
- 5) Zhu, L., Petersen, P.E., Wang, H.Y., Bian, J.Y. and Zhang, B.X.: Oral health knowledge, attitudes and behaviour of adults in China. *Int Dent Journal* **55**: 231–241, 2005.
- 6) Christensen, L.B., Petersen, P.E. and Bhambal, A.: Oral health and oral health behaviour among 11–13-year-olds in Bhopal, India. *Community Dent Health* **20**: 153–158, 2003.
- 7) Bolin, A.K.: Children's dental health in Europe. An epidemiological investigation of 5- and 12-year-old children from eight EU countries. *Swed Dent J Suppl* **122**: 1–88, 1997.
- 8) Stenberg, P., Hakansson, J. and Akerman, S.: Attitudes to dental health and care among 20 to 25-year-old Swedes: results from questionnaire. *Acta Odontol Scand* **58**: 102–106, 2000.
- 9) Freeman, R.: Child oral health promotion experiences in Northern Ireland. *British Dental Journal* **192**: 175–203, 2002.
- 10) Kalyvas, D.I., Taylor, C.M., Michas, V. and Lygidakis, N.A.: Dental health of 5-year-old children and parents' perceptions for oral health in the prefectures

of Athens and Piraeus in the Attica County of Greece. *Int J Paediatric Dent* **16**: 352–357, 2006.

11) Linvy, A., Vered, Y., Slouk, J. and Sgan-Cohen, H.D.: Oral health promotion for schoolchildren—evaluation of a pragmatic approach with emphasis on improving brushing skills. *BMC Oral Health* **8**: 25–33, 2008.

12) Demetzi, A., Topitsoglou, V. and Muronidis, S.: Caries prevalence of 11.5 year-olds between 1989 and 2001 in a province of North-Eastern Greece. *Community Dent Health* **23**: 140–146, 2006.

13) Kwan, S.Y., Petersen, P.E., Pine, C.M. and Borutta, A.: Health-promoting schools: an opportunity for oral health promotion. *Bull World Health Organ* **83**: 677–685, 2005.

14) Artemi, A., Lygidakis, N.A. and Christodoulidis, A.: Epidemiological study of oral diseases, oral hygiene and food consumption habits in preschool children in Athens (in Greek). *Pedodontia* **6**: 103–110, 1996.

15) Rajab, L.D., Petersen, P.E., Bakaeen, G. and Hamdan, M.A.: Oral health behavior of school children and parents in Jordan. *Int J Paediatr Dent* **12**: 168–176, 2002.

16) Taani, D.Q. and Alhaija, E.S.: Self-assessed bleeding as an indicator of gingival health among 12–14-year-old children. *J Oral Rehabil* **30**: 78–81, 2003.

17) Jalevik, B., Sjostrom, O. and Noren, J.G.: Evaluation of three years of dental care of adolescents in the Public Dental Service in the West Sweden. *Swed Dent J* **23**: 141–148, 1999.

18) Polychronopoulou, A., Kawamura, M. and Athanasouli, T.: Oral self-care behavior among dental school students in Greece. *J Oral Sci* **44**: 73–78, 2002.

19) Kunzelmann, K. and Dünninger, P.: Dental fear and pain: effect on patient’s perception of the dentist. *Community Dent Oral Epidemiol* **18**: 264–266, 1990.

20) Karydis, A., Komboli-Kodovazenti, M., Hatzigeorgiou, D. and Panis, V.: Expectations and perceptions of Greek patients regarding the quality of dental health care. *Int J Qual Health Care* **13**: 409–416, 2001.

Appendix

The items of the questionnaire completed by the study sample:

1. I am: Girl Boy
2. I am student: of.....school.
3. My father is graduate of:
 - Primary school.
 - Middle school.
 - High school.
 - University.
4. My mother is graduate of:
 - Primary school.
 - Middle school.
 - High school.
 - University.
5. How often do you brush your teeth (you can give more than one answer)?
 - Less than once per day.
 - Once per day.
 - Twice a day.
 - More than twice per day.
6. What do you use for cleaning your teeth?
 - Brush and toothpaste.
 - Dental floss.
 - Mouthwash.
 - Toothpicks.
 - Others (specify).....
7. When do you brush your teeth?
 - Morning.
 - Noon (after lunch).
 - Before going to bed.
 - Other times (specify)...
8. For how long do you brush your teeth?
 - Less than a minute.
 - One minute.
 - Two minutes.
 - More than two minutes.
9. My parents
 - Watch me while brushing my teeth.
 - Never care.
 - Do not watch but advice.
 - Only my mother watches me.
10. What does gum bleeding mean?
 - Healthy gums.
 - Inflamed gums.
 - Gum recession.
 - Don't know.
11. How do you protect yourself from gum bleeding?
 - Using toothbrush, paste & dental floss.
 - Using soft food.
 - Using Vitamin C.
 - I do not know.
12. What does plaque mean?
 - Debris on the teeth.
 - Stains on teeth.
 - I do not know.
13. What does dental plaque lead to?
 - Inflammation on the gum.
 - Staining of the teeth.
 - Dental caries.
 - I do not know.

14. *How often do you visit your dentist?*
 Regularly every 6–12 months.
 Occasionally.
 When I have dental ache.
 I never visited a dentist.
15. *Last time I visited a dentist was:*
 Six months ago.
 Last 6–12 months.
 Last 1–2 years.
 Last 2–5 years.
 More than 5 years.
16. *The treatment(s) I sought during my last visit to the dentist was (were):*
 Check my teeth.
 Take x-rays.
 Have scaling.
 Have fluoride on my teeth.
 Treat my gums.
 Have fillings.
 Have crown/bridge.
 Have orthodontic treatment.
 Have tooth extraction.
 Others (specify).....
17. *The reason for my last visit to the dentist was:*
 Dental pain.
 Family & friends advice.
 Dentist advice.
 Another reason (specify).....
18. *When I first visited the dentist:*
 I was scared and reluctant.
 Slightly afraid.
 Very slightly afraid.
 I was never afraid.
19. *When I first visited the dentist:*
 There was no dental pain.
 I felt nothing.
 There was little dental pain.
 There was severe dental pain.
 There was not enough time for treatment.
 There was enough time for treatment.
 I was feeling not comfortable.
20. *If you do not visit the dentist or are afraid of him or her, the reason(s) is (are):*
 I am afraid of the dental tools.
 I am afraid of the dental wheel.
 Treatment cost is high.
 I have no time.
 I am afraid sitting in the waiting room.
 I am afraid even for thinking of tomorrow's appointment
21. *How many are the deciduous teeth?.....*
22. *How many are the permanent teeth?.....*
23. *How many carious teeth do you have?.....*
24. *How many filled teeth do you have?.....*
25. *Do you think you can decide the treatment you need?*
 Yes.
 No.
 I do not know.
26. *Is it necessary for patients to decide their dental treatment needs?*
 Yes.
 No.
 I do not know.
27. *Carious teeth can affect the teeth appearance?*
 Yes.
 No.
 I do not know.
28. *Pastries affect the teeth adversely?*
 Yes.
 No.
 I do not know.
29. *Soft drinks and fizzy drinks affect the teeth adversely?*
 Yes.
 No.
 I do not know.
30. *Brushing teeth prevents dental decay?*
 Yes.
 No.
 I do not know.
31. *Using fluoride strengthens the teeth?*
 Yes.
 No.
 I do not know.
32. *Regular visits to the dentist are necessary?*
 Yes.
 No.
 I do not know.
33. *Dentists always explain the dental problem and solve it?*
 Yes.
 No.
 I do not know.
34. *The dentist examines and takes care of his or her patients?*
 Yes.
 No.
 I do not know.
35. *What the dentist cares about is treatment not prevention?*
 Yes.
 No.
 I do not know.
36. *General body health has a relationship to oral and dental diseases?*
 Yes.
 No.
 I do not know.
37. *You care about your teeth as much as any part of your body?*
 Yes.
 No.
 I do not know.