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### RESEARCH ARTICLE

#### PREVALENCE AND DISTRIBUTION OF DEEP CARIES AND ABSCESS FORMATION IN CHILDREN

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#### Manuscript Info

##### Manuscript History

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#### Abstract

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#### Introduction:-

To begin with, the health of the child is the health of his teeth, which means that the teeth are of great importance because they are affected significantly and quickly depending on the child's food and components and this means that you must pay attention to the baby's food and quality and components as it in general should not contain sugars.. The relation: the less sugar you eat the less the incidence of tooth caries and abscess.

#### Rationale:

The importance of this research is that it is concerned with the health of the child as it is on the other hand, dental health has become a global trend for beauty, both in children and adults, while abounding methods of well-being and recreation of the child, which has a strong relationship with candies and sweets, while this admires the child very much and take it without Stop, which means that he will be exposed more and more to the occurrence of caries in his teeth.

Because of this, the importance of working to know the prevalence of deep caries and abscess in children will make science and knowledge the best way to reduce the occurrence of deep caries and abscess gradually and to prevent it after that, If this has happened, it helps to treat it in the right way and fast.

#### Literature review:

##### According to the other previous studies:

##### This study:

Prevalence and distribution of deep caries and abscess formation in children who required emergency dental general anesthesia. A retrospective analysis.(Schnabl D, 2019)

##### The conclusion was:

Prevalence of deep caries and abscess formation was alarmingly high. In consideration of the medical risks and high efforts immanent in DGA, educational measures should address parents in order to raise awareness of their responsibility for their children's health.(Schnabl D, 2019)

Although this study was wonderful, useful and concise as it gave us an impressive and logical result on a large sample number, but this study outside the Kingdom of Saudi Arabia is also a study different from our study type.

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We did not find a study that corresponds entirely with our study and our goals and most importantly for those who find a study interested in the incidence and prevalence of caries and abscess in children specifically in Saudi Arabia.

**Research Objectives:-**

Questionnaire.

**Aim:-**

The assessment of prevalence and distribution of deep caries and odontogenic abscess formation in children

**The Sub- Objectives:-**

1. To determine the most common age in children affected by the deep caries and abscess formation
2. To determine the relationship between gender and deep caries and abscess formation.
3. To determine the most common cause of caries and abscess in children.

**Method and Design:-**

**Study design:**

Cross sectional study.

**Study area:**

This study will be conducted in kingdom of Saudi Arabia.

**Study setting:**

The study will be carried out by questionnaire.

**Study population:**

General children population (IP and OP)

**Inclusion criteria:**

children

**Exclusion criteria:**

Adult

**Data collection methods:**

**Data collection tool:**

Self-administered questionnaire partially constructed by the researcher with reference to already made questionnaire in another study. Validity will be checked by at consultant.

**Data collection technique:**

The researcher will distribute the questionnaire.

**Study sample and technique:**

**Sample size:**

More than 500

**Sample technique:**

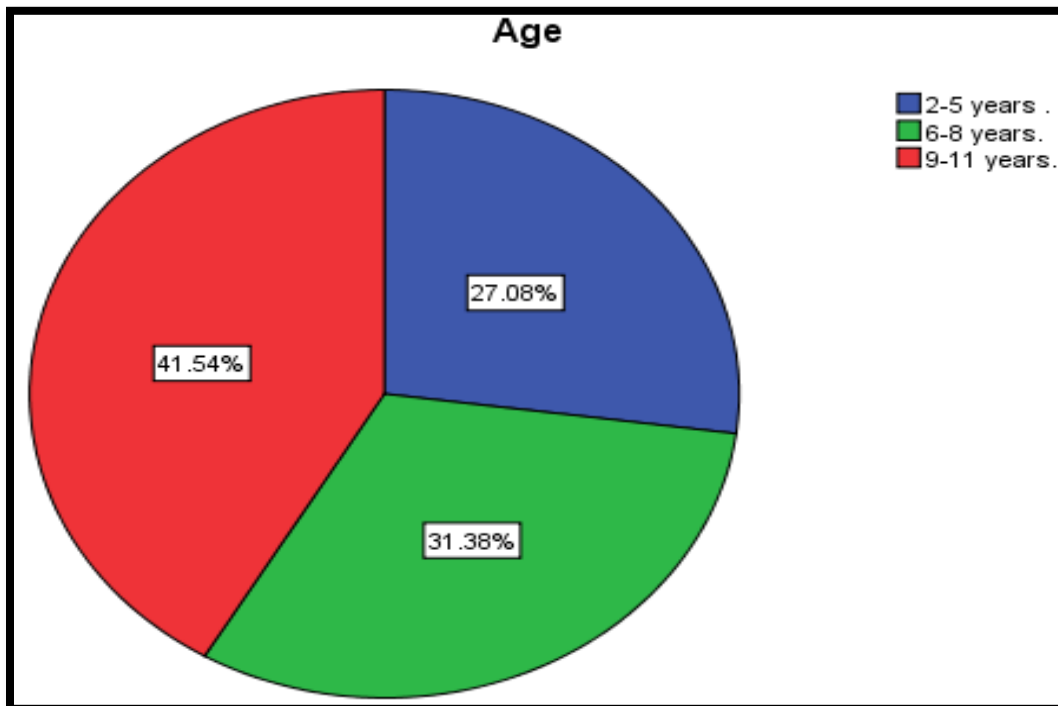
Questionnaire.

**Data entry and statistical analysis:**

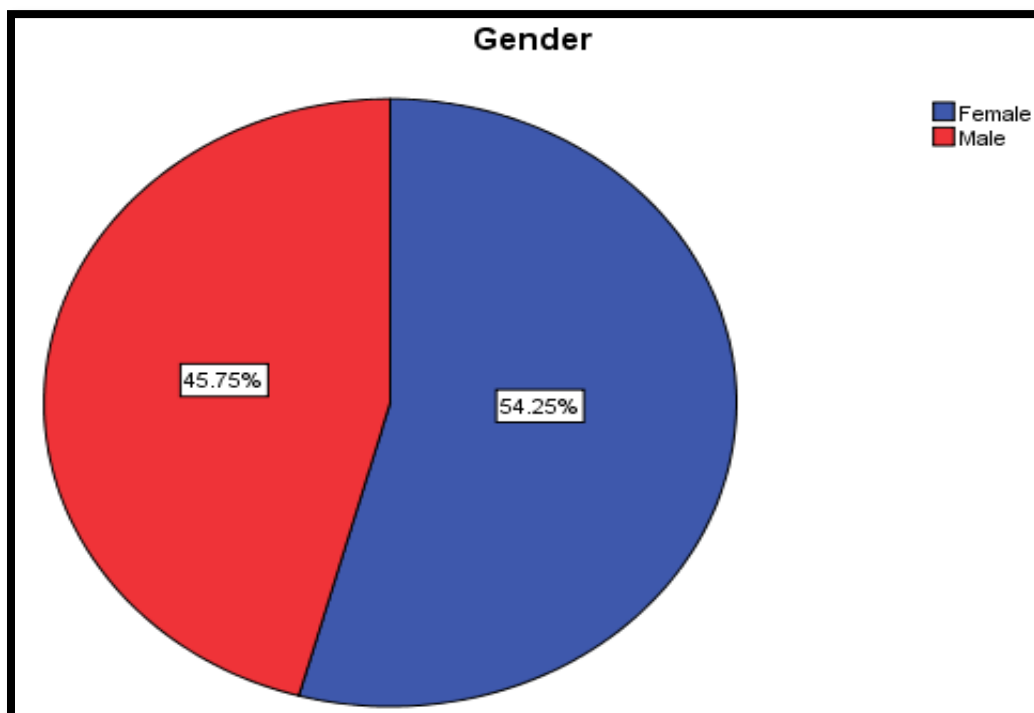
The data will be entered into a personal computer and it will be analyzed using Statistical Package for the Social Sciences (SPSS).

**Results:-**

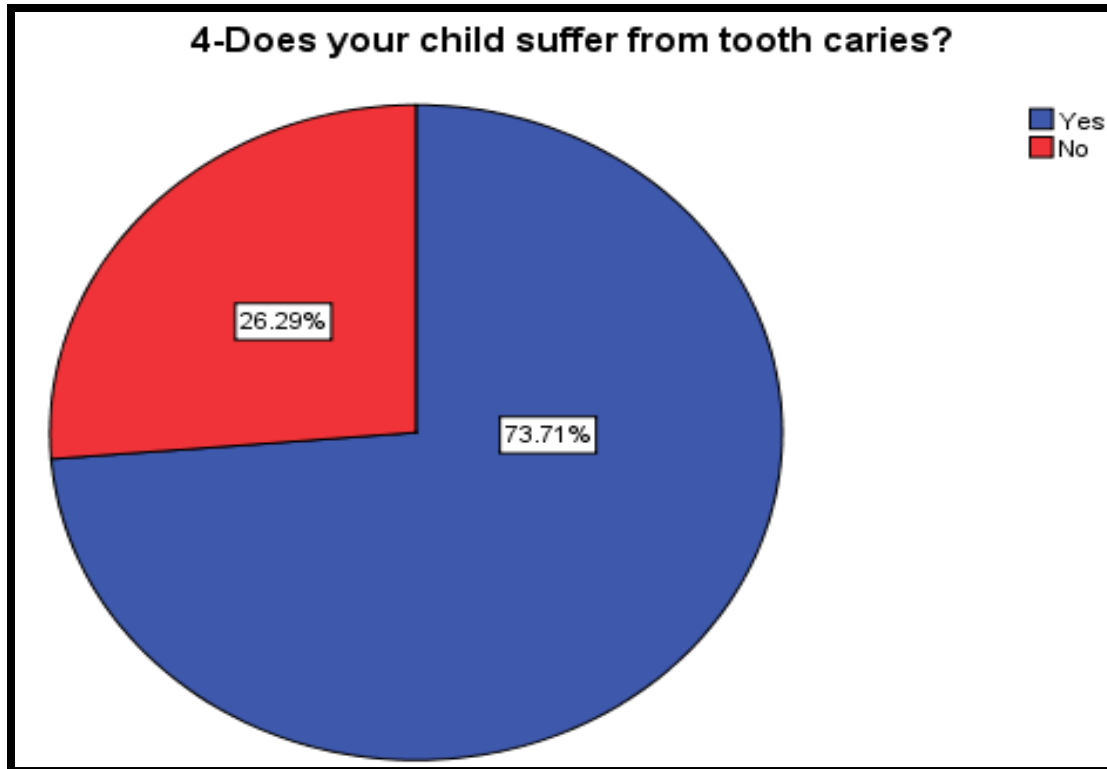
The Questionnaire aimed to know the Prevalence and distribution of deep caries and abscess formation in children. 1411 responses were collected showing the following results :



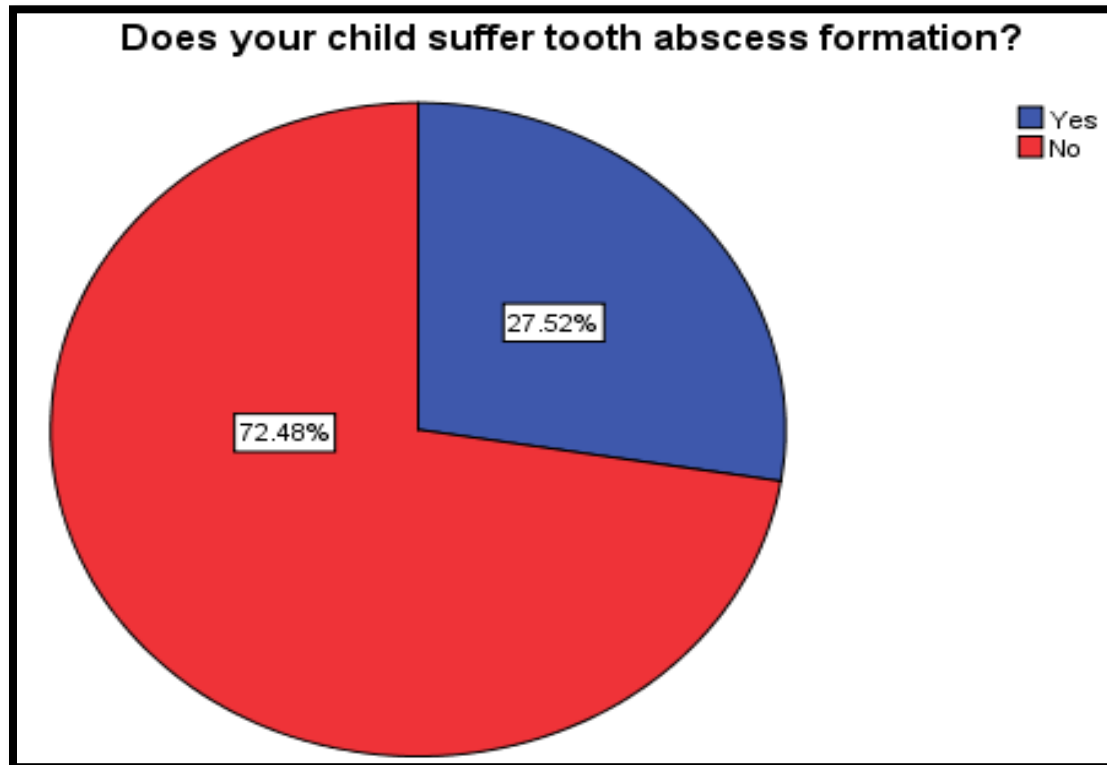
41.54% of the respondents' children are between 9-11 years.



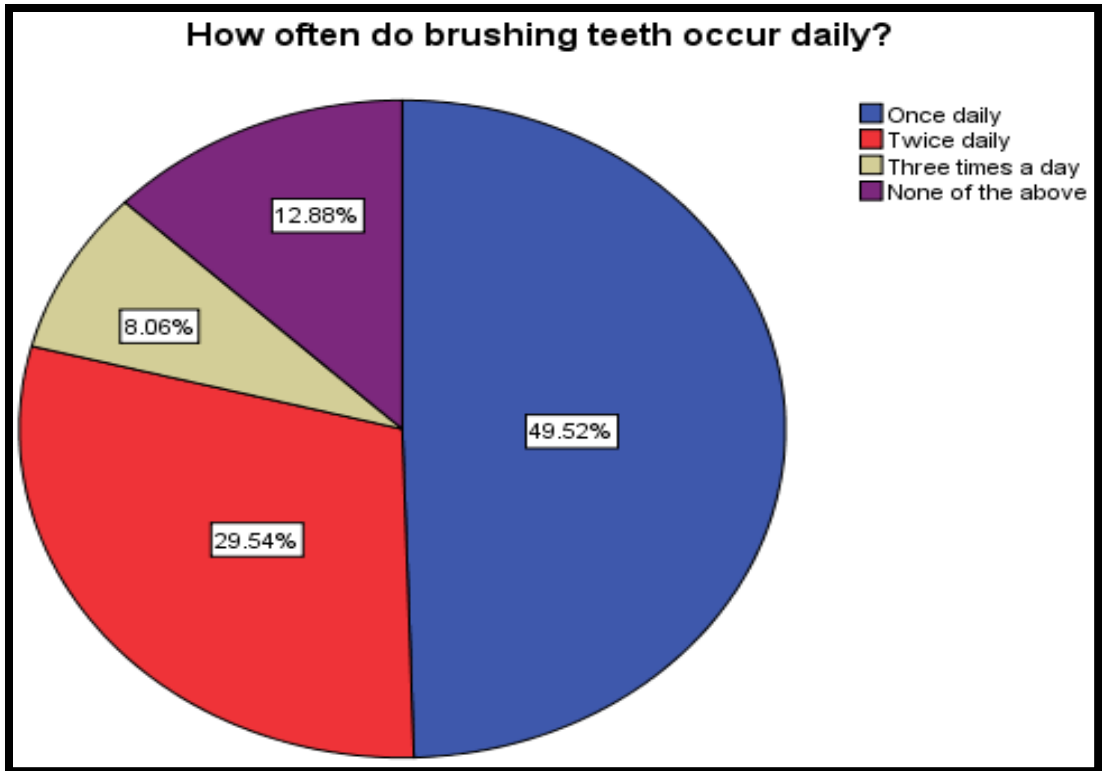
The results indicate that most respondents are females.



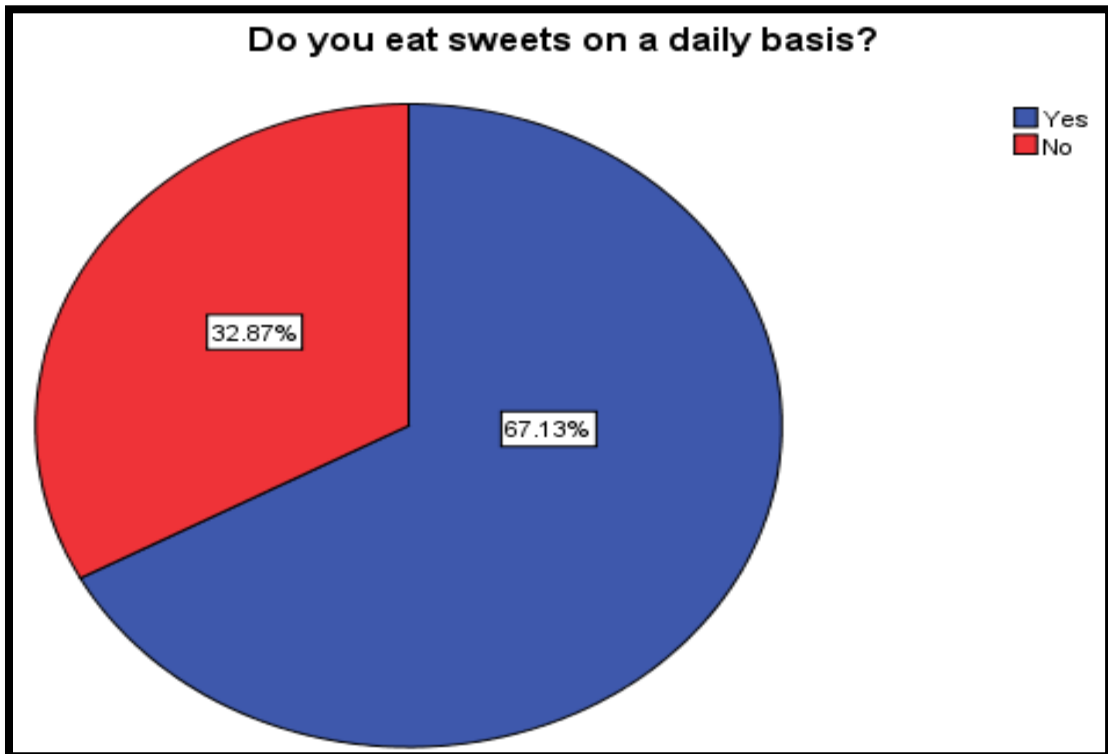
The results show that most of the respondents' children suffer from tooth caries.



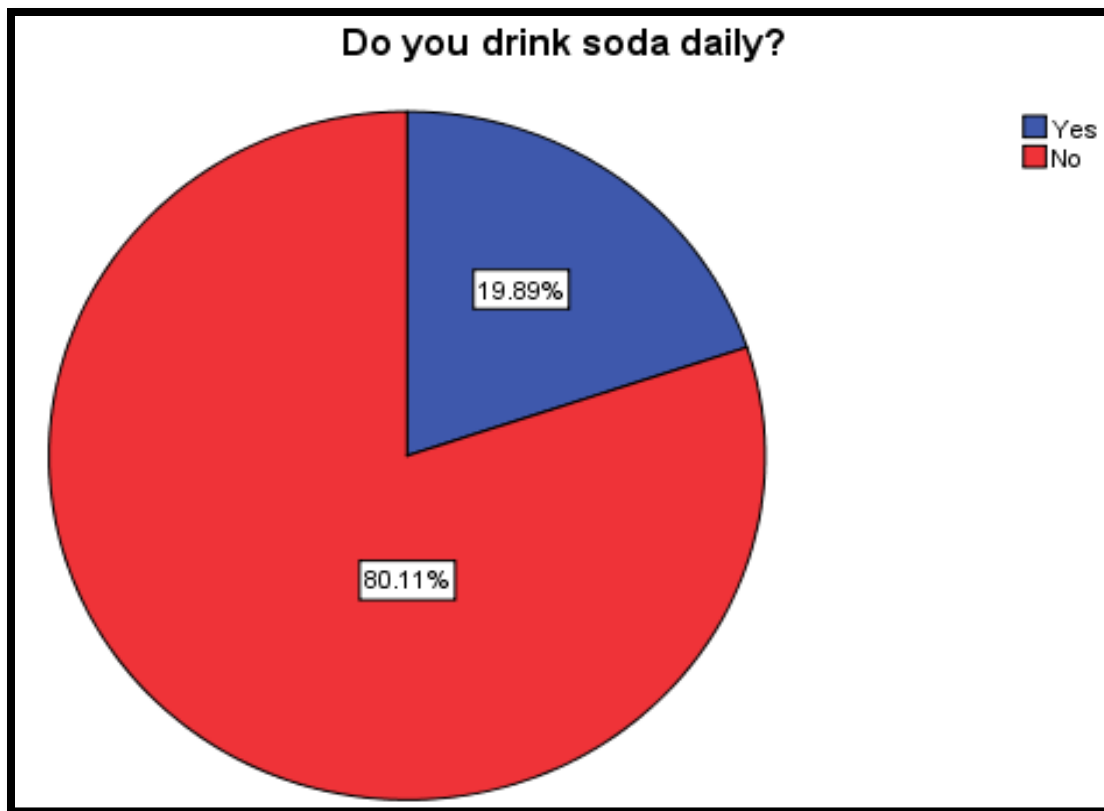
The results show that most of the respondents' children do not suffer from abscess Formation.



The answer of most respondents to the question of the duration is once daily.



The results indicated that most respondents eat sweets on a daily basis.



The results indicated that most respondents don't drink soda on a daily basis.

**Correlations:-**

Correlations								
		Age	Gender	4-Does your child suffer from tooth caries?	Does your child suffer tooth abscess formation?	How often do brushing teeth occur daily?	Do you eat sweets on a daily basis?	Do you drink soda daily?
Age	Pearson Correlation	1	-.025-	-.123- <sup>**</sup>	-.189- <sup>**</sup>	.053	.077 <sup>**</sup>	-.175- <sup>**</sup>
	Sig. (2-tailed)		.403	.000	.000	.074	.009	.000
	N	1141	1141	1141	1141	1141	1141	1141
Gender	Pearson Correlation	-.025-	1	-.041-	-.041-	.041	-.055-	-.102- <sup>**</sup>
	Sig. (2-tailed)	.403		.167	.169	.170	.066	.001
	N	1141	1141	1141	1141	1141	1141	1141
4-Does your child suffer from tooth caries?	Pearson Correlation	-.123- <sup>**</sup>	-.041-	1	.355 <sup>**</sup>	.195 <sup>**</sup>	.209 <sup>**</sup>	.133 <sup>**</sup>
	Sig. (2-tailed)	.000	.167		.000	.000	.000	.000
	N	1141	1141	1141	1141	1141	1141	1141
Does your child suffer tooth abscess formation?	Pearson Correlation	-.189- <sup>**</sup>	-.041-	.355 <sup>**</sup>	1	-.044-	.293 <sup>**</sup>	.317 <sup>**</sup>
	Sig. (2-tailed)	.000	.169	.000		.136	.000	.000
	N	1141	1141	1141	1141	1141	1141	1141
How often do brushing teeth occur daily?	Pearson Correlation	.053	.041	.195 <sup>**</sup>	-.044-	1	-.055-	-.120- <sup>**</sup>
	Sig. (2-tailed)	.074	.170	.000	.136		.066	.000
	N	1141	1141	1141	1141	1141	1141	1141
Do you eat sweets on a daily basis?	Pearson Correlation	.077 <sup>**</sup>	-.055-	.209 <sup>**</sup>	.293 <sup>**</sup>	-.055-	1	.260 <sup>**</sup>
	Sig. (2-tailed)	.009	.066	.000	.000	.066		.000
	N	1141	1141	1141	1141	1141	1141	1141
Do you drink soda daily?	Pearson Correlation	-.175- <sup>**</sup>	-.102- <sup>**</sup>	.133 <sup>**</sup>	.317 <sup>**</sup>	-.120- <sup>**</sup>	.260 <sup>**</sup>	1
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000	
	N	1141	1141	1141	1141	1141	1141	1141

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Discussion:-**

This study was based on a number of 1141 participants, from this study as the number of females is 619 and males is 522 and ,841 of them suffer from tooth caries which is considering as unhealthy sign requires going to the doctor for a health check-up,.

The current study showed statistically significant (P value is 0.000) which means there is a strong relationship between suffering from tooth caries and eating sweets on a daily basis this means that eating sweets on a daily basis may constitute an important cause on suffering from tooth caries, (P value is 0.000) which means there is a strong relationship between suffering from tooth caries and drinking soda on a daily basis this means that drinking soda on a daily basis may constitute an important cause on suffering from tooth caries.

(P value is 0.000) which means there is a strong relationship between suffering from tooth caries and how often the children brush their teeth daily, and this means that brushing teeth more than once a day may help alleviate the suffering of tooth caries.

**Conclusion:-**

The results of the study showed positive results in terms of the low incidence of tooth abscess formation among the children. But many children suffer from tooth caries, and the main causes of it depends on the study is eating sweets on a daily basis . Also , there is a strong relationship between suffering from tooth caries and drinking soda daily. Also , there is a strong relationship between suffering from tooth caries and how often the children brush their teeth daily.

**Recommendation:-**

we recommend setting up health education programs about the tooth abscess ,This health problem must be presented broadly and beneficially and, in a way, that everyone understands, as most deal with the tooth abscess by ignoring and not being important, work should be done on health conferences and medical discussions on that.

**Acknowledgement:-**

The authors would like to thank the participants for their great cooperation, Participants will be especially from medical universities and colleges selected and carried out by questionnaire.

**We thank the data collectors:**

**Ethical consideration:**

1. Individual consent from participants (written on the front page of the questionnaire).
2. All information will be kept confidential.

**Budget:**

Self-funded. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**References:-**

1. Schnabl D, e. (2019). Prevalence and distribution of deep caries and abscess formation in children who required emergency dental general anaesthesia. A retrospective ana... - PubMed - NCBI. [online] Ncbi.nlm.nih.gov. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/31246087> [Accessed 20 Jun. 2019].
2. Chou, R., Cantor, A., Zakher, B., Mitchell, J. and Pappas, M. (2019). Introduction. [online] Ncbi.nlm.nih.gov. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK202091/> [Accessed 8 Sep. 2019].
3. Nidcr.nih.gov. (2019). Dental Caries (Tooth Decay) in Children Age 2 to 11. [online] Available at: <https://www.nidcr.nih.gov/research/data-statistics/dental-caries/children> [Accessed 8 Sep. 2019].

**Appendices:-**

**( Questionnaire )**

Questionnaire Prevalence And Distribution of Deep Caries And Abscess Formation in Children.

استبيان انتشار وتوزيع التسوس العميق وتشكيل الخراج عند الأطفال

هذا الاستبيان يمكن تعبئته من قبل الطبيب و المريض مباشرة و يمكن تعبئته من قبل الطبيب و الام المصاحبة لطفلها المريض و يمكن تعبئتها من الام المصاحبة لطفلها المريض فقط

This questionnaire can be filled by the doctor and the patient directly and can be filled by the doctor and the mother accompanying her patient child and can be filled from the mother accompanying her child patient only.

**العمر: Age:**

1. 2-5 years.
2. 6-8 years.
3. 9-11 years.

**الجنس: Gender:**

1. Male / ذكر
2. Female / انثى

هل يعاني طفلك من تسوس الأسنان؟ / Does your child suffer from tooth caries? /

1. Yes / نعم
2. No / لا

هل يعاني طفلك من تكوين خراج الاسنان؟ / Does your child suffer tooth abscess formation? /

1. Yes / نعم
2. No / لا

كم عدد المرات التي يتم فيها تفريش الاسنان يوميًا؟ / How often do brushing teeth occur daily? /

1. Once daily / مره واحده يوميًا
2. Twice daily / مرتين يوميًا
3. Three times a day / ثلاث مرات يوميًا
4. None of the above / لا شيء مما في الأعلى

Do you eat sweets on a daily basis?

1. Yes / نعم
2. No / لا

هل تشرب الصودا (المشروبات الغازية) بشكل يومي؟ / Do you drink soda daily? /

1. Yes / نعم
2. No / لا

Thank you..