

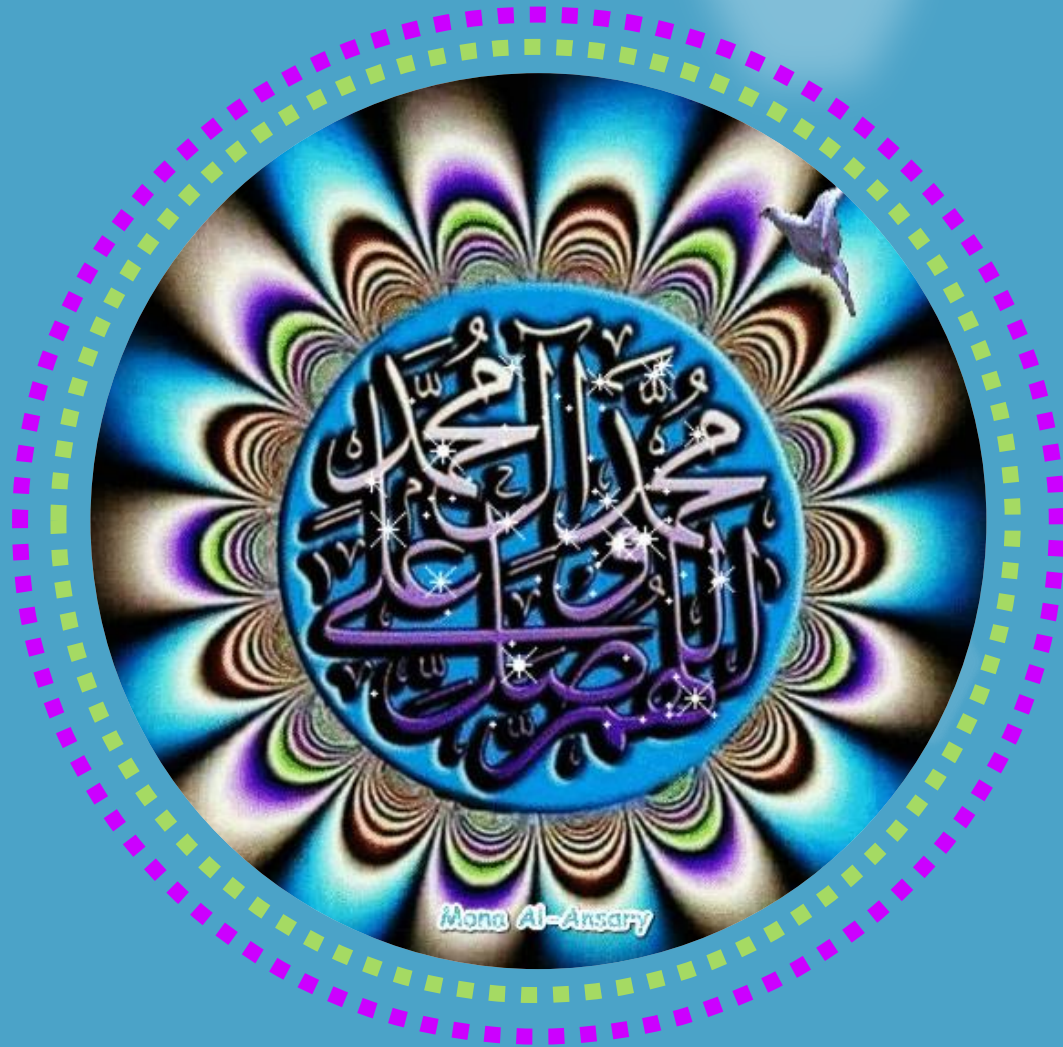


بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

السَّلَامُ عَلَیْكُمْ

وَرَحْمَةُ اللّٰهِ وَبَرَكَاتُهُ

يامن بحثت عن العطور جميلها  
ليكون عطرك في الانام نسима  
هل لي بان اهديك عطرا فاخرا  
هو الدواء اذا غدوت سقيما  
هو قول رب الخلق في قرانه  
صلوا عليه و سلموا تسليما







**Assist. Prof. Aseel Haidar**



# CONTENT



**1** Introduction

**2** Definition

**3** Clinical course

**4** Types

**5** Stress and dental caries



# Introduction



**(ECC) is a biofilm-dependent, critical, widespread oral health problem, in both developing and industrialized countries, usually targets children from poor socio-economic families and racial/ethnic minority backgrounds.**

*What is Early Childhood Caries?*





## Early Childhood Caries

This type of dental caries doesn't vary from the usual carious process, but; mainly associated with incorrect feeding practice so called (bottle feeding), (nursing) caries.

It was recognizing that this distinctive clinical presentation was not consistently associated with poor feeding practices and that caries is an infectious disease, AAPD adopted the term "early childhood caries" (ECC) to reflect better multifactorial etiology.



- In 1985 the term "baby bottle tooth decay" was proposed as an alternative which would be more appropriate for patient acceptance and would focus attention on potential damage of using a nursing bottle





*Clinical  
course of ECC*



# Clinical course of ECC



*Initial stage*

**Destructive or  
"de"**

*Traumatic stage..*

*Arrested caries..*

Initially, a demineralization dull, white area is seen along the gum line on labial aspect of maxillary incisors.



These white lesions become cavities which involve the neck of the tooth in a ring like fashion

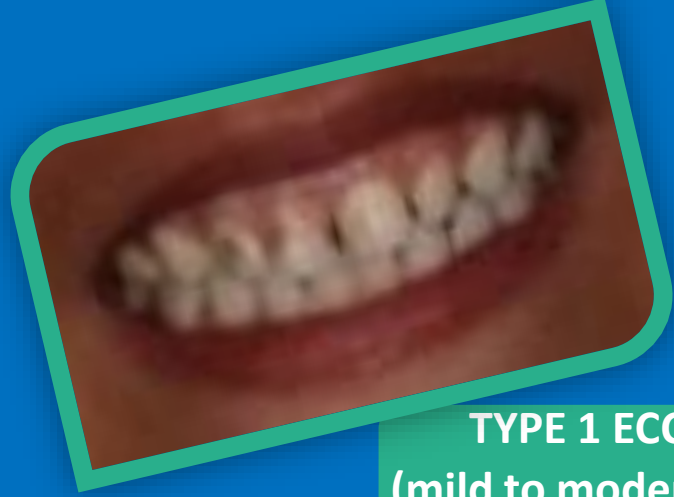
Finally, the whole crown of the incisors is destroyed leaving behind brown-black root stumps.



*Progression of the lesion*



# Types



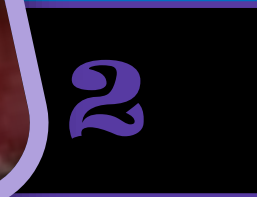
## TYPE 1 ECC (mild to moderate)

Carious lesions involving the molars and incisors



## TYPE 2 ECC (moderate to severe)

Labiolingual carious lesion affecting the maxillary incisors with or without molar caries



## TYPE 3 ECC (severe)

Carious lesion involve all the teeth, including mandibular incisors



# Types of early childhood caries

Rampant caries

Pit and fissure caries

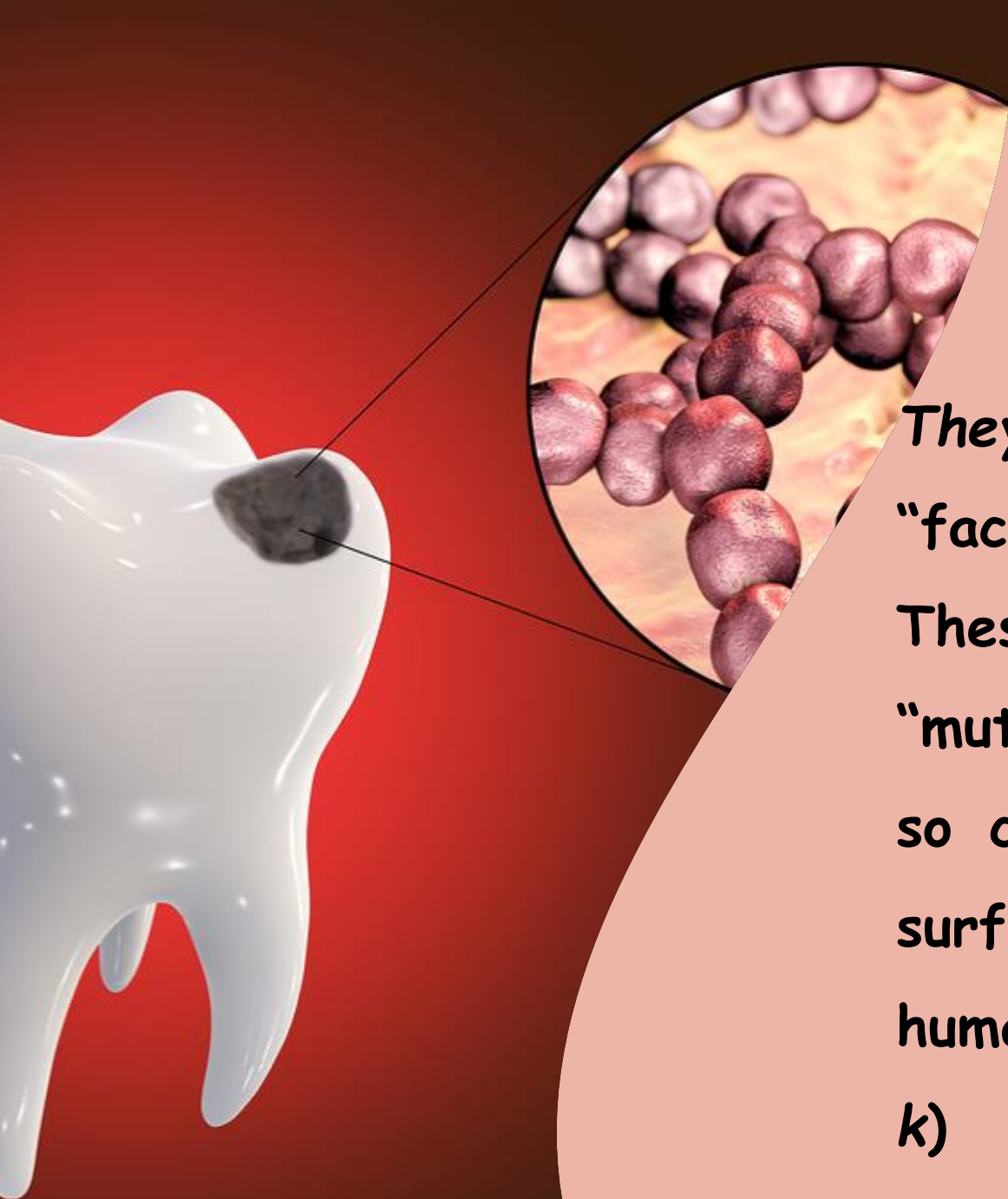
Nursing caries



## *Mutans Streptococci*

They are "non-motile", "gram positive", "facultative anaerobic" microorganisms.

These micro-organisms change its shape "mutatable" from coccal form to rods form so called "mutans", according to their outer surface there are 9 serotype (a-h and k), human's mouth mostly inhabitants by (c, e, f, k)





# Virulence of Mutans Streptococci

**A**

Acid production and tolerance

**B**

Formation of polysaccharides

**C**

Adhere and colonize the smooth surface layer with subsequent biofilm formation

**D**

Mutacin production and Biofilm adaptation

**Associated risk factors**

**Feeding practice**

Breast feeding

Bottle feeding

**Oral hygiene**

**Parents education, behavior and socioeconomic status**

**Emotional stress**

Stress defined as “  
The non-specific  
response of the body  
to any demand”.

Anxiety defined as  
generalizes annoying  
and unclear feeling of  
fear and  
apprehension with  
obscure source, which  
someone can feel.







Partially by rising  
the salivary and  
serum  
corticosteroids  
and  
catecholamines

Through  
deleterious  
eating  
practices

**Stress and  
dental  
caries**

Atrophic  
change of the  
major salivary  
glands

By reducing of  
the  
effectiveness  
of the self-  
care practices

1

3

2

4

# Methods for measuring childhood stress

1

- Environmental approach

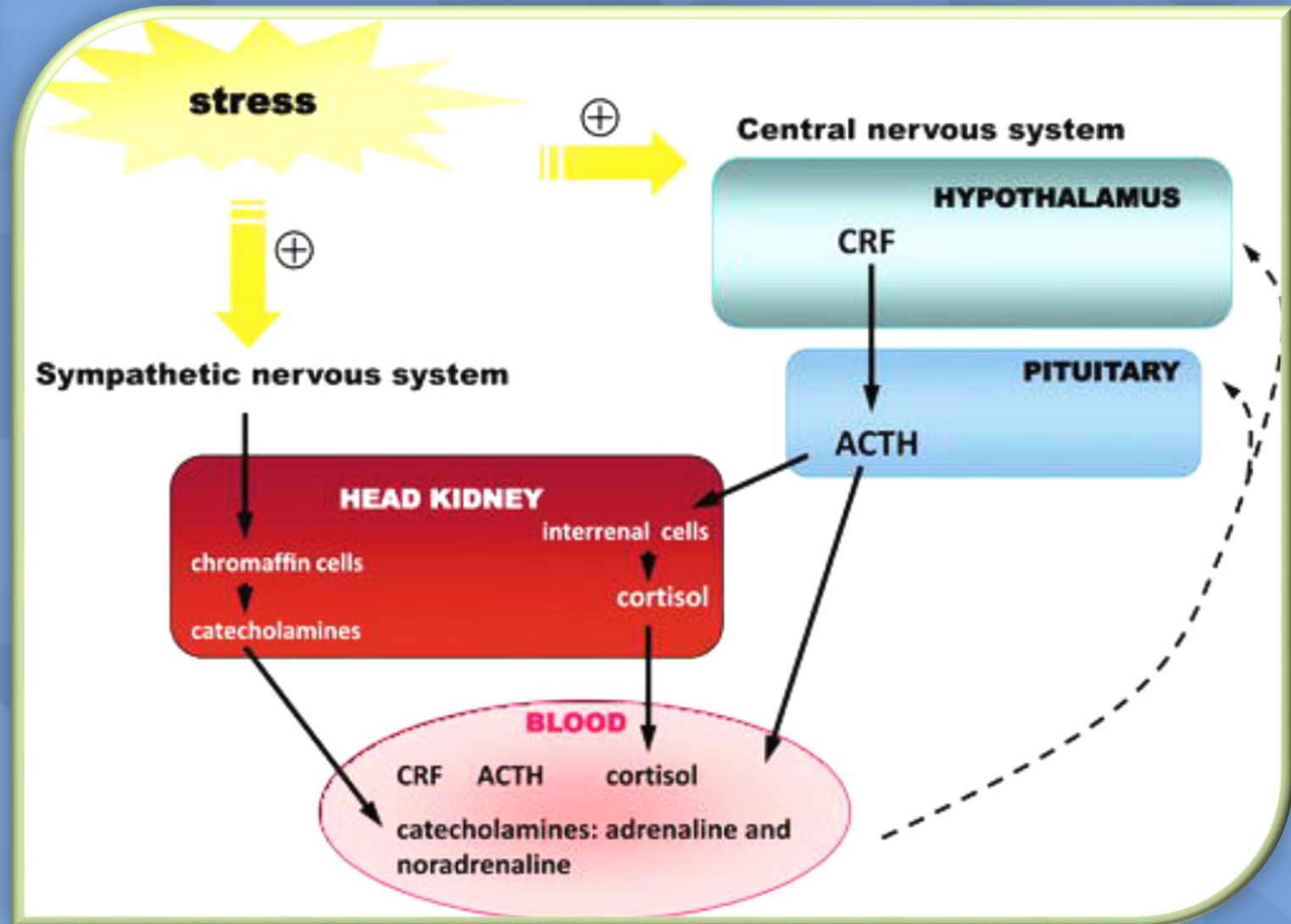
2

- Psychological approach

3

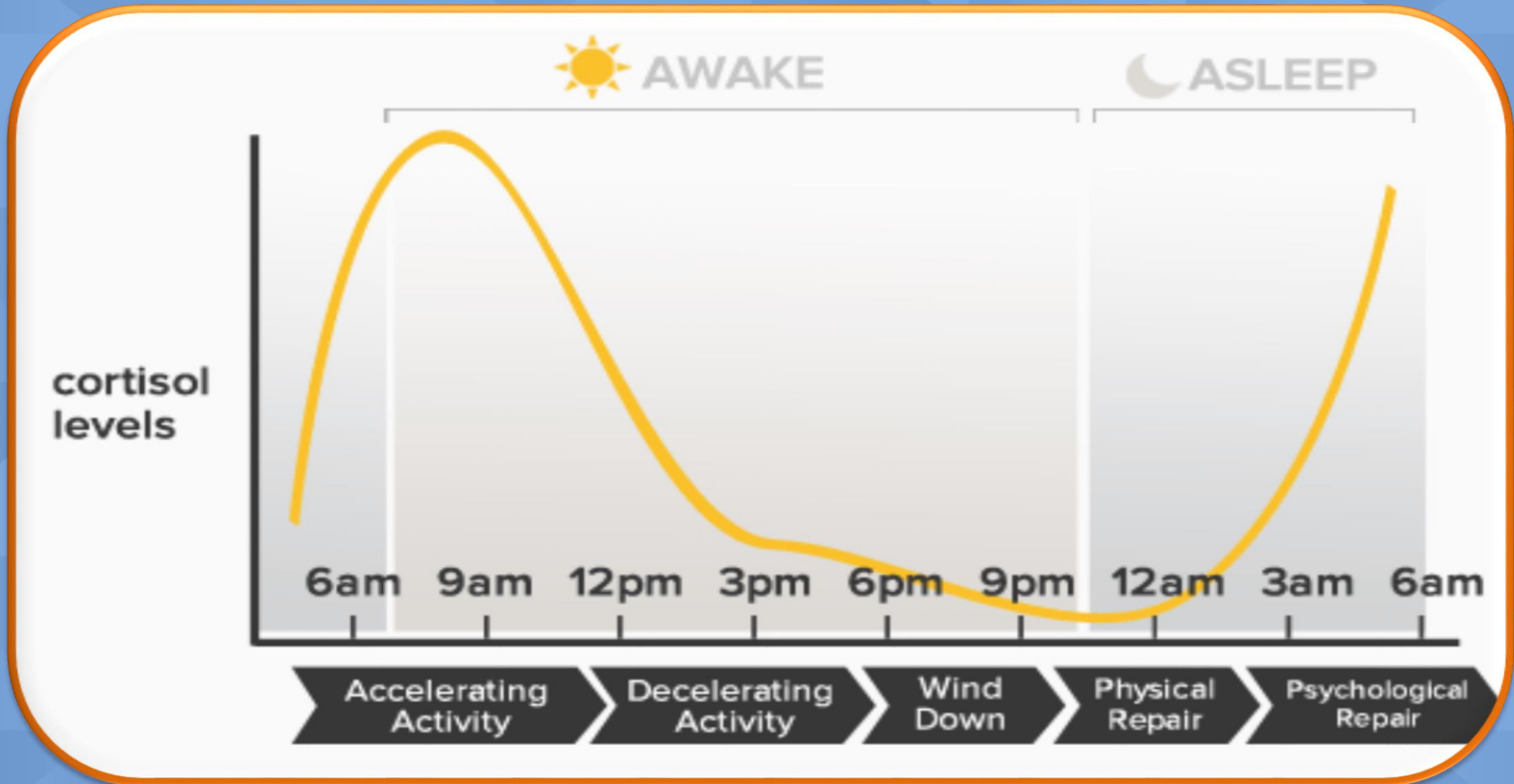
- Physiological approach ( Biological approach)

# Salivary cortisol





# Circadian rhythm of cortisol



AIMS of a previous Iraqi study



*Aims*



**Aim**

**1**

Measuring the level of the cortisol hormone in both groups (children with ECC and children free of dental caries).

**2**

*Evaluate the effect of the cortisol level on the count of the mutans streptococci.*

**3**

*Measuring the level of the anxiety in both groups of children.*

**This  
and  
ch**

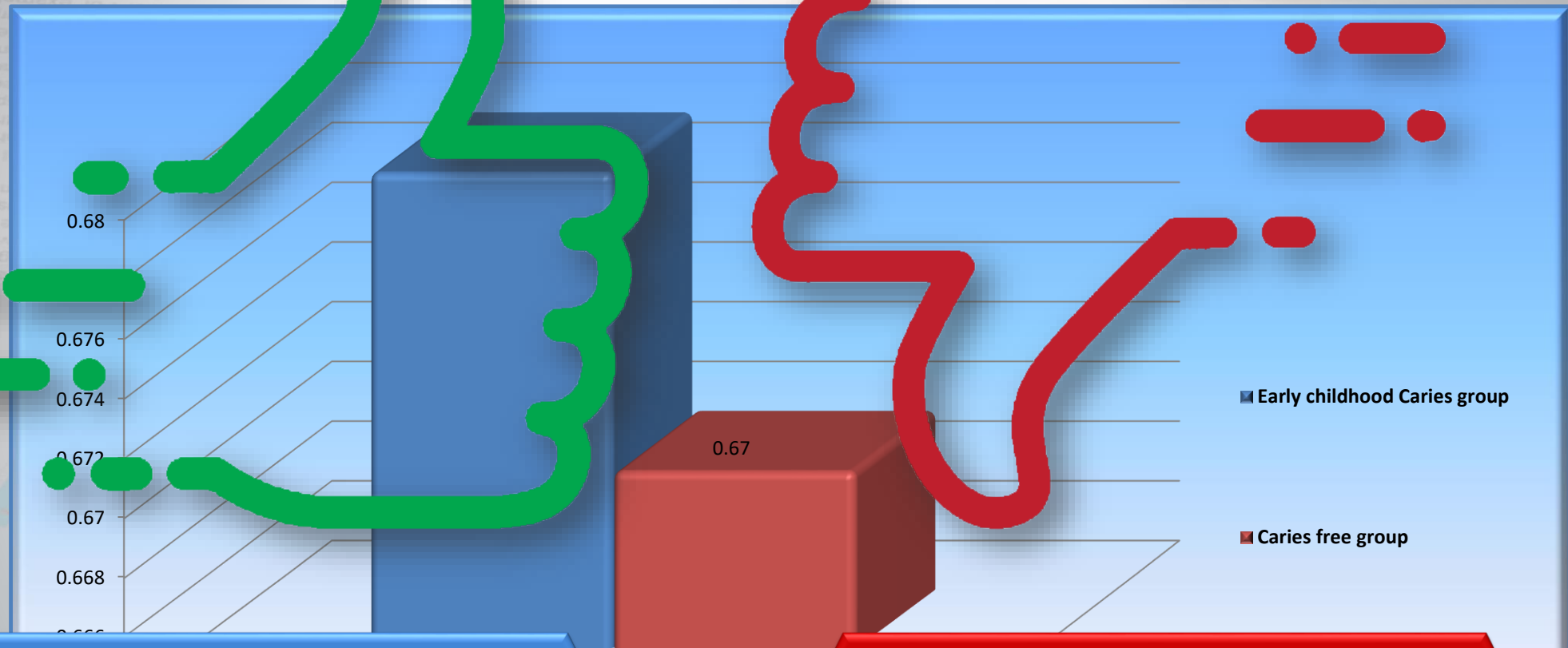


## Anxiety measurement

In this study , the measurement of the anxiety among the children was done by using Spence Children's Anxiety Scale (SCAS) which was proposed by the DSM-IV. The Preschool Anxiety Scale (PAS) was available for children aged 3 through 6 years old (Parent PAS, Teacher PAS). In this study, (Parent PAS) had been used .This scale translated to Arabic language . Validity and reliability were carried out under supervision of The Arab Board of Health Specialization.



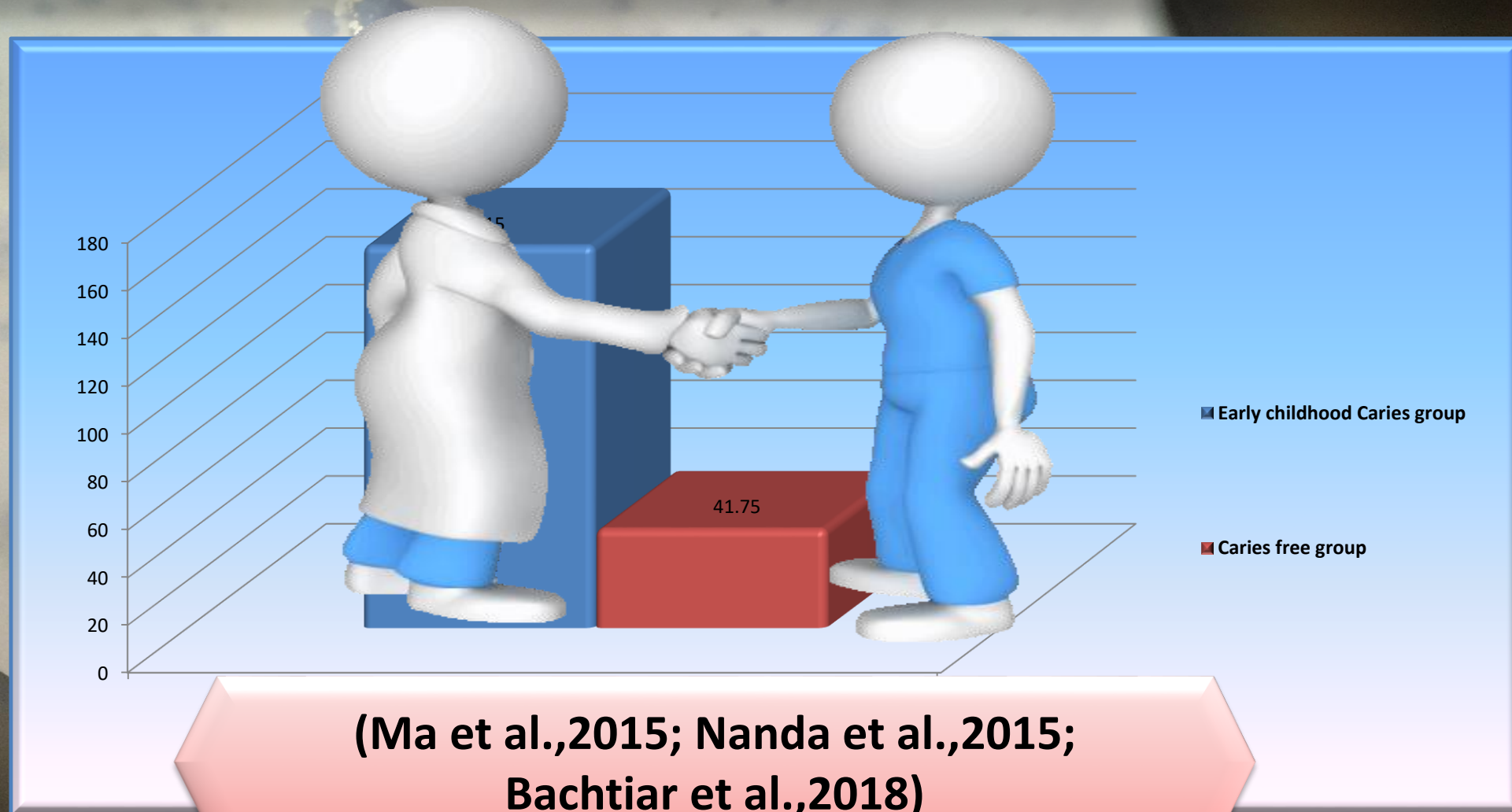
# Salivary cortisol level among early childhood caries group and caries free group



(Rai et al.,2010; Pani et al.,2013)

(Kambalimath et al.,2010)

# The viable count of *mutans streptococci* (CFU/ml) among the study sample.

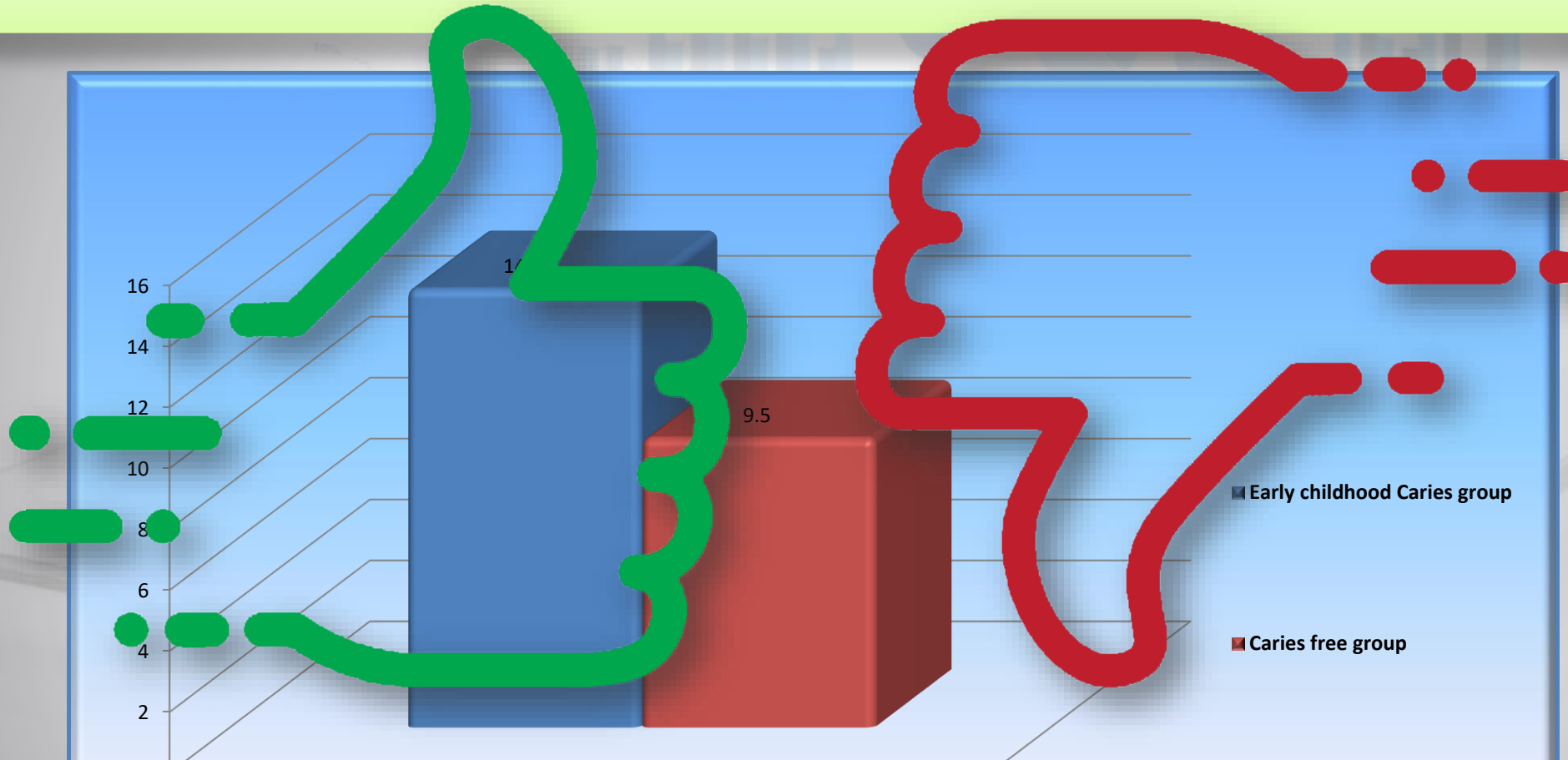




# The impact of salivary cortisol ( $\mu\text{g}/\text{dl}$ ) on the *mutans streptococci* ( $\text{CFU}/\text{ml} \times 10^5$ )

Variable	Salivary Cortisol ( $\mu\text{g}/\text{dl}$ )					
Mutans Streptococci $\text{CFU}/\text{ml} \times 10^5$	No.	R	R Square	B	t-test	p value
	80	0.367 <sup>a</sup>	0.135	1483.46	3.488	0.001*

# Anxiety records among the study sample



(Shimura et al. in  
1983 )

(Barbosa et al.,2012)

# The effect of anxiety on the salivary cortisol level

Variable	Anxiety					
Salivary cortisol ( $\mu\text{g}/\text{dl}$ )	No.	R	R Square	B	t-test	p value
	80	0.348 <sup>a</sup>	0.121	0.001	3.016	0.004*



A close-up photograph of a person's right hand holding a black pen, poised to write on a white, lined notebook. The background is softly blurred, showing a desk with a spiral-bound notebook and a camera. Overlaid on the right side of the image is a large, pink, cloud-shaped thought bubble with a thin red outline. Inside the bubble, the word "Conclusions" is written in a bold, black, serif font. Below the main bubble are three smaller, overlapping pink circles of varying sizes, also with thin red outlines, suggesting a trail of thought.

**Conclusions**

# Conclusion

1

Plaque index was higher significantly among ECC group compared to caries free group and it was significantly associated with caries experience.

2

The viable count of mutans streptococci was higher in the mouth of the ECC group than that presented in the caries free group.

3

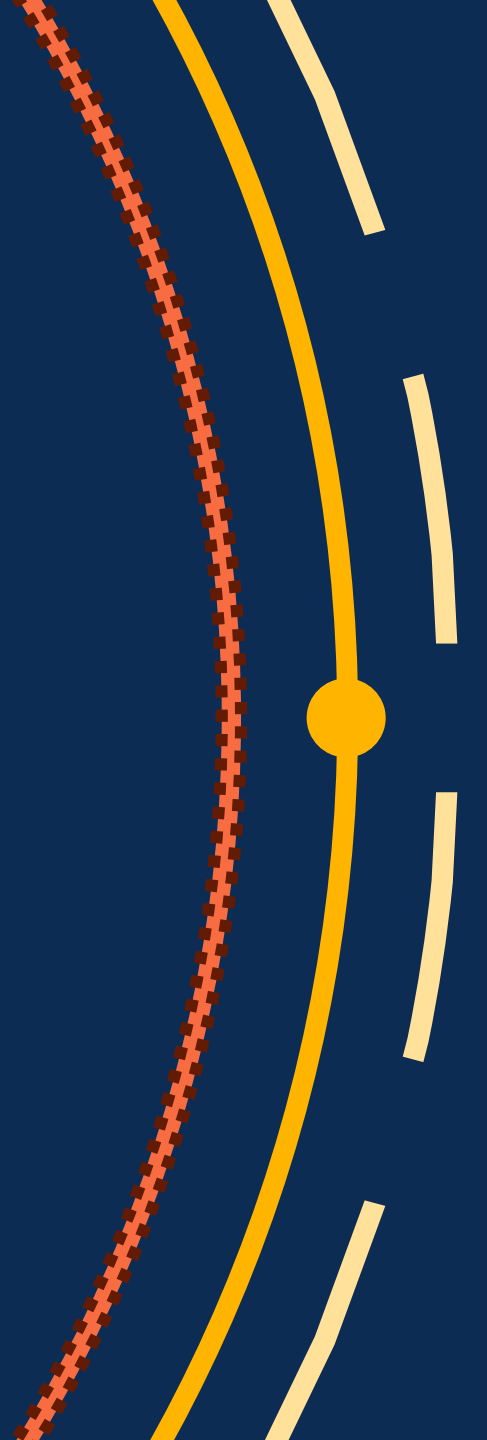
Salivary cortisol level was higher among ECC group than that found among caries free group.

4

Salivary cortisol level affected the viable count of Mutans streptococci positively.

5

Child anxiety was significantly higher among the ECC group compared to the caries free group, and it had an impact on the salivary cortisol level and the presence of dental plaque







**Any  
Question?**

