

Republic of Iraq  
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# **The Impact of Depression Status on Oral Health Condition and Salivary Growth Hormone Related to Anthropometry Among Internally Displaced Adolescence in Baghdad/Iraq**

A thesis

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# *Dedication*

*TO MY LOVELY FAMILY....*

*MY WONDERFUL MOTHER AND FATHER, SISTER, BROTHERS.....*

*MY LOVELY HUSBAND MUSTAFA...*

*SPECIAL THANKS FOR ALL YOUR PATIENCE, SUPPORT AND  
ENCOURAGEMENT IN ALL MY WORK ....*

*ALL MY LOVE TO MY SOUL MATE*

*HASSAN.....*

## **Abstract**

**Background:** Depression is a common mental disorder that presents with depressed mood, it affects oral health either directly through its effect on salivary function or indirectly by affecting on growth is adversely affect dental health. The aims of this study were to assess the effect of depression status on severity of dental caries, gingival inflammation and tooth alignment among internally displaced persons at age 13-17 years in relation to salivary physiochemical and anthropometric measurement.

**Materials and Methods:** 121 internally displaced persons at age range 13-17 years old from three camping area in Baghdad were subjected to Children Depression Inventory questionnaire by Kovacs in 2011. Gingival health status was assessed by using gingival index by Loe and Silness in 1964, while dental caries was assessed by Decay (1-4) Missing-Filled surface index, tooth alignment also measured for upper and lower arch according to criteria of World Health Organization in 1997. Unstimulated salivary flow rate was measured by dividing the volume of collected saliva in milliliter (ml) by the time required for collection in minute (min). Sixty internally displaced persons were selected for salivary growth hormone analysis, and analysis was performed by using special kit (Enzyme-linked Immunosorbent Assay) technique. All 121 persons were subjected to anthropometric measurement (Weight, Height) to assess growth pattern.

**Result:** from the total sample that include 121 internally displaced persons, high depression grade was more occurrence about 65% and the lower occurrence was medium depression grade was (19%) and the occurrence of all depression grade was in female higher than male. Higher depression grade increase in percentage with increase the age especially at age from 16-17 years old. The occurrence of dental caries in male was higher than female and with low depression grade whom under-weight persons. For caries experience, Decayed, Missed surfaces,

the higher mean value was with high depression grade except Filling surfaces was in low depression grade which is the highest value. For weight status, the highest mean value was with over-weight group in low depression grade. For caries severity D<sub>1</sub>, D<sub>3</sub> were more occurrence in medium depression grade while D<sub>2</sub>, D<sub>4</sub> were higher in high depression grade.

For gingival health condition, the higher mean value was in high depression grade for under-weight group. Concerning severity of gingivitis, severe and moderate gingivitis were more high depression grade while mild gingivitis was more in medium depression grade. For tooth alignment according to crowding score, the occurrence of crowding in one arch for healthy, over-weight groups more than two arch for three depression grade. In salivary flow rate, the highest mean value was in low depression grade, for under and over-weight groups, the highest mean value was in medium depression grade. Concerning concentration of growth hormone in saliva, higher salivary growth hormone level was in low depression grade than high depression grade.

**Conclusion:**

The result of the current research revealed that caries experience and gingival inflammation increase in severity with increase in depression grade which affect the salivary status and secretion of growth hormone that affects the tooth alignment.