HEAD SHAPE OF ADULT MALES AS A POSSIBLE INDICATOR OF ECONOMIC CHANGE IN NORTHERN JORDAN (1900-1978)

by:

AHMAD. Y. H. ABU DALOU

(B.A in Nursing, 1993) Jordan University of Science and Technology.

Thesis to be Submitted in Partial Fulfillment of The Requirements of Master Degree of Anthropology in the Institute of Archaeology and Anthropology of Yarmouk University

Thesis committee

Dr. Abdel-Halim Al-Shiyab Chairman

Prof. Dr. Wajih Owais Member

Dr. Mahmoud El-Najjar Member

Dr. Hatem El-Shanti Member

May 1998
ABSTRACT

HEAD SHAPE OF ADULT MALES AS A POSSIBLE INDICATOR OF ECONOMIC CHANGE IN NORTHERN JORDAN

(1900-1978)

by

Ahmad Y. H. Abu Dalou

Supervisor

DR. Abdel-Halim Al-Shiyab

Four hundred and twenty one unrelated adult males were selected haphazardly from Irbid governorate.

The first objective of this study was to find out the role of early childhood nutrition in determining the head shapes which are classified as dolichocephaly (long-headed), mesocephaly (normal or intermediate head), and brachycephaly (broad-headed). For that reason, the modern economic history of Jordan and the West Bank was divided into four economic periods.

The second objective of this study was to know the differences in head width, head length, Cephalic Index which provide the necessary information on the head shape, and head circumference between Jordanians and Palestinians.

The major findings of this study were as follow:

1- Most of Jordanians who lived their early childhood (0-4 years) during the extremely bad economic period (27.2%) were characterized by mesocephaly, while most of them (14.1%) who lived their early childhood during the good economic period were characterized by brachycephaly. This indicates that the nutritional status during
early childhood period play a major role in determining the head shape.

2- Other factors such as genetic factors, sleeping position during infancy, cultural factors, presentation during pregnancy, kind of delivery, and environmental factors may play minor roles in the determining head shape.

3- The picture among Palestinians was different. Most of them who lived their early childhood during the extremely bad economic times (28.1%) were characterized by brachycephaly. This type of head shape was common among most of them (14.6%) who lived their early childhood during the good economic times. This may be due to many factors such as genetic factors, environmental factors, sleeping position during infancy, presentation during pregnancy, kind of delivery, and cultural factors. The role of the nutritional status was not the major one.

4- Among Palestinians, there was a difference in the mean value of Cephalic Index (82.9924%) (brachycephaly) for the subjects whose fathers worked as governmental employees and the mean value of Cephalic Index (79.2806%) (mesocephaly) for subjects whose fathers worked as tenant farmers. This may be due to the economic status which is always reflected the nutritional condition. In addition, Palestinians whose fathers worked outside of the country have the highest mean value of head circumference, which reflecting good nutritional status, especially during the first two years of their lives.
This study showed that the differences between Jordanians and Palestinians in head width, head length, Cephalic Index, and head circumference were not statistically significant, which may be due to the fact that these people share similar genetic components, cultural, and living under similar environmental conditions.