# SCREENING OF FOETOPLACENTAL WEIGHT

# IN IMMEDIATE NEONATAL PERIOD

THESIS

SUBMITTED FOR PARTIAL FULFILLMENT

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BY



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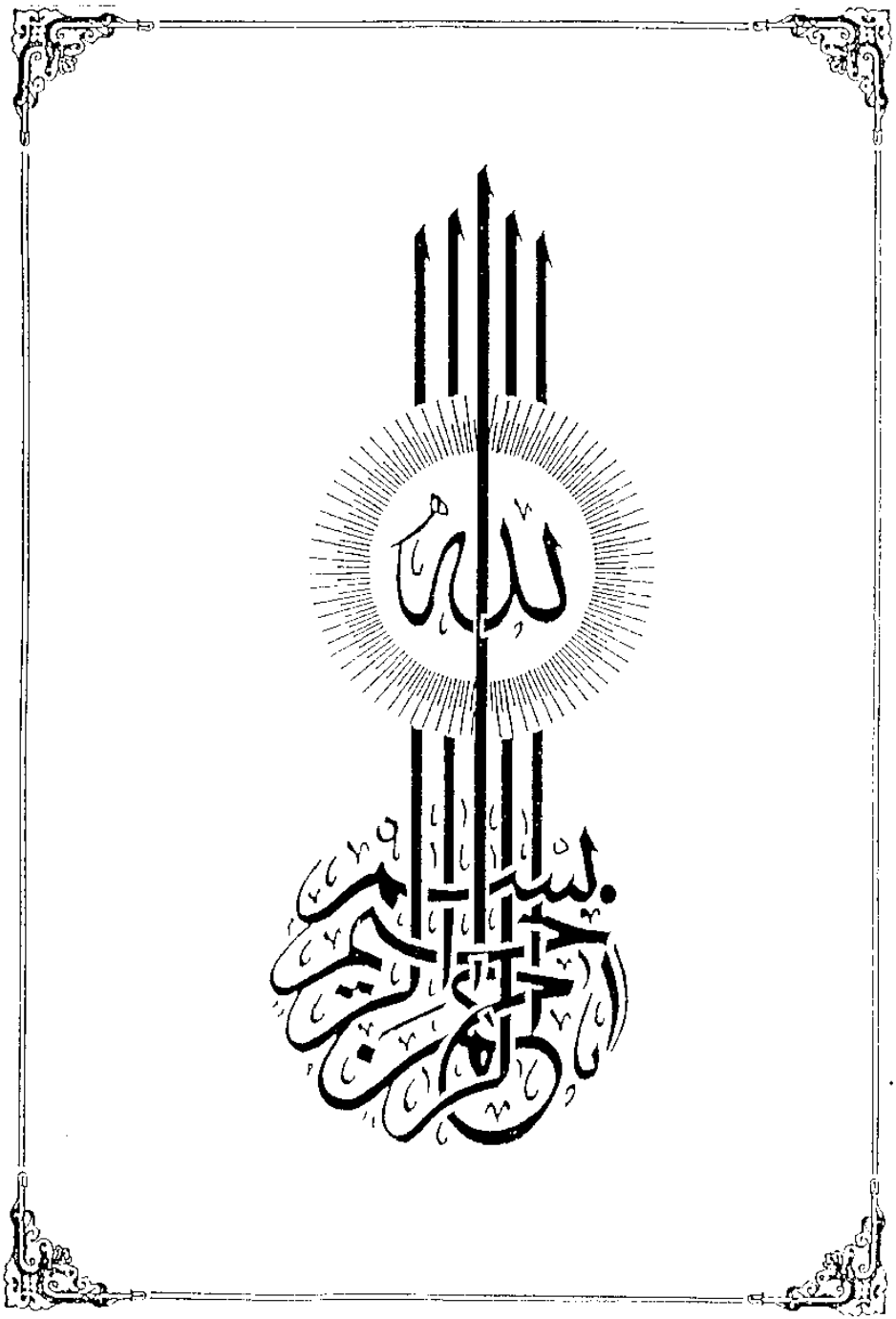

# Introduction
# &
# Aim of the work

# Review of literature

# REVIEW OF LITERATURE

1- SEX RATIO

2- EFFECT OF FOETAL SEX

3- EFFECT OF MATERNAL AGE, PARITY AND SOCIAL STANDARD.

4- EFFECT OF SMOKING.

5- EFFECT OF MATERNAL DISEASES ASSOCIATED WITH PREGNANCY AND THEIR PROPORTION RATES.

# 1- SEX RATIO

reflect the relative fragility of the male foetus. Maternal disease and smoking may act in this way: damaging the foetus and therefore causing disproportionate losses among the less robust males".

## 2- EFFECT OF FOETAL SEX

Studies on "the large foetus" revealed that more than 65% of large infants were males (Nathanson.,[17] 1950), (Hunt.,[18] 1952), (Sylvester.,[19] 1954) and (Ponser et al.,[20] 1955). It is interesting to know that the largest human birth recorded was of a male baby. The baby was delivered at 18th January 1879 by Dr. A.P.Beach and weighed 23 3/4 lbs (about 11780 g.) (Barnes[21], 1957).

According to Little[3] (1960), the placental/foetal (P/F) weight ratio, at term, normally ranges from 0.10 to 0.18. Any term infant with P/F weight ratio less than 0.10 and greater than 0.18 may be considered to have a relatively small or large placenta. Any ratio less than 0.08 or greater than 0.20 at term may be considered to be associated with an abnormally small or large placenta.

The study of Thomson et al.[16](1969), showed that P/F weight ratio of males at term, was greater than that of females. A difference of about 0.025 between males and females was recorded.

As an explanation for the difference existing between male and female foetuses regarding birth weight and placental weight, Thomson et al.[15](1968), stated, "That the sex differential does not appear before about

30 weeks suggests that the eventually faster growth of the male may be due to sex hormone difference rather than to an innate characteristic of growth potential; testosterone, for example, is recognized as having a markedly stimulating effect on growth. Whatever the mechanism is, it does not appear to be specific to the foetal environment, since males continue to grow faster than females for about a year after birth. At one year of age, males are about 500 g. heavier than females, on average".

3- EFFECT OF MATERNAL AGE, PARITY AND SOCIAL STANDARD.

EFFECT OF MATERNAL AGE AND PARITY:

Maternal age and parity are incorporated together in various studies when their effect upon birth weight and placental weight is concerned. This is logic as a rise in parity is inevitably accompanied by increasing maternal age.

Increasing age and increasing parity are considered as aetiological factors in excessive foetal development (Koff and Potter[22],1939), (Nathanson[17], 1950) and (Posner et al.,[20] 1955).

Increasing parity and maternal age are directly correlated with an increase in foetal birth weight (Rathbun[23], 1943; Perlin[24], 1960) irrespective of the period of gestation at delivery (Beischer[25] et al., 1969).

O'Sullivan[26](1965), showed that when parity was held constant, the age of the mother was seen to have little or no effect. Conversely, with maternal age fixed, parity relationships remained, particularly in the older groups.

Horger[27] (1977), in a study about pregnancy in women over forty found that 10.8% of his cases gave birth to infants above 4000 g. His study included 440 mothers above forty years.

In another study held by Higdon[28] (1960), on 522 cases over forty years, he found that infants weighing over 4000 g. were more prevalent.

The elderly multigravida differ from young multigravida in having higher incidence of large babies. This was shown by the study of Kaltrieder (1959)[29] on elderly mutltigravida. He found that the incidence of babies weighing over 4000 g. was 6.5% in the younger and 9.9% in the older multigravida.

Hendricks[14] (1964), demonstrated that the weight of the foetus born to the multipara was greater than that of the primipara by 3.42% while the placental weight difference was 2.50%.

Colkins[30] (1937), reported that the placental weight showed a tendency to increase with age. He considered this increase apparent rather than real. He proved this when he separated his patients into primipara and multipara groups, and compared placental weights within each group. He found that with increasing maternal age within each group, there was no significant increase in placental weight. He concluded that the apparent difference of placental weight with age is due to the effect of parity. Concerning parity , Colkins[30] (1937), found that placental weight increased

in the third and fourth pregnancies so that it was greater than that of first pregnancy and that of later pregnancies. This is a result which was surprising for him, so that he did not give a final conclusion and considered the number of his cases too small to make his findings entirely reliable.

Regarding P/F weight ratio, Colkins[30] (1937), has found no significant difference with parity and accordingly no significant change with increasing maternal age. The same finding was recorded by Thomson et al.[16] (1969).

As an explanation for the effect of age and parity upon birth weight and placental weight, O'Sullivan et al.[26], (1965), suggested that the change in birth weight with parity was entirely due to maternal pre-pregnant weight, but the data they published, as well as the work of Thomson et al.[15] (1968), showed that, for any given maternal weight, first babies were lighter than subsequent babies.

Greenhill[11] (1951), stated, "children increase in size in successive pregnancies; this is due to the better development of the mother which comes with years, the more active circulation in the uterus and the prolongation of later pregnancies".