Impact of Nutrition Education Program On Hemoglobin Level Among Pregnant Women

Thesis
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Master Degree in Public Helath

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قالوا

سبحانك لا علم لنا إلا ما علمتنا

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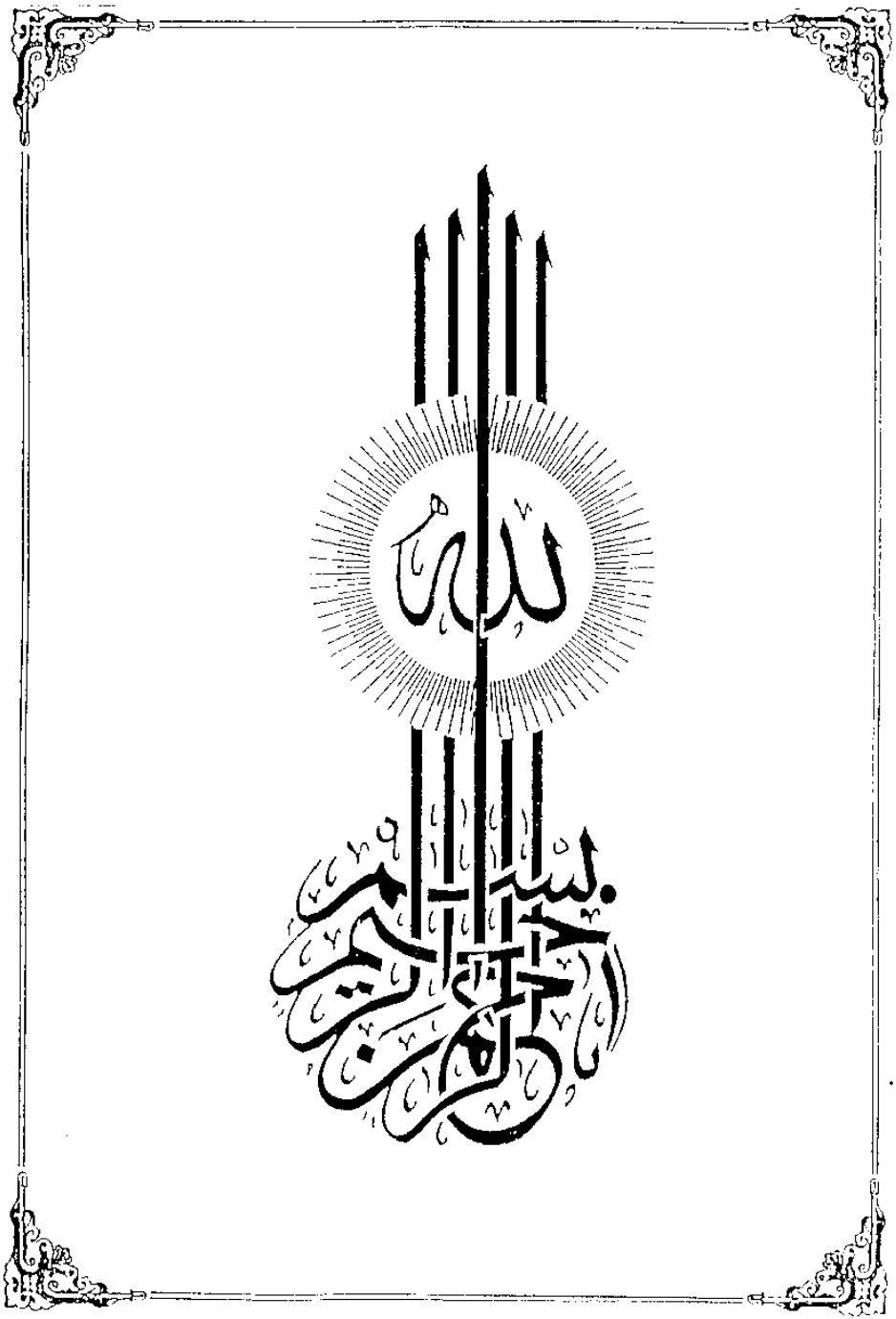

I DEDICATE THIS THESIS TO MY PARENTS AND FAMILY

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INTRODUCTION

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Anemia is the most common nutritional disorder among women and is particularly prevalent among pregnant or lactating women, **[Li, 1993 and Charles, 1995]**.

Although many nutrients and co-factors are involved in the maintenance of a normal hemoglobin concentration, the most common nutrient deficiency from the public health point of view is iron deficiency, **[I.N.A.C.G., 1977]**.

Iron deficiency is the commonest nutritional disorder in the world and affects over one billion people, particularly reproductive women and preschool children in tropical and subtropical zones, **[Stuart et al., 1991 and Brittenham, 1991]**.

If iron deficiency is uncorrected it will lead to anemia of increasing severity, increased susceptibility to infections and greater pregnancy risks including maternal mortality, prematurity, low birth weight infants, prenatal and perinatal infant loss, **[Politt et al., 1989 and Lozoff et al., 1991]**., Thus it has been a major target for interventions.

Anemia in pregnancy remains a serious public health problem in most parts of the world. It is known to worsen other complications of pregnancy, delivery and perperium. In developing countries, anemia is also an important contributory factor in low birth weight and still birth rates, **[Davidson et al.,**

1979].

Various studies showed an increasing prevalence of anemia with increasing trimester of pregnancy **[Mahfouz et al., 1994] [Mohamed, 1986]**.

Considerable controversy exists about energy requirements during pregnancy, what constitutes an adequate nutrient intake, and what is the precise relationship between nutritional factors and reproductive outcomes, **[Brazil & Winick, 1972; and Durnin, 1987]**.

It is however generally accepted that maternal nutrition is an important influence affecting the course and outcome of pregnancy, **[Pittkin, 1977]**.

Nutritional status during pregnancy is thus implicated as a contributory factor in maternal and infant morbidity and mortality, **[Kafatos et al., 1989]**.

Iron deficiency anemia occurs when an insufficient amount of iron is absorbed to meet the body's requirements. This insufficiency may be due to inadequate intake of iron, or to chronic blood loss. When, prolonged iron deficiency leads to iron deficiency anemia, **[WHO, 1985]**.

Although iron is one of the commonest elements in the earth's crust, yet iron deficiency is the commonest cause of anemia. This is because the body has a limited ability to absorb iron and excess loss of iron due to hemorrhage is frequent,

[Fairbanks & Beulter, 1990].

Iron is present also in muscle as myoglobin and in most cells of the body in iron containing enzymes, (e.g. cytochrome, succinic dehydrogenase and catalase), **[Huebers & Finch, 1987]**.

Both the iron content and the proportion of iron absorbed differ from food to food; in general meat and in particular liver is a better source than vegetables, eggs or dairy food, **[Jacobs, 1985]**.

Exogenous sources of iron are required, particularly in late pregnancy, **WHO [1970]**, because the increase in red blood cell count requires approximately 500 mgm of additional iron, the foetus contains about 300 mgm, the mother stored iron is only about 500 mgm or less and there will be some iron loss by excretion.

For many years iron deficiency anemia among pregnant women has been a major target for interventions because of the presumed effects of anemia on the health of mothers and babies, **[Yip, 1994]**.

In Greece, **Kafatos et al.[1989]**, examined the effect of an educational nutritional program among pregnant women and concluded in their study that nutritional counseling improve dietary intake and maternal weight gain.

Studies conducted by Nutrition Institute in Cairo [1978],

showed that the prevalence of anemia among pregnant women was 22.1%, **[National Survey of Final Report, 1978]**.

However, the prevalence of anemia among Egyptian women attending urban family planning centers reached 46% while in rural centers it varies between 65% and 71%, **[Morcos and Moharam, 1986]**.

The recent national nutritional survey conducted by Nutrition Institute in Cairo [1995], showed that the prevalence of anemia among pregnant women was 26%, [**National Survey of Vit A Studies in Egypt, 1995**].

Anemia control program among pregnant women are often based on iron supplementation in antenatal care settings, dietary modification through activities to introduce changes in nutritonal patterns **[Pappagallo & Bull, 1996]**.

The study of iron distribution system done by Nutrition Institute during [1993], indicated that iron supplement distributed was not under good supervision or control, **[A ssessment of Iron Supplementation Distribution System, 1993]**

AIM OF WORK

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Objectives

* To determine the prevalence of anemia among pregnant women in their first trimester of pregnancy attending Al-Galaa Maternity Teaching Hospital.

* To apply a Nutritional Educational Intervention Program for non-anemic pregnant women aiming at preventing anemia in second trimester of pregnancy (a prophylactic measure).

* To evaluate the effectiveness of the Nutritional Educational Intervention Program by assessing hemoglobin level in the second trimester of pregnancy.