

تدخلات التغذية التكميلية للنساء
الحوامل المصابات بالانيميا:
تطبيق نماذج التعزيز الصحي

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للحصول على درجة الدكتوراة
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(تمريض صحة المجتمع)

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Complementary Nutritional Intervention for Anemic Pregnant Women Applying Health Promotion Model

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Abstract

*Iron deficiency anemia is one of the main health problems in Palestine, it affects about a quarter of pregnant women who attended the Ministry of Health facilities in the West Bank. It is preventable while its consequences can't be prevented or treated easily. Health Believe Model (HBM) is widely used in intervention programs that aiming to change behaviors. **The aim of study** was to evaluate the effect of nutritional interventions using health promotion model through changing in their perception regard the risk of anemia. **Research design:** Quasi-experimental design, using control group. **Sample:** it was a convenient sample included 102 pregnant from antenatal care (ANC) of MOH in Nablus city/Palestine. **Research tool:** 5 tools were used for data collection; the interviewing questionnaire that consist of 6 parts; the socio-demographic and maternal profile of pregnant women, their knowledge about anemia, their perception about risk and susceptibility to iron anemia, their dietary habits/practice and their one week diet sheet, the last one was their fatigue scale and general health . The second tool was the investigation /laboratory tool that assessed the hemoglobin level of pregnant women and their new born. Third tool was physical assessments of pregnant women. The fifth one was observational tool regard signs of anemia. All pregnant women interviewed, and results of blood samples for hemoglobin level obtained from the MOH laboratories. Data were analyzed using SPSS soft ware. The study **results** showed overall significant relationship between perceiving risk of anemia and eating practices, and between changing eating practices and improvement in hemoglobin level of pregnant women, also showed a significant relationship between hemoglobin and fatigue level of pregnant women. And there was no relationship between maternal hemoglobin at third trimester and A/S at 5 minutes and cord blood hemoglobin level of their newborn in study control group ($r=959$). Actions at mother child health centers regarding management of anemia among pregnant women using principles of Health Promotion Model/Health Belief Model in different intervention programs should be recommended.*

Dedication

To father's soul, my mom, brothers, sisters, friends
with love and respect

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Contents

	Page
- Introduction	1-4
- Review of literature	
I. Nutrition and anemia during pregnancy	6
- Definition and Types of anemia	7
- Epidemiology of anemia	7-10
- Pregnancy and physiology of pregnancy.....	10
- Nutrition during pregnancy	11
- Iron deficiency anemia	12
- Signs of anemia	14
Assessment of health status of women during pregnancy	
- Laboratory diagnosis of anemia	15
- Anthropometric measurement	17
- Contributing factors of Iron anemia deficiency	20
- Iron balance and homeostasis	21
- Iron deficient stages.....	22
- Internal iron exchange	23
- Iron absorption and excretions and	24
- iron bioavailability	25
- Estimated iron absorption.....	26
- Factors affecting iron absorption.....	27-30
- Consequences and adverse effect of anemia	30-34
- Strategies to improve iron absorption	34-41
- Complementary diet for treating anemia	42-45
II. Health education and health promotion models	46
- Reasoned reaction theory	47
- PRECCED-PROCED model.....	50
- Health Believe model HBM.....	51-57
III. Role of Nurse at MCH centers	58-67
- Subjects & Methods	68-87
- Results	88-136
- Discussion	137-178
- Conclusion and Recommendations	179-183
- Summary	184-194
- References	195-226
- Appendices	
- Research tool	
- Administrative letters	
- Ethical consent form	
- Booklet	
- Preprogram sessions	
- Protocol	
- Arabic summary	

List of Tables

No.	Tables related to Literature Review	Page
1	Recommended weight gain during pregnancy based on BMI before pregnancy	1
2	Degree of iron bioavailability in food	
3	Components of the theory of reasoned action	
4	Components of HBM	5
5	Components and application of HBM	5

Tables Related To Results

No	Table of Results	Page No.
I.1	Table (1): The Distribution of percentages of study and control group regards their socio demographic profile	
I.2	Table (2): The Distribution of percentages study and control group regards maternal history	9
II.1	Table (3): Distribution of percentages of study and control groups regards iron supplement use	9
III.1	Table (4): Distribution of the mean and standard deviation of study and control group regards their vital signs	9
III.2	Table (5): Distribution of the mean and standard deviation of study and control group regards their anthropometric measurements	
III.3	Table (6): Distribution of study and control	

	group regards their Body Mass Index categories	
III.4	Table (7): Distribution of percentages of study and control groups regarding signs of anemia	
IV	Table (8): Distribution of percentages of study and control group regarding their hemoglobin levels pre-post –CNI	
V.1	Table (9): Distribution of percentages of study and control groups regards fatigue levels pre-post CNI	103
V.2	Table (10): Distribution of percentages of study and control groups regards general health pre-post-CNI	105
VI.1	Table (11): Distribution of percentages of study and control groups knowledge regards food groups pre-post CNI	106
VI.2	Table (12): Distribution of percentages of study and control groups regard their knowledge about anemia pre-post CNI	108
VI.3	Table (13): Distribution of percentages of study and control groups regards knowledge levels about food groups and anemia, pre-post-CNI	110
VI.4	Table (14) Distribution of percentages of study and control groups regards their source of information	112
VII.1	Table (15): Distribution of percentages of study and control groups perception regard danger of IDA, pre-post CNI	113
VII.2	Table (16): Distribution percentages of study and control groups regard their susceptibility to IDA pre-post-CNI	115
VII.3	Table (17): Distributions of percentages of study and control groups regards their perception level about danger and susceptibility to IDA pre-post-CNI	117

VIII.1	Table (18): Distribution of percentages of study and control groups regards their food preparing practices pre-post-CNI	119
VIII.2	Table (19): Distribution of percentages of study and control groups regards their eating habits pre-post CNI	121
VIII.3	Table (20): Distribution of percentages of daily amount of nutrient of study and control group	123
VIII.4	Table 21 Distribution of percentages of study and control groups regards their levels of cooking and eating habits pre-post CNI	124
X.1	Table (22) Distribution of percentages of study and control groups regard their pregnancy outcome	126
	Table (23): Distribution of mean scores of health belief model variables pre-post CNI	128
XI.1	Table (24): Relationship between pregnant women's knowledge of levels and their perceiving level of risk and susceptibility of anemia	129
XI.2	Table (25): Relationship between pregnant women's level of practice and their knowledge levels and perceiving level of risk and susceptibility of anemia post-CNI	130
XI.3	Table (26): Relationship between pregnant women's dietary practices and their hemoglobin levels of study and control groups post -CNI	131
XI.4	Table (27) : Relationship between maternal hemoglobin level at 3 rd trimester and fatigue levels of both groups post -CNI	132
XI.5	Table (28): Relationship between maternal hemoglobin levels at 3 rd trimester with pregnancy outcome; infant weight, Apgar score, and hemoglobin levels	133

List of Figures

List of Figures related to literature review

No.		Page
1	My pyramid	12
2	Reasoned action theory	47
3	PRECEED-PROCEED theory	50
4	Health Belief Model	53

List of figures related to results

1	Figure (1): Distribution of percentages of iron supplementary use by study group	94
2	Figure(2): Distribution of percentages of iron supplementary use by control group	94
3	Figure (3): Distribution of percentages of pre-pregnancy Body Mass Index of study and control groups	99
4	Figure (4): Distribution of percentages of hemoglobin levels of study and control groups during the three pregnancy trimesters	102
5	Figure (5): Distribution of percentages of fatigue levels of study and control groups pre-post CNI	104
6	Figure (6):Distribution of percentages of knowledge levels of study and control groups about food group pre-post CNI	111
7	Figure(7) Distribution of percentages of knowldege levels of study and control groups regard anemia pre-post CNI	111
8	Figure (8): Distributions of percentages of study and control group regard their perception levels about risk of anemia pre-post CNI	118
9	Figure (9) : Distribution of percentages of	118

	study and control group regard their levels of susceptibility to anemia pre-post-CNI	
10	Figure (10): Distribution of percentages of study and control group regard their levels cooking habits pre-post CNI	125
11	Figure (11): Distribution of percentages of study and control group regard their levels of eating practices/habits pre-post CNI	125
12	Figure (12): Relationship of new-born body weight and maternal hemoglobin levels at 3 rd trimester for the study and control groups	134
13	Figure (13): Relationship of the Apgar score of new-born at one minute and maternal hemoglobin level at 3 rd trimester for study and control groups	135
14	Figure (14): Relationship of the Apgar score of new-born at five minutes and maternal hemoglobin level at 3 rd trimester for study and control groups	135
15	Figure (15): Relationship of new-born hemoglobin levels and maternal hemoglobin level at 3 rd trimester for study and control groups	136

INTRODUCTION

Anemia is one of the major public health problem worldwide, based on the classification reported by **Kraemer & Zimmermann (2007)**, anemia is considered a severe public health problem when the percent is (40%), and it is moderate one if the percent is (20–39.9%), and a mild problem if it is (5–19.9%), and it is not considered a public health problem if the percent is less than (5%). Moreover it is associated with increased risk of morbidity and mortality, especially among children and pregnant women.

Iron deficiency anemia has several adverse effects on pregnant women. During pregnancy it has been associated with increased risk for low birth weight, preterm delivery, and perinatal mortality. Moreover, recent studies suggested that, maternal iron deficiency anemia may be associated with postpartum depression, and poor performance on mental and psychomotor tests in offspring, (**AHRQ, 2006**).

According to (**Skikne, 2007**), different etiological causes are responsible about anemia includes iron deficiency, hemoglobinopathies, chronic disease, and nutritional deficiencies.

The severity of iron deficiency anemia in a population is evaluated based on the Prevalence of anemia. A prevalence of (20%) or greater is considered a high prevalence (**Burger, 2002**).

Using the values of 13.5 g/dL for men and 12.5 g/dL for women as cut point for anemia, it is estimated that the prevalence of anemia in United States is approximately (4%) of men and (8%) of women. And it is the same in Canada and Northern Europe. In underdeveloped countries, the prevalence of

Introduction

anemia is 2-5 times greater than that in the United States, (**Conrad, 2008**). The highest prevalence of anemia is in Africa, while in Asia are the greatest number of people affected by anemia, where (58.0%), (56.1%), and (68.0%), of the global anemia burden exists in preschool aged children, pregnant women and non pregnant women, respectively (**Kraemer& Zimmermann, 2007**).

Iron deficiency is the highly associated factor of nutritional anemia during pregnancy. As pointed by **Brown et al (2008)**, the estimated incidence rate of iron deficiency anemia among pregnant women reached up to (56%) in developing countries compared to (18%) in developed countries. In addition, it is associated with increased risk of premature birth, low birth weight and perinatal mortality (**Sharam2003**).

According to WHO, the prevalence rate of IDA among pregnant women world wide is (55.8%), (**Yekta, etal, 2008**), and about (58%) of women in developing countries are anemic (**Moradi, etal, 2007**), most of them were already anemic at the time of conception, and the prevalence of anemia in non-pregnant women in developing countries estimated by (43%), (**Brown, et al 2008**) & (**Allen, 2000**).

Significance of the problem

In Palestine, anemia is still considered a public health problem, as it affects about a quarter of pregnant women who attended the ministry of health facilities in the West Bank. The baseline during December 2005- January 2006 is (23%) in west bank and (42.6%) in Gaza strip (**WHO, 2006**). As reported by Palestinian MOH the results indicated that (69.7%) of women were anemic. Out of the total, (1%) was diagnosed of level (<8 gm/dl), and (26.3%) of level,