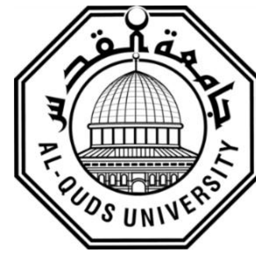
Al-Quds University
Deanship of Graduate Studies
School of Public Health



The Effect of Psycho-social Factors on Birth Outcomes Among the Refugee Pregnant Women in Gaza Strip

Bahja Mohammed Al-Maqadma

MPH Thesis

Jerusalem-Palestine

2017/ 1438

The Effect of Psycho-social Factors on Birth Outcomes Among the Refugee Pregnant Women In Gaza Strip

Prepared by:

Bahja Mohammed Al-Maqadma

Supervised by

Dr. Nuha El Sharif

Al-Quds University, Jerusalem-Palestine

A thesis Submitted in Partial fulfillment of the requirements for the Master Public Health/Epidemiology- School of Public Health

Through Al-Quds University

2017/1438

Al-Quds University

Deanship of Graduate Studies

School of Public Health

Thesis Approval

The Effect of Psycho-social Factors on Birth Outcomes Among the Refugee Pregnant Women in Gaza Strip

Prepared by: Bahja Mohammed Al-Maqadma

Registration No: 21312047

Supervision**:** Dr. Nuha El Sharif

Master thesis submitted and accepted, Data: January 2017

Head of Committee: Dr. Nuha El Sharif Signature

Internal Examiner: Dr. Salam Al-Khatib Signature:

External Examiner: Dr. Haleama Sabbah Signature:

Gaza-Palestine

1438-2017

Dedication

To my country “Palestine”

To my dear parents

To my dear sisters

To all my professors

Bahja Mohammed Al Maqadma

Declaration

I certify that this thesis submitted for the Degree of Master of Public Health is the result of my own research, except where otherwise acknowledged, and that this thesis has not been submitted for a higher degree to any other university or institution.

Signed:

Bahja Mohammed Al-Maqadma

Date: **--------------------------------**

Acknowledgments

This study would not feasible without the assistance of my supervisor Dr. Nuha El-Sharif, who has been very generous for me with her extensive experience. Her advices enlightened to me many ideas and thoughts, which helped me to overcome all the obstacles I have faced at any stage of conducting the study.

I'm very grateful for her and I keep all the lessons I have learnt from her along my scientific course of my life. At the same time her understanding and patience in her discussion with me reflected her kind feelings towards her students. I'm grateful for her.

Many thanks should go to my professors who care tributes a lot in developing my knowledge and acquired many skills that helped me to carry out this study.

Many thankfulness is directed to the pregnant ladies who were involved in this study and were very helpful for me to collect the needed information.

The five health workers who were tasked to collect the information from the pregnant women, were very understanding and were very committed to the time frame of the data collection period. I'm very grateful for each of them.

Finally, I'll be very pleased and honored to dedicate this study to my parents who were very supportive and encouraging during the three years of the master course.

All the respect

Bahja Maqadma

Abstract

Background: Over the past ten years, infant mortality and neonatal mortality rates in Gaza Strip had an increasing trend despite all the efforts that were done to reduce it. In 2013 a study by the United Nations Relief and Work Agency for the Palestinian refugees (UNRWA) showed that there was an increase in infant mortality rate from 20.2 per 1000 live birth in 2008 to 22.4 per 1000 live birth in 2013. Also, neonatal mortality rate was 12 per 1000 live birth in 2008 and rose up to 20.3 per 1000 live birth in 2013.

In our country, the ongoing Israeli – Palestinian conflict particularly in Gaza Strip, shows high level of violence and insecurity, besides, low socioeconomic levels and a poor quality of life. All these factors make the Palestinian refugee women more susceptible to be exposed to traumatic events than other societies.

Aim and objectives: This study aimed to examine the effects of exposure of Palestinian refugee women to psychosocial stressing factors during the 3rd trimester of pregnancy and consequently their birth outcomes. Its objectives were to determine the association between the effect of the socioeconomic; demographic factors; social support and stressing factors on refugee pregnant women and their birth outcomes in Gaza Strip.

Study methodology: This study was a prospective cohort of 500 pregnant (aged above 18 and less than 39) women in their third trimester attended eight health centers to receive antenatal care using an interview questionnaire. After delivery women were approached to collect information about their birth outcomes.

SPSS (version 20) was used for data entry, cleaning and analysis. Frequencies and chi-square analysis were done to describe the study variables. Univariate analysis was done to examine the association between the study independent variables and the birth outcomes. Significant level was set to be less than 0.05.

Results: It was showed that 21.20% of the babies; their weight were less than 2500 and 16.4% were preterm babies. Also, 1.6% of the woman experienced perinatal deaths. More than half of LBW, PTB, and perinatal deaths were among the women who completed secondary and high school. Also, about 7% of LBW and 8% of PTB were the outcomes of the employed pregnant women.

A 16% of pregnant women were exposed to domestic violence during their pregnancy. Some of those women had adverse birth outcomes, results demonstrated that domestic violence contributes to 18.9% of LBW babies, 17.1% of PTB. Yet there wasn't any perinatal death occurred among the women who were exposed to domestic violence.

A 17.4% of pregnant women perceived that they have received low social support and 43.2% of them had high stress level. Also, 45.6% complained of severe level of fatigue and 16% had high stress level caused by pregnancy.

The results which have been found significant association were between the husband's education and having PTB and the relationship of the women with their husbands and having LBW or PTB.

Conclusion of the study: This is the first study of its kind in Gaza Strip that investigated pregnant women psychosocial health. Within the past ten years, people living in Gaza strip experienced three wars and were in an ongoing political conflict for more than 20 years.

This study revealed important results which should be of concern for decision makers and health care providers although did not show significant results. Although social support; violence; fatigue; having stress due to pregnancy or exposed to any kind of other stress did not show significant roles in determining birth outcomes in this study, but is still considered factors affecting pregnant women's health. Other factors which were not examined in this study might still playing a role in determining birth outcomes in Gaza Strip. For example, pregnant women own health factors; life style factors like diet quality; multiple pregnancies with short intervals or others might have influence on birth outcome.

Violence against women in this study was within the estimated range by the World Health Organization for women aged 15-44 years. However, we suspect that there is an under-reporting of this problem since it is culturally sensitive to women in the Palestinian society. Therefore, the high incidence of adverse birth outcomes among those women who claimed in their answers that they never exposed to domestic violence in their pregnancy might biased this study results.

For that, we recommend for future research to use a qualitative study design and techniques which might help women to be more opened to talk about the real psychological situation they are facing through their pregnancy.

Table of Contents

Subject		Page
Declaration		i
Acknowledgement		ii
Abstract		iii
List of tables		v
List of figures		v
List of annexes		vi
List of abbreviation		vi
Chapter (1) Introduction		1
1.1	Background	1
1.2	Problem Statement	2
1.3	Justification of the study	3
1.4	Aim of the study	4
1.5	Objectives of the study	5
1.6	Study expected outcomes	5
1.7	Thesis structure	5
Chapter (2) literature review		7
2.1	Introduction	7
2.2	Socioeconomic status and its effect on pregnancy	7
2.3	War, conflicts and disasters and birth outcomes	15
2.4	Domestic violence in the Arab countries	17
2.5	Social support and birth outcomes	22
Chapter (3) Conceptual framework		26
3.1	Introduction	26
3.2	Study Variables operational definitions	26
Chapter (4) Methodology		32
4.1	Introduction	32
4.2	Study design	32
4.3	Study settings	33
4.4	Study population	34
4.5	Eligibility Criteria	35
4.6	Sample size determination	36
4.7	Study instrument	37
4.8	Validity and reliability	39
4.9	Pilot study	39
4.10	Data collection	40
4.11	Statistical analysis	40
4.12	Ethical consideration	43
4.13	Study limitations	43
Chapter (5) study results		45
5.1	Introduction	45
5.2	Demographic characteristics	45
5.3	Social characteristics	46

5.4	Exposure of pregnant women to domestic violence	47
5.5.1	Demographic characteristics and birth outcomes	48
5.5.2	Social characteristics and birth outcomes	52
Chapter (6) discussion conclusion and recommendations		58
6.1	Introduction	58
6.2	Birth outcomes and demographic indicators	58
6.3	Birth outcomes and social indicators	62
6.4	Conclusion	64
6.5	Recommendations	66
	References	68
	Annexes	81

List of tables

No.	**Title**	**Page**
Table 4.1	Distribution of the sample unit among the selected HCs	36
Table 4.2	Sample size calculation	37
Table 5.1	Demographic characteristics of the pregnant woman	45
Table 5.2	Social characteristics of the pregnant woman	46
Table 5.3	The perceived score of the exposure factors of the pregnant woman	47
Table 5.4	Exposure of the pregnant woman to domestic violence	47
Table 5.5	The effect of demographic characteristics on the LBW	49
Table 5.6	The effect of demographic characteristics on the gestational age	50
Table 5.7	The effect of demographic characteristics on the perinatal death	51
Table 5.8	The effect of family members' relationship on the baby birth weight	52
Table 5.9	The effect of exposure to domestic violence on the birth weight of the baby	52
Table 5.10	The effect of family members' relationship on the gestational age	53
Table 5.11	The effect of exposure to domestic violence on the gestational age	53
Table 5.12	The effect of family members' relationship on causing perinatal death	54
Table 5.13	The effect of exposure to domestic violence on causing perinatal death	54
Table 5.14	The effect of psychosocial status of the pregnant woman on the baby birth weight	55
Table 5.15	The effect of psychosocial status of the pregnant woman on the gestational age	56
Table 5.16	The effect of psychosocial status of the pregnant woman on causing perinatal death	57

List of figures

No.	**Title**	**Page**
Figure 2.1	Conceptual framework	28

List of Annexes

No.	Title	Page
		81
Annex 1	Study questionnaire (Arabic version)	90
Annex 2	Study participation consent form	91
Annex 3	Ethical approval from Palestinian health Research Council (Helsinki committee)	
Annex 4	Ethical approval for conducting the study from the UNRWA	92
Annex 5	Abstract (Arabic version)	93

List of Abbreviations

ANC	Antenatal Care
CDC	Center of Disease and Prevention
CS	Caesarian Section
HC	Health Center
LBW	Low Birth Weight
LGA	Large for Gestational Age
LMP	Last menstrual period
MFIS	Modified Fatigue Impact Scale
MSSS	Modified Social Support Survey
PCBS	Palestinian Center Bureau of Statistics
PCC	Pre Conception Care
PES	Pregnancy Experience Scale
PHC	Primary Health Care
PSS	Perceived Stress Scale
PTB	Preterm Birth

PTSD	Post-traumatic Stress Disorder
SES	Socio-economic Status
SGA	Small for Gestational Age
SPSS	Statistic Package for Social Science
UNICEF	United Nations Children's Emergency Fund
UNRWA	United Nation Relief and Work Agency
USA	Unites States of America
WHO	World Health Organization

Chapter (1) Introduction

1.1 Background

Many improvements in the health are implemented worldwide by various stakeholders from national and regional sectors. Those stakeholder emphasized on the fact that mother and child health are highly affected by a wide range of socio-economic and environmental factors, which could indirectly affect their health in addition to the clinical (physical) causes (WHO, 2015). Therefore, care for child should start even before pregnancy and continue through the course of pregnancy and child birth (WHO, 2016a).

The use of antenatal care (ANC) and traditional approach that focus on clinical services and the prevention of potential complications, the psychosocial aspects of the pregnancy was added as an important component in these guidelines (WHO, 2016a).

Therefore, the new ANC approach requires of what they called “woman-centered antenatal care service” that would include tailored, rather than routine clinical therapeutic practices, relevant and timely information and finally the most important part is the support including social, cultural, emotional and psychological support (WHO, 2016a).

For long time ago, we used to hear talks and debates about the effect of the pregnant woman emotions on fetus development. It was a belief that the fetus may be harmed by these negative emotions of the woman such as, stress; psychological trauma; post -traumatic stress disorder (PTSD), and others. This belief has its root in the culture and the tradition of the different societies around the world. Studies should have several attempts to validate such a belief and examine it to find out to which extent maternal stress may affect the pregnancy outcomes (DiPietro, 2012).

Stress can be a possible host of problems for the babies during pregnancy. The problem is that the stress is a silent disorder, thus pregnant women should be aware how to recognize it when they have stress. This is also applied on the birth outcomes. As, it is not easy to predict with certainty whether the outcome is going to be poor or not. Therefore it is important to follow the possible ways which mitigate the harm that could happen (Van, 2011).

Stress includes a wide range of different exposures to life events like bad relationship, witnessing on acute disasters, poor socioeconomic status (SES) and pregnant specific anxiety

as well. It has been shown to be associated with altered outcomes for the infant (Glover, 2011). The outcomes of these factors might cause morbidities which by themselves lead to adverse birth outcomes such as low birth weight (LBW) and preterm birth (PTB) (Feinberg et al, 2015).

According to the world health organization (WHO) report 2013, about 15 million babies are born preterm each year and that is one every ten babies worldwide. In addition, it is attributed to one million deaths, and even those who survived are suffering lifelong disabilities. Globally, prematurity is the leading cause of death among the children under five years old, and according to the countries with reliable data the number is increasing (WHO, 2014a).

The gap in the infant mortalities between the low and high income countries remains wide. It is about 12 times more in low income countries than in high income countries (WHO, 2014a). This gap and disparities between these countries should be reduced. Thus one of our priorities is saving more children's live (WHO, 2014a).

1.2 Problem Statement

In Palestine, particularly in Gaza Strip, unstable life is the dominant feature. Siege and boycott, high unemployment rate (43.3%), increasing poverty, shortage of power supply, restriction of people movement and internal political dispute between government de-facto and the Ramallah government are leading the life to stressful daily suffering (Shomar, 2011). Also, since 2008 Gaza was passing in three wars (2008/2009, 2012, 2014). This situation added more difficulties and stress on the daily life of Gaza population and imposed impact, in particular on the vulnerable groups and among of them are the pregnant women and their newborns (Shomar, 2011).

The influence of psychosocial stressing factors on birth outcome is still controversial and unclear (looman et al, 2013). The association between these factors and the birth outcomes can be confounded by pathological causes; as pregnancy induced hypertension, Diabetes mellitus, and anemia and so on (looman et al, 2013). LBW and PTB are two of the main leading causes of infant morbidity and mortality, which are still increasing in Palestine especially in Gaza strip (Van den Berg et al, 2015). Therefore, it is important for the health

care providers, the mother and the families as well to have better understanding of the effect of the stressing factors on the psychology of the pregnant women and the newborns.

1.3 Justification of the study

Neonatal period "first 28 days of the life" is the most vulnerable time for the child life. As mentioned before, globally it is estimated that 45% of under five deaths occurred during their first month of life (WHO, 2016a). During the last 20 years, the proportion of child death which occurs during the neonatal period has increased all over the WHO regions (WHO, 2014b).

Furthermore, it is known that prematurity and LBW are the leading cause of neonatal death, also they are the second leading cause of the deaths in children under five (WHO, 2014b).

Studies showed that, maternal stress and anxiety during pregnancy have been associated with higher incidence of PTB and LBW (Schetter et al, 2012).

It is well known that countries where women live in deprived socio-economic conditions are more susceptible to poor outcomes of their offspring (Messer et al, 2006). Besides; lower socioeconomic status (SES) is associated with a number of important social and environmental conditions that contribute to chronic stress and impaired health (Baum et al, 2000).

It is worthy to highlight this problem and to explore other causes. So that appropriate interventions can be applied to improve the mothers resilience and avoid the newborns those harmful factors.

Palestinian Central Bureau of Statistics (PCBS), (2015) conducted a survey and found out that the under-five mortality rate was 21.7 per 1000 live birth in the whole Palestinian territories. In West Bank child under five mortality rate was 20.0 per 1000 live birth, while in Gaza Strip it was 23.7 per 1000 birth. For the Infant Mortality rate reached 18.2 per 1000 live births in the whole Palestinian territories, 17.1 per 1000 live birth in West Bank and 19.6 per 1000 live birth in Gaza Strip.