Nursing Care Guideline for Pregnant Women Suffering from Heart disease

Thesis

Submitted for partial fulfillment of master
Degree in Nursing Sciences
(Maternity &Neonatal Nursing)

By

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2019**

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2019

بِسْمِ اللهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا

سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

صَدَقَ اللهُ الْعَظِيمُ

سورة البقرة الآية: ٣٢

Acknowledgments

First of all, I would like to thank ALLAH for helping me to accomplish this Work.

No words could express my feelings of gratitude and respect to Prof. Dr. Sabah Metwally Mohammed, professor of maternal & gynecological nursing, faculty of nursing, Ain-Sham University for her endless guidance, support, and patience throughout the work. I felt greatly honored to work under her supervision.

My deepest thanks to Dr. Amal Fatthi Mohammed, lecturer of maternal & gynecological nursing, faculty of nursing, Ain-Sham University for her valuable advices, guidance, and supervision throughout the study phases

I would also like to express my sincere appreciation to Dr. Amal Roshdi Ahmed lecturer of maternity & neonatal nursing, Faculty of Nursing, Beni-suef University for her constant assistance, tremendous efforts, and suggestions to make improvements throughout the study.

Last but not least thanks for jury group in maternity and gynecological nursing department of faculty of nursing, Ain-shams university who review and agree the tool,Also;I would like to thank study sample who agree to participate in the study.

Finally,I would never forget to offer my special thanks to my parents,my husband,my brothers and my sisters for their encouragment to accomplish this study.

Walaa khalaf gooda

List of Content

List of Tables

Table	Title	Page
1	Reliability coefficient of the study tools	66
2	Experts opinions regarding evaluation of guidelines	75
3	Demographic characteristics of the study sample	76
4	Percentage distribution of study sample according to their knowledge about heart diseases	77
5	The relation between nurses' total knowledge and their demographic characteristics	80
6	Percentage distribution of nurses' practice regarding interpersonal & communicational aspect of care	82
7a	Percentage distribution of nurses' practice regarding comprehensive assessment	84
7b	Percentage distribution of nurses' practice regarding comprehensive assessment(Nursing care)	85
8a	Percentage distribution of nurses' practice regarding information aspect given to pregnant women(Diet)	87
8b	Percentage distribution of nurses' practice regarding information aspect given to pregnant women(Activity,Sex,Danger sign during pregnancy).	88
9	Percentage distribution of Nurses according to their practice regarding the main categories	90

List of Figures

List of Abbreviations

Abbr.	Meaning
ACHD	Adult Congenital Heart Disease
AS	Aortic Stenosis
ASD	Atrial Septal Defect
BAoVs	Bicuspid Aortic Valves
CHD	Congenital Heart Disease
CO	Cardiac Output
CoA	Coarctation of the Aorta
CPB	Cardio Pulmonary Bypass
ECG	Electrocardiogram
ENs	Enrolled Nurses
LMWH	Low Molecular Weight Heparin
MS	Mitral Stenosis
PDA	Patent Ductus Arteriosus
PS	Pulmonary Stenosis
RN	Registered Nurse
SBP	Systemic Blood Pressure
SVT	Supra-Ventricular Tachyarrhythmia
VSD	Ventricular Septal Defect
WHO	World Health Organization

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Abstract

Background: Heart disease in pregnancy is still a major problem worldwide, particularly in developing countries. The presence of heart disease increases the risk of maternal and fetal complication. **Aim:** The present study aimed to evaluate the effect of nursing care guideline for pregnant women suffering from heart disease. **Design:** Quasi experimental research design was used. **Setting:** The study was conducted at Beni-Suef university hospital and Beni-suef general hospital at gynecological ward (Inpatient: high-risk ward) & outpatient clinic. **Sample:** A Convenient sample of 40 nurses was included in the study. **Tools:** Four tools were utilized for data collection; 1) A structured interviewing questionnaire sheet, which includes two parts; part 1 sociodemographic characteristics. Part 2: Assessment of nurses' knowledge regarding heart disease during pregnancy, 2) A standardized observational checklist adopted from WHO to assess nurses' practices regarding heart diseases during pregnancy, 3) Nurses opinionnaire sheet, and 4) Experts opinionnaire sheet. **Results** of the current study revealed a statistically significant improvement in nurses' knowledge and practice related to care of pregnant women suffering from heart disease at the post test and follow up. **Conclusion:** implementation of nursing care guideline enhance nurses' knowledge& practices regarding care of pregnant women suffering from heart diseases, so study mainly **recommended** that educational program for nursing care of pregnant women suffering from heart disease should be conducted periodically for nursing staff in obstetrics and gynecology department

Key words. Nursing Care, Guidelines, Pregnant Women, Heart Diseases.

Introduction

Heart disease continues to be the leading cause of non-obstetric maternal morbidity and mortality. Early diagnosis and appropriate care can lead to prevention of complications and improvement of pregnancy outcome. Despite advances in the management of maternal cardiovascular diseases, heart disease during pregnancy accounts for as much as one-third of the maternal mortality *(Appelman et al., 2015).*

The incidence of pregnancies in women with heart disease is rising mainly due to an increased number of women with congenital heart disease (CHD) reaching childbearing age; advancing maternal age; and increase hypertension pre-eclampsia, and multifetal pregnancies *(Stuart et al., 2018).*

In western countries Cardio-Vascular Disease (CVD) is increasing and is a major cause of maternal mortality in pregnancy. Congenital heart disease is the predominant type of CVD in developed countries, whilst rheumatic cardiac disease is still an important cause of morbidity and mortality in developing countries, those living in poor socio economic conditions.Some heart conditions, such as pulmonary embolism, arrhythmias, hypertension in pre-eclamptic toxemia and Peripartum cardiomyopathy develop as a complication of pregnancy in previously healthy women, but women, with pre-existing heart disease may be predisposed to some of these complications and less able to cope with them *(Ramlal et al., 2018).*

Furthermore, Careful monitoring through pregnancy is required as there are altered physiological demands on the woman's body, including cardiovascular system glucose, and cholesterol and coagulation homeostasis. Physiological changes, during pregnancy facilitate the adaptation of the cardiovascular system to the increased metabolic needs of the mother, thus enabling adequate delivery of oxygenated blood to peripheral tissues and the fetus. Changes occur in circulating blood volume (affecting preload), peripheral vascular compliance and resistance (affecting afterload), myocardial function and contractility, heart rate, and sometimes heart rhythm and the neurohormonal system *(Silversides et al., 2018)*.

Pregnancy is accompanied by physiologic changes that stress the heart. Several significant physiologic changes occur during pregnancy within the cardiovascular system that could become fatal in patients with a cardiac pathology. These changes include; a 50% increase in blood volume, a 35% increase in cardiac output, decreased peripheral vascular resistance and decreased mean arterial blood pressure *(Kattah & Garovic, 2019)*

Signs and symptoms of heart disease can be difficult during pregnancy.Many normal women experience dyspnea, fatigue, decreased exercise capacity, palpitations, lightheadedness and pedal edema during uncomplicated pregnancy-symptoms suggestive of cardiac disease. The physical examination during normal pregnancy reveals a slightly fast resting heart rate, bounding pulses, and a pressure. Venous pressure is usually

elevated above the normal range for non-pregnant woman but rarely in a clearly abnormal range *(Nishimura et al., 2014).*

Heart diseases are classified into congenital or acquired heart disease. Congenital heart disease is further divided into a cyanotic and cyanotic heart disease. The common a cyanotic congenital heart disease are: Atrial Septal Defect (ASD), ventricular Septal Defect (VSD), Pulmonary Stenosis (PS), Patent Duct Arteriosis (PDA), Coarctation of Aorta (COA), and Marfan's syndrome while cyanotic heart diseases are tetralogy of fallots, Eisenmengers syndrome, and pulmonary hypertension. Among acquired heart diseases, the most common is rheumatic heart disease. Others are coronary artery disease, cardiomyopathy, aneurysms, dissection of aorta and its branches *(Caruana et al., 2017)*.

According to **World Wide Organization (WHO), (2016)**, Cardiac diseases were classified according to functional status into: **A) class I**; Uncompromised (no limitation of physical activity): these women do not have symptoms of cardiac insufficiency or experience anginal pain, **B) Class II**; slight limitation of physical activity: These women are comfortable at rest, but if ordinary physical activity is undertaken, discomfort results in the form of excessive fatigue, palpitation, dyspnea, or anginal pain, **C) Class III;** marked limitation of physical activity: these women are comfortable at rest, but less than ordinary activity causes excessive, palpitation, dyspnea, or anginal pain, and **D) Class IV;** severely compromised (inability to perform any