

MATERNAL NEWBORN

Nursing and Women's Health

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Preface

This book responds to the need for a book that could support the integration between Islamic and scientific knowledge on maternal-newborn nursing and women's health. It is designed specifically for undergraduate nursing, advanced diploma in midwifery and master in midwifery students. The first chapter offers a fundamental understanding of maternal-newborn nursing and changes in anatomy and physiology during pregnancy. It looks at the female reproductive system, conception and fetal development, changes and adaptation during pregnancy, and signs and symptoms of pregnancy.

Chapter 2 explains maternal and fetal well-being, antenatal care, minor ailments during pregnancy, maternal nutrition, and pregnancy at risk. In this chapter, pregnancy-related health care given to a pregnant woman is described together with the relevant care and screening for the fetus to ensure a healthy mother and baby. It also explains the common ailments of a pregnant woman and their management, a balanced and healthy diet for fetal development, maternal nutrition, and the care and management of pregnant women at high risk.

Chapter 3 discusses labour and postnatal. The discussion covers the normal labour process, obstetric emergency, and postnatal care. This chapter is vital to understand because, with this knowledge, the nurses can formulate their care and management of a labouring and postnatal mother. Chapter 4 focuses on the assessment of the newborn, immediate care of the newborn, and the newborn at risk. Such knowledge is crucial

as the nurse's assessment of neonatal adjustment to the extrauterine environment within these essential hours is vital to ensure neonatal survival.

Chapter 5 explains women's health promotion across the lifespan, women's health problems, pre and post-care of gynecologic surgery and procedures. A detailed description of women's wellness through the life span, common women's health problems and pre- and post-nursing assessment of the standard gynaecological procedures are included in this final chapter.

We hope we have discussed the fundamental understanding of maternal, newborn nursing and women's health issues. We hope that this book will be the breakthrough in connecting Islamic and scientific knowledge in this area.

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CHAPTER 1

ANATOMICAL AND PHYSIOLOGICAL CHANGES IN PREGNANCY

1.1 Female Reproductive System

LEARNING OBJECTIVES

At the end of this chapter, students will be able to:

1. Describe the main structures and functions of the female external and internal genitalia.
2. Recall the pelvic structure.
3. Explain the divisions of the pelvis.
4. Discuss the functions and structure of the pelvic diaphragm.

“It is He who hath produced you from a single person; here is a place of sojourn and a place of departure; We detail Our signs for people who understand.”

(Surah Al An’am 6:98)

1.1.0 Introduction

The Western world has Galen and Aristotle as the fathers of anatomy. We as Muslims should not forget the crucial contributions of our Muslim scholars who have played a remarkable role in advancing knowledge in the field of anatomy and physiology. Ar-Razi and Ali Ibn Abbas were among the Muslim scholars who studied and published their discoveries on the anatomy of the female reproductive system in their books (Alghamdi, Ziermann, & Diogo, 2017). These medieval Muslim scholars studied anatomy and physiology to strengthen their faith in Allah, guided by the revelation of the Qur’an.

A verse from Surah Al-An'am also mentions the anatomy of the female reproductive system. Verse 98 in this Surah (Quran Chapter) is one of the examples from the Holy Quran where Allah described the maternal uterus as a place of sojourn, which is a temporary place to stay. According to Tafseer Ibnu Kathir, the place of sojourn in this verse refers to the mother's womb. Nobody except Allah knows how long a baby will stay in the mother's womb. The appointed time determined by Allah belongs solely to Him, the Most Knowing. He knows what happens to us in the past, the present, and the future. We had lived in the small world known as the womb until a fixed term. And not to forget, our lives in this present world are also subject to an appointed time, like the one Allah mentioned in verse 98 of Al-An'am.

Let us have our heart-setting right, as exemplified by those great Muslim scholars, as we review the greatness of creation by the Most Knowledgeable of Allah on the structures and functions of the female reproductive system. Also, the fundamental knowledge of the bony pelvis is addressed in this chapter to highlight its importance in childbearing women; hence, relates it to providing security for the child inside the womb. Thus, shall we take this compelling journey of learning in this book not just to be a learner but also a believer?

1.1.1 External Female Genitalia

The external female genitalia is the accessory structure that lies outside the true pelvis and can be inspected directly. The organs in this area are called the vulva, which includes the following:

- Mons pubis
- Labia majora
- Labia minora
- Clitoris
- Vestibule
- Main blood supply from the pudendal artery

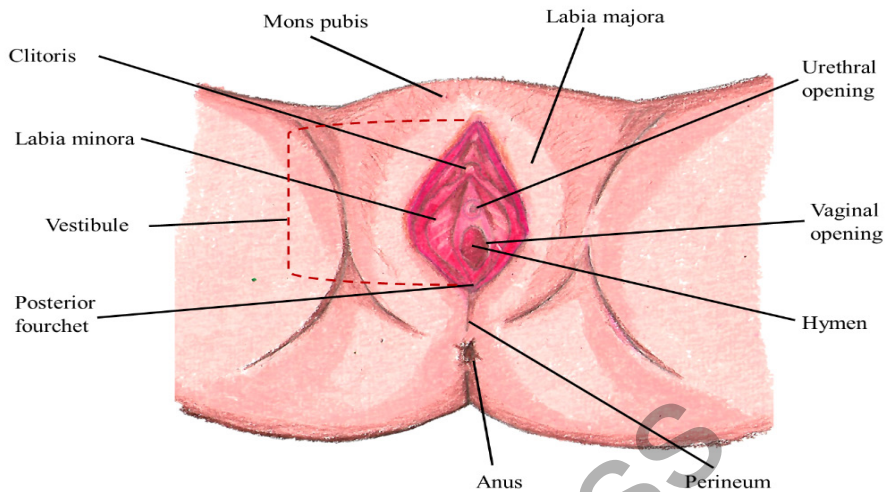


Figure 1.1: The external genitalia of the female.

Mons Pubis

The mons pubis is a soft, rounded cutaneous tissue that covers the symphysis pubis area. This upper part structure of the external female genitals has hair follicles in which the pubic hair grows. It serves the function of cushion-like protection for the pubic bones, especially during coitus. In individuals, the amount and spread of pubic hair vary. The mons pubis skin contains many sensory receptors and oil-secreting glands. These glands produce sebum and pheromones.

Labia Majora

The labia majora are the prominent longitudinal outer fold of pigmented skin. The fold of subcutaneous tissue is elevated on either side from the mons pubis to the anus. The outer pigmented skin contains sebaceous glands, hair follicles and sweat glands. Adipose tissue, connective tissue with abundant venous plexus and lack of hair follicles are underneath the labia majora. Labia majora has fewer sensory receptors than mons pubis. The individual size of the labia majora is highly varied (Palatty et al., 2018).

Labia Minora

The two soft folds of skin within labia majora are known as labia minora or nymphae. Each of the labium minus is composed of connective tissue,

sebaceous glands, erectile muscle tissue, blood vessels and numerous sensory nerve endings and receptors (Graziottin & Gambini, 2015). These minor lips range from light pink to brownish-black in colour. This smooth skin has no hair and no adipose tissue. The labia minora becomes thinner and gradually lose its moisture on its surface in older women due to lower estrogen level.

Clitoris

The highly erogenous organ is enclosed inside the labia minora. The glans of the clitoris, known as the prepuce or clitoral hood, are located below the upper division of the labia minora. The clitoral hood may be confused with the urethral meatus as it resembles the opening of the orifice (Davidson, London, & Wieland Ladewig, 2012). This external structure of the glans clitoris is a non-erectile region, whilst the clitoris is highly dense with nerves, particularly at the dorsal of the clitoral body (Jackson et al., 2019).

Vestibule

The triangular shape between the clitoris and the labia minora is known as the vulva vestibule or vaginal vestibule. It contains the opening into the vagina, known as the vaginal introitus. In women who have not had coitus, the hymen, a membrane of connective tissue, partially covers the vaginal opening. This thin membrane can be torn or broken because of several reasons, such as falls, coitus, and trauma related to sports activities.

Main Blood Supply from Pudendal Artery

The external pudendal and internal arteries provide blood supplies to the organs of the external genitalia. The internal pudendal artery supplies blood to all the perineal structures inferior to the pelvic diaphragm, which originates from the internal iliac artery. The internal pudendal artery extends to numerous branches, including the inferior rectal artery, the perineal artery, the bulb of the vestibule artery, dorsal and deep arteries that supply the area of the anal canal, vestibule, perineal muscles and clitoris. On the other hand, the superficial and deep external pudendal arteries provide blood supply to labia majora (Graziottin & Gambini, 2015).

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This book fills a crucial gap by integrating both Islamic and scientific knowledge into maternal-newborn nursing and women's health. Tailored to undergraduate nursing, advanced diploma in midwifery, and master in midwifery students, it begins with foundational concepts of maternal-newborn nursing, delving into pregnancy changes, the reproductive system, conception, fetal development, and pregnancy symptoms. It then proceeds to discuss maternal and fetal health, antenatal care, managing minor pregnancy issues, nutrition, and addressing high-risk pregnancies, all with a dual focus on the well-being of both mother and baby. The book also covers essential aspects of labor and delivery and postnatal care, providing support for mothers during and after childbirth. Additionally, it addresses newborn assessment, immediate care, and the vital task of caring for at-risk newborns, emphasizing the importance of their transition to life outside the uterus. Finally, it concludes with a discussion on promoting women's health, addressing common health issues at various life stages, and offering guidance on caring for women before and after gynecologic surgeries.

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