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SCHOOL OF NURSING AND MIDWIFERY
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UNIVERSITY OF GHANA, LEGON

HEALTH BELIEFS OF CAREER WOMEN LIVING WITH POLYCYSTIC OVARIAN SYNDROME IN ACCRA METROPOLIS

BY

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THIS THESIS IS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES, UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF PHILOSOPHY DEGREE IN NURSING

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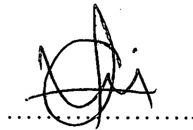
DECLARATION

I, Cindy Ofori – Appiah, declare that this thesis is the result of my own work done under supervision. I also declare that with the exception of published materials which were used in this research and duly acknowledged, this work has not been submitted in any form for a degree at any University or any tertiary institution.

CINDY OFORI – APPIAH		24/7/19
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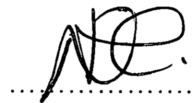
DR. FLORENCE NAAB		29/07/19
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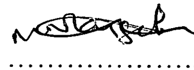
DR. MARY ANI AMPONSAH		24/7/2019
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ABSTRACT

Polycystic ovarian syndrome (PCOS) is the most common endocrine disorder among women of reproductive age. Although many studies have investigated the prevalence of PCOS, there are however discrepancies in their results. The study therefore explored the experiences of career women living with PCOS in Accra metropolis. The Health Belief Model (2002) was used as an organizing outline for this study. This qualitative research adopted a descriptive exploratory design. Thirteen (13) career women with PCOS who met the inclusion criteria in the Accra metropolis were purposively selected. Data was collected by means of face-to-face interviews using a semi structured interview guide. The study revealed that majority of the participants attributed PCOS to imbalance in the hormones of women, irregular menses and that PCOS affects the ovaries of women. Findings of the study revealed that the major source of knowledge on PCOS is the hospital staff. All thirteen (13) participants admitted that the major barrier to accessing care is financial constraints. Majority of the participants also observed that women suffering from PCOS have problems in their marriages resulting in broken homes and divorce. Participants also observed that prevention and control of PCOS is early detection through regular medical check-up and screening from the adolescence to adulthood. However, the non-involvement of other women who are not career women but are also diagnosed of PCOS was a major limitation. Based on the study results, the following recommendations were made to the Ministry of Health (MOH), Ministry of Gender, Children and Social Protection, Ghana Health Service (GHS), Nursing education and Nursing and Midwifery researchers.

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DEDICATION

I dedicate this work to my family members who have supported me all this years. To all the people who have been very active in helping me in various ways which has empowered me to complete this program.

Finally, to all the women who are going through this form of situation as fighters in their own small world and the medical professional team for supporting them continuously.

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TABLE OF CONTENT

DECLARATION ii

ABSTRACT iii

DEDICATION iv

ACKNOWLEDGEMENT v

TABLE OF CONTENT vi

LIST OF TABLES xiii

LIST OF FIGURES xiv

LIST OF ABBREVIATIONS xv

CHAPTER ONE 1

INTRODUCTION 1

1.0 Background of the study 1

1.1 Problem statement 4

1.2 Purpose of the study 6

1.3 Specific objectives 6

1.4 Research questions 6

1.5 Significance of the study 7

1.6 Operational definitions of terms 7

CHAPTER TWO 9

LITERATURE REVIEW 9

University of Ghana http://ugspace.ug.edu.gh

HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

2.0 Introduction 9
2.1 Health Belief Model (HBM) 9
2.1.1 Perceived Susceptibility 10
2.1.2 Perceived Severity 11
2.1.3 Perceived Benefits 11
2.1.4 Perceived Barriers 12
2.1.5 Cues to Action 12
2.8 Description of the HBM in the study 15
2.9 Review of related literature 17
2.10 Overview of Polycystic Ovarian Syndrome (PCOS) 17
2.11 Perceived susceptibility and severity of women with PCOS 20
2.12 Perceived benefits and barriers to PCOS prevention 21
2.13 Cues to action in the prevention of PCOS 22
CHAPTER THREE 24
METHODOLOGY 24
3.0 Introduction 24
3.1 Research design 24
3.2 Research setting 25
3.3 Target population 26
3.4 Inclusion criteria 26

University of Ghana http://ugspace.ug.edu.gh

3.5 Exclusion criteria 26

3.6 Sampling technique and sample size 26

3.7 Tools for data collection 27

3.8 Pre-test 28

3.9 Procedure/Methods of data collection 28

3.10 Data management and analysis 29

3.11 Methodological rigour 30

3.11.1 Credibility 31

3.11.2 Transferability 31

3.11.3 Dependability 31

3.11.4 Conformability 32

3.11.5 Audit trail 32

3.11.6 Member checking 32

3.11.7 Bracketing 32

3.12 Ethical Considerations 33

CHAPTER FOUR 34

FINDINGS OF THE STUDY 34

4.0 Introduction 34

4.1 Socio-Demographic Characteristics of Participants 34

4.2 Organization of themes 34

University of Ghana http://ugspace.ug.edu.gh

HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

4.3 Knowledge on PCOS 36

4.3.1 Meaning of PCOS 36

4.3.2 Sources of knowledge about PCOS 37

4.3.3 Causes of PCOS 38

4.3.4 Signs and Symptoms of PCOS 39

4.3.5 Prevention and Control of PCOS 40

4.3.6 Awareness of PCOS 41

4.4 Perceived Benefits to PCOS treatment 41

4.4.1 Seeking Early Treatment of PCOS 42

4.4.2 Frequent medical check- ups 43

4.4.3 Change of diet 44

4.4.4 Involvement in physical exercise 44

4.4.5 Family support 45

4.4.6 Keep track of treatment progress 46

4.5 Perceived Barriers to PCOS treatment 46

4.5.1 Financial Difficulties 46

4.5.2 Ignorance 47

4.5.3 Lack of Education or Information 48

4.6 Cues to Action for PCOS 49

4.6.1 Fear 49

University of Ghana http://ugspace.ug.edu.gh

HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

4.6.2 Domestic conflicts 50

4.6.3 Personal conversion 51

4.6.4 Media 52

4.7 Perceived Susceptibility to PCOS 52

4.7.1 Lifestyle 52

4.7.2 Genetics 53

4.8 Perceived Severity of PCOS 54

4.8.1 Infertility 54

4.8.2 Broken homes/ Divorce 54

4.9 Psycho-social experience about PCOS 55

4.9.1 Depression, Anxiety and Stress 56

4.9.2 Stigma 57

4.9.3 Low self-esteem 57

4.10 Summary of findings 58

5.0 Introduction 61

5.1 Knowledge on Career women living with PCOS 61

5.2 Perceived benefits to PCOS treatment 63

5.3 Perceived barriers to PCOS treatment 64

5.4 Cues to action for women living with PCOS 65

5.5 Perceived susceptibility to women living with PCOS 66

University of Ghana http://ugspace.ug.edu.gh

HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

5.6 Perceived severity of women living with PCOS 67

5.7 Psycho-social experience of women living with PCOS 68

CHAPTER SIX 70

SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSION AND RECOMMENDATIONS 70

6.0 Introduction 70

6.1 Summary 70

6.2 Implications 72

6.2.1 Nursing practice 72

6.2.2 Nursing research 73

6.2.3 Nursing education 73

6.3 Conclusion 74

6.4 Limitations of the study 74

6.5 Recommendations 74

6.5.1 Ministry of Health (MOH) 75

6.5.2 Ministry of Gender, Children and Social Protection 75

6.5.3 Ghana Health Service and Christian Health Association of Ghana 76

6.5.4 Nursing and Midwifery Researchers 76

REFERENCES 77

Appendix A: NMIMR-IRB CONSENT FORM 87

University of Ghana http://ugspace.ug.edu.gh

Appendix B: Data Collection Instruments 93

.... 102

.... 103

APPENDIX: C Ethical Clearance 104

.... 104

APPENDIX: D Introductory letters 105

APPENDIX: E Introductory Letter to Ghana Health Service 106

.... 106

APPENDIX: F Introductory Letter to Greater Accra Regional Hospital 107

.... 107

APPENDIX G: PROFILE OF PARTICIPANTS 108

University of Ghana http://ugspace.ug.edu.gh

LIST OF TABLES

Table 4:1 Details of all the themes and subthemes 35

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LIST OF FIGURES

Figure 2.1: Health Belief Model (Glanz, Rimer, & Lewis, 2002) 14

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LIST OF ABBREVIATIONS

AMA	Accra Metropolitan Assembly
ERC	Ethical Review Committee
ESHRE	European Society of Human Reproduction and Embryology
GA	Greater Accra
GARH	Greater Accra Regional hospital
HBM	Health Belief Model
HBQ	Health Belief Questionnaire
KBTH	Korle-Bu Teaching Hospital
NIH	National Institutes of Health
NMIMR	Noguchi Memorial Institute for Medical Research
OPD	Out-Patient Department
PCOS	Polycystic Ovarian Syndrome
WHO	World Health Organization

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CHAPTER ONE

INTRODUCTION

1.0 Background of the study

The most common endocrine disorder among women of reproductive age is known as a polycystic ovarian syndrome (PCOS). The prevalence of PCOS has been investigated by many studies; however, there are discrepancies in their results. For example, the variation of reported prevalence in epidemiological studies presents differences in study populations by the use of the same subset diagnostic criteria (Bozdag, Mumusoglu, Zengin, Karabulut &Yildiz, 2016).

Typically hyperandrogenism associated with chronic anovulation in women without other underlying disease refers to PCOS (Sanchez, 2014). PCOS is a major global PCOS is recognized as the major public health issue. Yet greater percentage of the general public is not unaware, and health care providers also don't understand the condition fully. Perelman School of Medicine (2017), mention that the most common endocrine disorder and the most common cause of infertility affecting 9 to 18% of women around the world.

Despite the prevalence of the complex and chronic condition, one-third of women diagnosed with PCOS saw at least three health professionals over the course of two years before receiving a diagnosis (Perelman School of Medicine, 2017). The World Health Organization (WHO) established that 116 million women (3.4%) worldwide in 2012 were affected by PCOS (Kabel, 2016). Global estimation of PCOS prevalence are highly variable, ranging from 2.2% to as high as 26%. In Africa, experts assert that PCOS affect 10% women and yet there is no proper

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published statistical data on the prevalence of PCOS in Africa is available (Omokanye, et al., 2015; Bharathi, et al., 2017).

Though there is available information on PCOS in the western world the same cannot be said of the African sub-region and Ghana is off no exception. More so. previous research on PCOS has primarily focused on its aetiology and clinical characteristics (Sanchez, 2014), thus giving less focus on the health beliefs aspects of human cognitive development and utilisation of health care associated with PCOS.

It is the most common endocrine disorders find in women during their reproductive years (Mousa, Brady, Mousa, & Mousa, 2009; Sanchez, 2014) with an estimated prevalence of 7–10 million American women (National Institutes of Health., 2017; Sanchez, 2014). 5%–10% of women are affected in the developed world and is the most common endocrine disorder of women in their reproductive years (Sanchez, 2014).

PCOS can be devastating to women at any age, but particularly during the reproductive periods because it a highly cause of female infertility (National Institutes of Health, 2017).

PCOS can also increase women's risk of type 2 diabetes (Gambineri et al., 2012), cardiovascular disease (Wild et al., 2010), anxiety and depression (Annagür et al., 2013; Dokras, 2012; Dokras, Clifton, Futterweit, & Wild, 2011; Livadas et al., 2011), and poor health-related quality of life (Li et al., 2011). It is essential for physicians to look for the hallmark signs of PCOS, such as menstrual cycle irregularity, hirsutism, infertility and a family history in order for them to diagnosed women with PCOS immediately (National Institutes of Health., 2017).

Currently, it is observed there is no national consensus on diagnostic criteria for PCOS. Additionally, the National Institutes of Health (NIH, America) and Rotterdam diagnostic criteria

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in America showed that women with undiagnosed PCOS constitute about 70% (March et al., 2010). The National Institutes of Health in America (NIH) consensus criteria consists of minimal finding of: (i) menstrual irregularity due to olio or anovulation, (ii) evidence of hyperandrogenism, whether clinical (hirsutism, acne, or male pattern balding) or biochemical (high serum androgen concentrations), (iii) exclusion of other causes of hyperandrogenism and menstrual irregularity (such as congenital adrenal hyperplasia, hyperprolactinemia, and androgen-secreting tumours) (National Institutes of Health, 2017; Mousa et al., 2009).

Again, an irregular period which is one of the symptoms of PCOS is not common among adolescence, because signs of PCOS consist of irregular periods (Bremer, 2010). The presence of symptoms and symptom severity can vary as results of PCOS heterogeneous (The Amsterdam ESHRE ASRM Sponsored 3rd PCOS Consensus Workshop Group, 2011). Furthermore, adolescents' and women's experiences of living with PCOS can vary across their life course (Sanchez, 2014).

The yearly financial cost of treating women with PCOS is estimated to be over $4 billion in America which implies that providing health care to women with PCOS is costly for every health care system (Omokanye,Ibiwoye-Jaiyeola, Olatinwo, Abdul, Durowade, Biliaminu, 2015). This includes the costs of "evaluating PCOS and treatments for menstrual dysfunction, infertility, diabetes and hirsutism" (Azziz, Marin, Hoq, Badamgarav & Song, 2005). Patients with PCOS might also require care from nutritionists, physical therapists, and mental health professionals which will virtually increase. The annual cost therefore need for improvement in public and health care providers awareness and management for women with PCOS (NIH, 2012) which may consequently ease the perceptual belief system about women living the PCOS.

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

The perceived effects and difficulties women with PCOS face include infertility, overweight and menstrual challenges (NIH, 2012). However, the justification of a woman having a PCOS cannot only be based on polycystic ovaries (NIH, 2012). Lack of awareness and negative health beliefs of individuals about PCOS can result in overlooking the needs of women with PCOS. To understand the health behaviours and beliefs of the people towards illness, the Health Belief Model (HBM; Becker, 1974) was used as a theoretical framework to understand health behaviours of the women. Thus, the HBM provides a sound theoretical model for assessing the health beliefs of career women living with PCOS in the Accra metropolis.

1.1 Problem statement

Polycystic Ovarian Syndrome (PCOS) affects women physically and psychologically. Globally, it has becomes a concern because of its linked effect with causing infertility in the women. Psychologically, career women with PCOS perceive that they are infertile, thus resulting to depression and lack of self-confidence. Emotionally, career women living with PCOS belief that their illness may lead to endometrial cancer, and anxiety (Farrell-Turner, 2011). Also, career women living with PCOS struggle financially to undergo their treatment modalities. The perceived cost of treatment is another major problem affecting career women living PCOS because the frequent hospital visits by the career women to seek for treatment affect them. Some of the women become defaulters and non-attendance for their medication and decide to seek for herbal medicines due to the high cost of orthodox treatment (Omokanye et al., 2015).

More so, many couples divorce their partners due to their economic exhaustiveness and being psychological distressed about their women's state of PCOS (Omokanye et al., 2015).

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

Career women living with PCOS are also noted to have little confidence in the medical team attending to them. Despite being such a common health condition women are facing today, PCOS is misunderstood by doctors and it remains undiagnosed and unmanaged in most people who have it .Visiting hospitals and receiving medications about their condition is unbearable, thus results to treatment noncompliance by most of the career women living with PCOS (Omokanye et al., 2015). It is therefore important that this findings inform the medical team to consider the emotional distress of these women individually (Hadjiconstantinou et al., 2017; 2009; Amiri, Tehrani, Simbar, Montazeri, & Thamtan, 2014a) and prevent women retrogressing to depression, lowered self-esteem, altered self-perception, and job dissatisfaction. Career women living with PCOS are affected physically, socially, sexually, spiritually and in many forms after they are diagnosed of having the disease (Omokanye,et al., 2015).

Furthermore, coping with their spouses, partners, families, friends and continuous integration into the community in which they live becomes a major task. The society has different perceptions and opinions about these career women living with PCOS (Marmarà, Marmarà & Hubbard, 2017; Omokanye et al., 2015). The stigma, perception of being infertile, depression, anxiety, sexual problems, divorce, social maladjustment, loss of self-control, and lowered self-esteem have become a major task for the women (Marmarà, Marmarà, & Hubbard, 2017). Apart from that, career women with PCOS battle with infertility, obesity and hyperandrogenism (Maya et al., 2018).

In Ghana, literature search indicates that only a few studies have examined PCOS and much has not been done on the career women living with PCOS (Maya et al., 2018**).** Few studies in Ghana have also assessed why we need epidemiologic studies of PCOS (Maya et al., 2018; Joseph,

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Burke, Tuason, Barker & Pasick, 2009) while media publications considers all what women should know about PCOS (Oyebade Abalola Jerry, 2018).

In Ghana, there is no PCOS registry or accurate data available about the experiences of career women with the disease (Maya et al., 2018). There also appears to be few studies that examine the health beliefs of career women living with PCOS in Ghana (Maya et al., 2018). It is against this backdrop that it is important for the researcher to assess the experiences of the health beliefs of career women living with PCOS in the Accra Metropolis.

1.2 Purpose of the study

The purpose of the study was to investigate the health beliefs of career women living with Polycystic Ovarian Syndrome (PCOS) in the Accra Metropolis.

1.3 Specific objectives

The specific objectives are to:

1. Explore the psycho-social experiences of career women living with PCOS.
2. Describe the perceived severity and susceptibility of women living with PCOS in the Accra Metropolis.
3. Identify the perceived benefits and barriers of women living with PCOS in the Accra Metropolis.
4. Identify the cues of action influencing women living with PCOS to seek medical attention.
5. Assess the knowledge of career women living with PCOS in the Accra Metropolis.

1.4 Research questions

1. What is the psycho-social experience of career women living with PCOS?

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2. What is the perception of severity and susceptibility of women living with PCOS in the Accra Metropolis?
3. What are the perceived benefits and barriers of women living with PCOS in the Accra Metropolis?
4. What are the cues of action influencing women living with PCOS in the Accra Metropolis to seek medical treatment?
5. What is the knowledge of career women living with PCOS in the Accra Metropolis?

1.5 Significance of the study

This study is relevant to the Ministry of Health and its agencies as well as the Christian Health Association of Ghana. It can also serve as a guide for policy formulation or reviews regarding Polycystic Ovarian Syndrome (PCOS) management and care.

The results of the study will also aid the stakeholders of the health services in Ghana, especially health practitioners to understand the factors that affect the women, so as to adopt appropriate strategies and measures to improve the health belief systems of career women living with PCOS.

Also, findings of this study will serve as a foundation of body of knowledge on PCOS in Ghana for emerging researchers and academicians, and also pave the way for further studies.

Finally, the findings of this study could form a basis for a structured in-service training programme for all health care professionals to improve the care of women living with PCOS.

1.6 Operational definitions of terms

1. **PCOS:** Polycystic ovarian syndrome
2. **Beliefs:** women perceptions or ideas about Polycystic Ovarian Syndrome (PCOS)

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3. **Career woman:** is a woman who is a banker, nurse, teacher, civil servant or business woman in a community.
4. **Experiences:** is the feeling and pain career women undergone through in the past with PCOS.

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CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This chapter presented the theoretical framework that guided the study and also reviewed related empirical literature on health beliefs of career women living with Polycystic Ovarian Syndrome (PCOS).

2.1 Health Belief Model (HBM)

The researcher considered using the Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB) as its theoretical frameworks. These theories were not considered to guide and define the study because the Theory of Reasoned Action has a limited validity as predictors of future behavior change of participants (Wicker 1969, Fishbein & Ajzen 1975). While the Theory of Planned Behavior only built further on an individual dimension of perceived behavioral control, thus, does not suit the current study constructs needed to be investigated. However, the Health Belief Model (HBM) has the constructs that were needed for the study, thus it's become the best model to be adopted.

The HBM as a conceptual framework was used as a guide for developing health-related interventions (Champion & Skinner, 2008). The model was originally developed in the1950's in an attempt to understand why people failed to be part of a free tuberculosis screening program (Rosenstock 1974). One of the most "widely used conceptual frameworks, since 1950 in health behavior research, both to explain change and maintenance of health-related behaviors and as a guiding framework for health behavior interventions is the health belief model" (HBM).

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The HBM contains several key concepts that predict why people will take action to prevent, to screen for, or to control illness conditions; these include susceptibility, seriousness, benefits, and barriers to behaviour, cues to action, and most recently self-efficacy (Glanz, Rimer, & Lewis, 2002). The HBM used to guide the study, contains the following theoretical constructs; perceived susceptibility, perceived severity, perceived benefits, perceived barriers and cues to action (Glanz, Rimer, & Lewis, 2002).

However, self –efficacy and perceived threat constructs were not studied because it does not form part of the constructs needed for this current study. Also, the current study was not designed specifically to determine participant's weight but rather health believes relating to women with PCOS.

2.1.1 Perceived Susceptibility

Perceived Susceptibility refers to an individual's subjective perception of the likelihood of contracting a disease or condition. The model posits that people were willing to act in acceptable ways if they perceived that they are vulnerable to a condition (Glanz et al., 2008). For instance, when applied to health beliefs of women, individuals were motivated to participate in PCOS preventive behaviour, if they perceived that they are at risk of contracting the disease.

On the other hand, they would be reluctant to engage in the preventive behaviour if they perceived themselves not at risk to the disease. If the individuals perceived that they are at risk of PCOS because they engaged in the negative behaviours, thus they are likely to change their behaviour towards contracting the disease.

According to Chen, Fox, Cantrell, Stockdale and Kagawa-Singer (2007), people were motivated to get vaccinated against contracting influenza as a result of perceived susceptibility.

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Additionally, Janz and Becker (1984) posited that susceptibility to a particular disease is subject to individual differences or perceptions.

2.1.2 Perceived Severity

This is where a disease or a condition is contracted by a belief leaving it untreated may result in a serious consequences it dimensions includes both personal consequences (e.g. death, and pain) and possible social consequences (e.g. effects on the conditions of work and family life). For instance, individuals are more likely to get preventive measures against PCOS if they believe getting infected with the disease has a high likelihood of mortality if it develops undetected. Conversely, if the individual perceives PCOS as a normal disease such as a cold that demands pain killers, there cannot be a behaviour change. The situation varies from one community to another.

According Hanson Benedict (2002), older people believe that contracting food-borne diseases may have negative consequences yet they do not use safe food-handling practices all the time. The HBM aims to promote the awareness/knowledge of how serious the outcomes of behaviours can be when applied to health preventive interventions like PCOS.

2.1.3 Perceived Benefits

The HBM postulates that people engaged in health seeking behaviour if they believe that what is offered is of value to them (i.e. potential to reduce the disease threat) (Rosenstock, 1974). For example, if the individual perceives that engaging in preventive behaviour is likely to prevent PCOS disease, the individual becomes more interested in engaging in the behaviour (Frank, Swedmark & Grubbs, 2004).

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However, if the individual perceives that the cost associated with the desired behaviour to be more than that of the old behaviour, it is very unlikely that she would engage in the behaviour.

2.1.4 Perceived Barriers

Barriers are the obstacles or challenges that prevent individuals from adopting a recommended behaviour (Rosenstock et al., 1988). A kind of cost-benefit analysis is thought to occur when the individual weighs the action's effectiveness against perceptions. For instance, when they perceive the recommended behaviour to be expensive, dangerous, painful, inconvenient and time-consuming (Strecher, 1997), then they are unlikely to participate in the recommended behaviour. Strecher (1997), therefore recommends that the needs to be greater benefits than perceived costs for an individual to carry out the proposed health-related behaviour. For example, individuals are unlikely to get PCOS treatment when they perceive that treatment centres are difficult to locate, perceive the treatment to be expensive, painful, dangerous and inconvenient, even if they believe the treatment can prevent one from getting infected with the polycystic ovarian disease.

2.1.5 Cues to Action

Cues to action are defined as anything that may increase awareness or trigger interest in performing the necessary health-related activity to prevent, control, treat, or elevate the health problem (Champion & Skinner, 2008). Cues could either be internal (bodily states) or external. For example, through reminders, friends, doctors, mass media campaigns or magazines and articles on PCOS, this could lead to a behaviour change when it is well executed.

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

Rosenstock (1974) asserts that the intensity of the cues varies with the degree of susceptibility and seriousness of the disease. For example, if a doctor advises and educates an individual on the seriousness of acquiring the disease and the benefits in getting treatment, there is the likelihood of the individual to engage in the preventive behaviour. However, the absence of appropriate cues from the medical practitioners, media, peers, and family is likely to hamper treatment uptake of women with PCOS.

Notwithstanding the original constructs of the model, there exist other variables/factors that influence individual's beliefs which directly or indirectly affect health-related behaviour; these factors include demographic (age, gender, educational attainment); psychosocial (social class, personality, educational level etc.) and structural (knowledge of disease) variables (Janz & Becker, 1984).

Below is the Health Belief Model used as an organising framework to assess the health beliefs of career women living with PCOS in this study.

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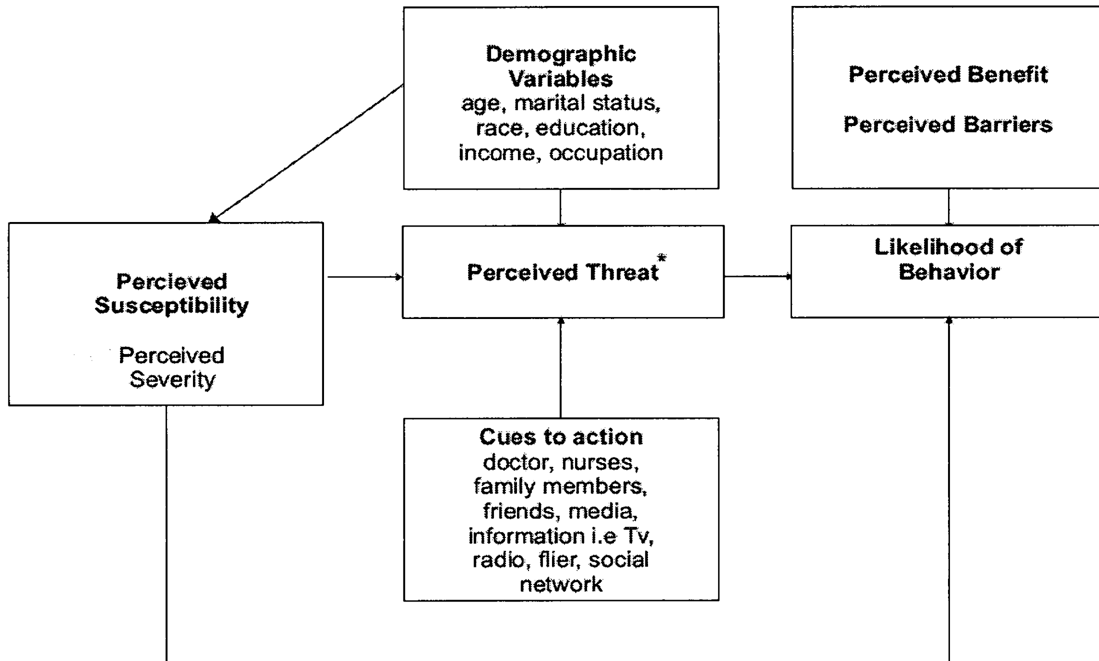
Figure 2.1: Health Belief Model (Glanz, Rimer, & Lewis, 2002)



***Perceived Threat: This construct of the model was not used.**

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2.8 Description of the HBM in the study

This conceptual framework seeks to explain the behavioural factors that influence an individual's willingness to adopt health-related behaviours (Glanz, Rimer & Le`wis, 2002; Abotchie & Shokar, 2009).

The first construct of HBM is perceived susceptibility; the study was anticipated to find out from these career women whether they view themselves as susceptible to getting PCOS. This is because they were reluctant to engage in the preventive behaviour if they perceived themselves not to be at risk of the disease. If these women perceived that they are at risk of having PCOS, they engaged in good behaviours. Thus, they are likely to change their behaviour in recommended preventive way.

If the women perceive severity of the condition and belief that contracting the disease or leaving it untreated, it may result in serious health consequences such as infertility. This will make the women change their lifestyle to avoid getting PCOS, similarly they will view it as normal like any other condition, and they may not bother changing their behaviour.

Thirdly, when the women believe in perceived benefit of PCOS, the likelihood of action will be to engage in taking commended preventive behaviour expected to prevent PCOS; the career women will be more interested in engaging in the behaviour.

On the other hand, the possible undesirable aspects of treatment could turn as obstacles to undertaking recommended behaviours' and this can be perceived barriers. A kind of non-conscious, cost-benefit analysis occurs wherein the women consider the actions expected benefits with perceived barriers but it may be when the career women perceive the recommended behaviour to be expensive, dangerous, painful, inconvenient and time-consuming, the women will participate in the recommended behaviour.

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Finally, the participants' cues to action performing the necessary health-related activity to prevent, control, treat, or elevate PCOS and likelihood of taking recommended preventative health action.

The framework of the HBM constructs has been used effectively to assess and explain health behaviours (Kohler, Grimley & Reynolds, 1999). For instance, Rhodes and Hergenrather (2008) used the HBM constructs to assess and explain sexual risk behaviours among gay men. In their study, they found that perceived susceptibility and severity of the disease were low among participants. In a similar vein, Abotchie and Shoker (2009) employed the Health Belief Model to explain cervical cancer screening intentions among college students in Ghana. They found that perceived barriers to screening had the most significant influence on screening behaviour.

Furthermore, Yazdanpanah, Forouzani and Hojjati (2015) used the HBM constructs to study consumers' intentions and perceptions of eating organic food. Their findings revealed that perceived benefits, general health orientation, self-efficacy and perceived barriers were the determinants of consumers' intentions. Gao, Xin, Nau, Rosenbluth, Scott and Woodward (2000) also used the HBM to study breast self-examination. Generally, all the HBM constructs are considered independent in assessing individual's behaviour (Carpenter, 2010; Armitage & Conner, 2001).

In another development, scholars like Yazdanpanah et al. (2015) argued that once the individual perceives a threat from the disease and perceives the benefits to outweigh the cost or barriers, then, there is the likelihood of taking action towards the desired behaviour without taking into consideration the cause. Consequently perceived threats could influence an individual's action towards behaviour change.

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

In accordance with Bandura's (1998) assertion, Champion and Skinner (2008) postulate that for behaviour change to occur the individuals perceived severity, perceived benefits and barriers must be influenced by modifying factors such as demographic variables (age, income, education), psychological variables, environmental and individual's knowledge about the disease. Thus the likelihood of an individual taking preventive action is high.

2.9 Review of related literature

A review of relevant research works related to this study under the various objectives was undertaken. Articles were retrieved from various databases ranging from 2014 to 2018 but few older literature were retrieved for the purpose of definitions of related theories about the study and where necessary.

These databases were Science Direct, Google Scholar, Pubmed, SAGE, EBSCHOST and CINAHL. The keywords that were used for the search were: Health beliefs, Polycystic Ovarian Syndrome, Perceived severity and susceptibility, Perceived benefits and barriers, cues to action, Perceived threats of women with PCOS.

The literature was organized according to the constructs of the conceptual framework and the objectives of the study. However, search of various databases revealed that related existing literature about the topic was scarce especially literature on health belief of career women living with Polycystic Ovarian Syndrome (PCOS).

2.10 Overview of Polycystic Ovarian Syndrome (PCOS)

Polycystic Ovarian Syndrome (PCOS) represents a condition in which an estimate of 10 small cysts of a diameter ranging between 2 and 9 mm develop on one or both ovaries and/or the

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ovarian volume in at least one ovary exceeds 10ml (Balen & Rajkowha, 2003). Likewise, PCOS is described as women who posse amenorrhea, hirsutism, and enlarged ovaries with multiple small cysts and thickened tunica (Farquhar, 2007).

However, the present description of PCOS is the most common endocrine condition with symptoms such as oligomenorrhea, anovulation, hyperandrogenism, and polycystic ovaries (Barron, 2004; Bates & Legro, 2012; Glueck, et al., 2005; Nicholson, et al., 2010). According to the National Institutes of Health (NIH) a systematic screening of women with diagnostic criteria estimated that 4–10% of women of reproductive age suffer from PCOS (Azziz et al., 2004). Although it was previously considered as a disorder of adult women, recent evidence suggests that PCOS is a lifelong syndrome, manifesting since prenatal age. In fact, according to the Rotterdam diagnostic criteria, the prevalence of PCOS in adolescents varies between a minimum of 3% (Hashemipour et al., 2004) and a maximum of 26% (Driscoll, 2003).

Currently, PCOS is the most common endocrine condition affecting young women where anovulation, hyperandrogenism, obesity, diabetes, and infertility are often seen (Barron, 2004; Bates & Legro, 2012; Glueck, et al., 2005; Nicholson, et al., 2010; West, et al., 2014). Majority of adolescents see Oligomenorrhea and anovulation symptoms as a normal physiological process of puberty, however half of the study population been studied are due to PCOS (Makarov, 2011; Meurer, Kroll & Jamieson, 2006; West, et al., 2014).

(Hart, 2007; West, et al., 2014), explained that a women missing menses for over four menstrual cycle a year after the onset refers to oligomenorrhea. Menstrual cycle conditions where ovaries do not release an oocyte is term as ovulation.

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

The most consistent diagnostic feature of PCOS is Hyperandrogenism; it is elevation of serum androgen levels or male hormones. Adolescents with irregular menstrual cycle will experience higher levels of plasma androgen than those with regular cycles (Venturoli, Porcu, Fabbri, Paradisi & Ruggeri, 1986; West, et al., 2014). Clinical manifestations of hyperandrogenism consist of acne, alopecia or male pattern balding, unwanted hair growth or hirsutism, and seborrhoea (Azziz, et al., 2004).

According to (Balen, 2003; Rosenfeld, 2011) Polycystic ovaries are the result of follicular arrest in which many small follicles develop in the ovaries but are not developed to an ovulatory size, and fail to ovulate. Although the term "cyst" can be an alarming term, these are not pathological cysts. They are immature follicles not developing to ovulatory size. A polycystic ovary is one in which 12 or more follicles measuring 2-9mm in diameter or increased ovarian volumes that are present.

Hyperandrogenism, is the main underlying problem identified in PCOS is a hormonal imbalance in which male hormones are higher than normal affecting the normal physiological process of ovulation; the development of follicles, and subsequent release of eggs.

Women with PCOS of too much insulin in their bodies are a result of Hyperinsulinemia. The production of androgens as well insulin increases the production of androgens, and high levels of androgens lead to acne, hirsutism, weight gain, issues with ovulation is affected by Hyperinsulinemia (Glueck, et al., 2005; Nicholson, et al., 2010). Patients with PCOS are twice more likely to be admitted to hospital in comparison to patients without it (Hart & Doherty, 2015).

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Therefore, accurate and early diagnosis of PCOS is necessary not only to prevent future health comorbidities but also to reduce the financial cost and burden of the women (Kamangar et al., 2015).

2.11 Perceived susceptibility and severity of women with PCOS

Studies indicated that the potential of women experiencing risky behaviours with PCOS, along with their response may be informed by theories of health behaviour (Bonar & Bohnert, 2016). Thus the individual woman's susceptibility to PCOS is high since the illness was diagnosed and well established. However, nature by which individual career women perceived the severity of PCOS determined how they seek treatment for the disease.

According to Rosenstock (1966), suggesting that cognitions about health outcomes can influence any engagement in any preventive behaviour towards seeking treatment by women living with PCOS. The HBM explained that perceived susceptibility (e.g., likelihood of PCOS) and perceived severity (e.g., the seriousness of PCOS) can influence health outcomes, especially on the woman's preventive behaviour. This influences whether one engaged in preventive behaviour (e.g., PCOS prevention strategies) or not. The more perceived benefits and the fewer perceived barriers of women with PCOS, there more they engaged in the preventive behaviour as well as being to promote about their own disease (Bonar & Bohnert, 2016).

However, it is observed that women living with PCOS experience various stress and anxiety about their condition. According to Farrell-Turner (2011), infertility and depression make career women susceptibility to the condition. It is argued that once a career woman with PCOS has received comprehensive health education about the condition, the perceived susceptibility of her condition cannot be overemphasized (Joseph et al., 2009; Nasiri et al., 2014b; Snyder, 2006).

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2.12 Perceived benefits and barriers to PCOS prevention

Thomson, Buckley, and Brinkworth, (2016) conducted a study on perceived exercise barriers and benefits with improved lifestyle modification in overweight and obese women with PCOS. It was found that perceived barriers to women experiences with PCOS were related to depression, while benefits were related to aerobic fitness. The study further revealed that the benefits and barriers of these women with PCOS about perceived exercise improved over time and do not always happened immediately (Thomson, Buckley & Brinkworth, 2016). Also, the findings of the study further indicated that the women perception about benefits on PCOS has been overlooked more especially psychological experiences of their disease. Rather consideration of social interaction has been increased as well as life enhancement with PCOS (Thomson, Buckley & Brinkworth, 2016). Thomson, Buckley and Brinkworth (2016) also indicated that women with PCOS do not have any change of experience in preventative health behaviour about their disease.

Benoit, Grönberg and Naslund (2001) found that the strongest benefit responses varied by group of individuals perception towards illness and as well as individual disease like PCOS. However, it is observed that women with PCOS are more worried and dissatisfied with life because of the infertility and societal stigma (Gibson-Helm, Lucas, Boyle & Teede, 2014; Gibson-Helm, Teede, Dunaif & Dokras, 2016; Hadjiconstantinou et al., 2017).

Also, it was revealed that the women perceived strongly that the barriers are from those having poor physical demographic background with PCOS (Thomson, Buckley, & Brinkworth, 2016). A study was conducted in the USA which also indicated that women were highly perceived to have more benefits in their daily physical exercises since it was believed to have reduced weight and enhanced their functional status than women who were interviewed about their social interactions (Thomson, Buckley & Brinkworth, 2016).

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

It was also observed that the daily physical responses of these women living with PCOS been negative due to depression and anxiety concerning their illness (Thomson, Buckley, & Brinkworth, 2016). However, other women believed that physical effort is the greatest barrier to improve on their weight lost with their PCOS (Mousa et al., 2009; Snyder, 2006; Thomson et al., 2016b).

2.13 Cues to action in the prevention of PCOS

Anecdotal evidence indicated that career women living with PCOS suffer with perceptual disorders such as suicidal ideations, mood swings, perceived infertility, and menstrual disorders, fear of stigma and isolation, and depression. However, these health problems needed cues to proper action in the prevention of PCOS through mass media publicity, awareness creation by public health educators, doctors giving health education about the condition in their consulting rooms and many more. It is believed that the susceptibility of the women living with PCOS rather promote positive behaviour change, thus various cues to action in preventions of PCOS does not affect their treatment protocol (Burner, Menchine, Kubicek, Robles & Arora, 2014; Joseph et al., 2009; Lin et al., 2018).

Aside that, a related study on the use of technology by PCOS patients about contraceptive usage found that majority of the participants was not technologically advanced in using it to propagate the message of contraceptive pill usage and it prevention (Burner et al., 2017). It is perceived that women with PCOS are susceptible about their condition, thus use technological advancement such as the social media to send and broadcast the preventive measures of PCOS to others.

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However, cues to action improve through the use of mobile technology in reaching these women about its preventive measures, and easy treatment opportunities by the women (Burner et al., 2017).

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CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter deals with how the study was conducted. It explained the design of the study, the setting, study population, inclusion and exclusion criteria, sampling method and sample size, data gathering tool and pre-testing. It also described the data gathering procedure, data management, data analysis and methodological rigour as well as ethical considerations.

3.1 Research design

A phenomenological design which is a qualitative approach that describes the health beliefs of career women living with PCOS was used. Phenomenology has to do with personal experience and requires description or interpretation of the meanings of phenomena experienced by participants in an investigation. Creswell (1998) posits that the best criteria to determine the use of Phenomenology is when the research problem requires a profound understanding of human experiences common to a group of people.

Since this study dealt with health belief of career women living with PCOS in the Accra metropolis, the use of this design gave the women enough room to share their personal experiences and thoughts freely on their health beliefs as living with PCOS in the Accra metropolis.

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3.2 Research setting

The Greater Accra Metropolitan area is the biggest, densely populated and the second largest industrial hub in Ghana. The metropolitan assembly has 11sub-metros with an estimated land area of 173 square kilometres in size.

The northern and western part of the metropolis is made up of the Ga East with a district capital Abokobi, Ga West holding Amasaman as the district capital and Ga South district is capitalized by Weija (AMA, 2015). On the Southern border of the metropolis the Gulf of Guinea from Gbegbeese to La. It shares a boundary with the Ledzokuku-Krowor Assembly on the Eastern part of Ghana.

According to Ghana Statistical Service population Census in the year 2000, the Accra city had a total population of 1,658,937 with a sharp growth rate of 3.4%. Currently, the Accra metropolis has become the fastest growing and most populated city in Africa (GSS, 2015). The growth rate of Accra is expected to go beyond 4 million by the end of year 2020. The Accra city has witness numerous economic transitions and changes since 1970s.

During the PNDC era in 1987, the industrial census conducted in Accra alone had 32% of Ghana manufacturing industries cited in the metropolitan area (Yankson, Kofie & Moller-Jensen, 2006). In spite of that, the most key financial institutions, Government ministries, multinational organizations and other major facilities like hospitals are all located in Accra.

According to GSS (2005), economic growth in terms of employment within Accra are that; 26% of the workforce is in the services sector, 24% is also in the wholesale or the retail trade aspect of the economy, 19% of the workforce was also in the manufacturing sector while 3% only went into the agricultural sector of the economy.

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The specific study area is the Greater Accra Regional hospital (GARH); which provides all types of gynaecological care to women in the metropolis.

3.3 Target population

According to Munhall (2012), qualitative research participants are selected based on their unique knowledge, experiences or views related to the study. The target population for the study were career women with PCOS in the Accra metropolis.

3.4 Inclusion criteria

The study included career women who seek for care in the Greater Accra Regional hospital in the Accra metropolis and who speak English Language, Twi and Ga. Career women with age limit of 20– 49 years and lived with PCOS for more than two years only were included in the study.

3.5 Exclusion criteria

Women with PCOS who are diagnosed of suffering severe mental illness were not included. Also, women who have not lived with PCOS for two years and above were not interviewed since they have little experiences about PCOS.

3.6 Sampling technique and sample size

Khan (2012) defined sampling as the process of selecting part of a group or population with the aim of collecting information which is used to determine the features of the entire population being studied. Purposive sampling technique, another name is judgment sampling (Etikan, 2016)

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was used by the researcher to select the participants. It is a non-probability sampling technique. This allows the researcher to recruit study participants on the basis of personal judgment about which participant best fit to give the required information to meet the purpose of the research (Polit et al., 2001).

Qualitative research relies basically on the quality of the information obtained from participants rather than the size of the sample (Burns & Grove, 2001). Hence, the researcher engaged a small number of women who gave in-depth and sufficient information on the phenomenon studied. The estimated sample size was 13 career women with PCOS based on data saturation. Saturation is the point at which the information the researcher collects begins to repeat itself (Bernard, 2000).

3.7 Tools for data collection

An interview guide was used to conduct in-depth interviews for data collection. These types of interview guides allowed participants in a qualitative study to describe personal experiences in their own words (MacDougall & Fudge, 2001). The interview guide was based on Health Belief Questionnaire (HBQ) developed by Mirotznik, Feldman and Stein (1995). Existing literature (Kyale & Brinkman, 2009; Marshall & Rossman, 2010) revealed that the objects of direct experience interview guide like this type of study should be open or semi-structured.

The semi-structured interview guide was used and it consisted of open-ended questions and then spontaneously devised follow-up questions to draw out more specific evidence from the career women. This type of interview guide also allowed the researcher to address the phenomenon profoundly, providing a space of aperture for the women to express their experiences in detail, approaching reality as faithfully as possible. The main focus of this interview guide was to

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describe the meanings of phenomena about the health belief of career women living with PCOS (Rubin & Rubin, 2012).

3.8 Pre-test

The interview guide was pre-tested using four participants in Korle-Bu Teaching Hospital (KBTH), which was also found within the metropolis and further met the inclusion criteria.

The aim of the pre-test was to ascertain trustworthiness of the interview guide. It also ensured that the guide addressed all the research questions and was modified based on the feedback.

3.9 Procedure/Methods of data collection

The researcher obtained ethical clearance from the Institutional Review Board (IRB) of the Noguchi Memorial Institute for Medical Research (NMIMR). Introductory letters were also obtained from the University of Ghana School of Nursing and Midwifery to seek permission from the management of the respective hospitals in order to recruit participants living with polycystic ovarian syndrome for the study. Informed and written consent were also obtained from the participants.

The researcher explained the rationale for conducting the study to the participants who met the criteria for inclusion. Participants who were within the inclusion criteria and agreed to take part in the study signed the consent form before the researcher started the interview. Participants' right to withdraw in the course of the study was explained to them so that no participant would feel being coerced to be part of the study.

The interviews were conducted at participants' place of choice such as the hospital OPD, churches, offices and homes as desired by the participants. The researcher was careful to avoid interference during the interviews and audio recording.

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More importantly, probing questions were used to elicit more information from the women's health belief perspectives on PCOS. Observations of the participants such as facial expressions, gestures, interruptions during the interview were documented. Field notes were also taken.

Field notes enabled the researcher to record the activities, events, behaviours and other characteristics of the setting being studied. Field notes helped the researcher to produce meaning and an understanding of the phenomenon being studied (Burgess, 1991). Audio tape recordings were done with permission from the participants. Each interview lasted between 30 minutes to 45minutes. When the session for the interview was over, participants were thanked by the researcher for their time.

3.10 Data management and analysis

The audio recordings were downloaded the into researcher's laptop computer. The recordings were listened to and transcribed verbatim in a word document by the researcher. All the transcribed data, information sheets and field notes were kept safe in a file under lock and key in a drawer at home. The soft copies of the entire research work were put in a folder on a password protected computer. Data collection and analysis were done concurrently. At the end of each interview, the audio recordings were transcribed verbatim. This also aided in improving upon subsequent interviews with the study participants.

The data was analysed using thematic analysis. Thematic analysis is a type of qualitative analysis that is used to categorize data and presents it into similar themes (Ibrahim, 2012). Thomas and Harden (2008) established that there are three components of thematic analysis which are: coding, organization of the codes and finally developing themes from the codes.

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According to Sandelowski and Barroso (2003b) research findings can be placed on a continuum indicating the degree of transformation of data during the data analysis process from description to interpretation. Gathering and analysing data were conducted concurrently, thus this was added to the depth and quality of the data analysis.

However, it is also common to collect all the data before examining it to determine what it reveals (Chamberlain et al., 2004). The researcher after transcribing and categorizing the data, used number codes based on its contents and meaning, defining and naming themes and subthemes. Reviewing themes and searching for appropriate themes that aligns with the structure of which the interview was directed. With this, the researcher identifies the responses with ease. The number codes were later changed with pseudonyms such as the respondents local names to ensure anonymity. Six themes emerged in all based on the constructs of the guiding framework whilst one new theme emerged outside the constructs based on the responses by the participants. The final stage of the data analysis was producing report and reporting results of the previous stages during the analysis of the gathered data.

3.11 Methodological rigour

Methodological rigour or trustworthiness is used in evaluating the findings of a qualitative research. It was the extent to which the study was rigorously conducted. Four criteria were identified by Guba (1981) to promote trustworthiness of the study: credibility, dependability, transferability, and conformability.

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3.11.1 Credibility

It is about the truthful description of the experience of the participants. It further assesses whether the findings make sense and are accurate representation of the participants (Rolfe, 2006). This was ensured by asking good questions, interactive questioning, and frequent debriefing sessions. Participants' validation was also done where some of the transcripts were given to the participants to confirm whether that was the exact information they gave as transcribed.

3.11.2 Transferability

It is the ability to move the findings of qualitative research to similar contexts within similar groups (Polit & Beck, 2004). This was ensured by giving a clear description of participants' selection and an in depth description of the research setting, the background of the participants and how the entire process of the study was done to enhance applicability of the study findings.

3.11.3 Dependability

This refers to the consistency of the data over time (Polit & Beck, 2004). Any researcher who follows the same audit trail of this study should come out with similar qualitative research findings (Polit & Beck, 2004). This was ensured through a detailed account of the processes involved, the research design, data gathering and analysis. The entire study was made available to the supervisors to peruse every stage of the study until the final report.

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3.11.4 Conformability

It is the objectivity or the neutrality of the data in a way that there would be a consensus between two (2) or more independent individuals about the relevance of the data.

3.11.5 Audit trail

It helps to establish the credibility of qualitative studies and serves to convince the scientific community of their rigor (Robinson, 2003). The researcher used audit trial to establish the credibility and conformability of the study. This was ensured by making sure that records provide evidence that recorded raw data such as field notes, audiotape recordings, coding, and analysis with in-depth methodological description, reduction and synthesis (Robinson, 2003). This helped the auditor to trace the textual sources of data back to the interpretations and the reverse.

3.11.6 Member checking

It is also known as participant or respondent validation which is a technique for exploring the credibility of research results (Birt, Scott, Cavers, Campbell, & Walter, 2016). The researcher ensured that data or results are returned to the participants to check for accuracy and resonance with their experiences. Member checking was also used as a validation technique for the study (Birt et al., 2016).

3.11.7 Bracketing

It is used to mitigate the potentially deleterious effects of preconceptions that may taint the research process (Tufford & Newman, 2012). This processes build the credibility of the study (Tufford & Newman, 2012).

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3.12 Ethical Considerations

The research study was subjected to ethical scrutiny by the relevant Institutional Review Boards (IRB) for ethical clearance to be obtained. Furthermore, each of the participants were informed about the nature and purpose of the study, the benefits and possible risk of the study to them and the hospital as well as voluntary participation or withdraw from the study. Participants were given consent form to read and complete by filling. This was to ensure that every participant makes an informed decision before taking part in the study. The researcher interviewed the participants based on their spoken language. The privacy of every participant was protected by the researcher, by ensuring that names and titles of the participants were not included in the interview guide (anonymity) but numbers and alphabets were used as identifiable codes.

Also, interviews were audiotaped for transcription and the use of pseudonyms to protect participants' anonymity. For the purposes of this study, subsequent reports of all the women were assigned pseudonyms and were assured of anonymity. As Babbie (2005) highlights, it is important to ensure anonymity and provide protection to the participants against any physical or psychological harm.

Also, to maintain the confidentiality of information, the interview guide, field notes and audio tape recordings were securely locked up in a cabinet. This document can only be assessed by the researcher, supervisor and the institution.

All information collected from the participants will be destroyed in five (5) years after the study. All storage materials like pen drive were only assessed by the researcher and supervisors. The pen drive was stored and secured in a cabinet.

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CHAPTER FOUR
FINDINGS OF THE STUDY

4.0 Introduction

This chapter presents the findings of the study. The chapter first highlights the demographic characteristics of the participants, followed by a presentation of the main themes that emerged from the data and their corresponding sub-themes. The presentations of the sub-themes were supported by selected verbatim quotes from the participants to illustrate the issues that emerged from the study.

4.1 Socio-Demographic Characteristics of Participants

Thirteen (13) participants took part in the study. All participants were females and their ages ranged from twenty-seven (20) to forty (49) years. Majority, representing nine (9) of the participants were married whiles four (4) were single. All the thirteen (13) participants who took part in the study were Christians. With regards to their educational background, twelve (12) of the participants were educated up to tertiary level whiles one (1) participant had Junior High School education. All of the participants were gainfully employed.

The ensuing section presented the main themes and corresponding sub-themes that emerged from the data analysis supported by verbatim quotes from the interview transcripts.

4.2 Organization of themes

Based on the constructs of the theoretical framework and the study objectives used, six (7) themes in all and twenty-two (27) subthemes were formulated.

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Table 4:1 Details of all the themes and subthemes

THEMES	SUBTHEMES	CODES
1. Knowledge on PCOS	a) Meaning of PCOS b) Sources of knowledge about PCOS c) Causes of PCOS d) Signs and symptoms PCOS e) Prevention and control of PCOS f) Awareness of PCOS	Now (NWP)
2. Perceived benefits to PCOS treatment	a) Seeking early treatment of PCOS b) Frequent medical check- ups c) Change of diet d) Involvement in physical exercise e) Family support f) Keeping track of treatment progress	Per Benet (PBP)
3. Perceived barriers to PCOS treatment	a) Financial difficulties b) Ignorance c) Lack of education or information	Bar (PBR)
4. Cues to action for PCOS	a) Fear b) Domestic conflict c) Personal conviction d) Media	Cute (CP)

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5. Perceived susceptibility to PCOS	a) Life style b) Genetic	Susce (PSC)
6. Perceived severity of PCOS	c) Infertility d) Broken homes/ Divorce	Sever (PSV)
7. Psycho- social experience about PCOS	a) Depression, anxiety and stress b) Stigma c) Low self esteem	P- social (PSE)

4.3 Knowledge on PCOS

One of the main themes was participants' knowledge on PCOS. The majority of the participants attributed PCOS to imbalance in the hormones of women, irregular menses and that PCOS affects the ovaries of women.

The data also revealed that majority of the participants did not know about PCOS until they were not feeling well and went to the hospital. Majority of the participants attributed PCOS to hormonal imbalance and genetics. The women described their knowledge of PCOS in six (6) categories.

4.3.1 Meaning of PCOS

Findings of the study indicated that PCOS is a female-related problem as a result of hormonal imbalance and it affects the ovaries and menstrual cycle of women which prevent women from getting pregnant. Selected excerpts from three (3) of the participants on the meaning of PCOS were as follows:

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> *"Well what I have been told is that, it's a female related problem which affects the menstrual cycle of a woman or the hormones in general.... It affects the ovaries of a woman and the hormones" (Akosua)*

> *"Mmmm...PCOS...the little I know about it is that, it has got to do with women's ovaries and then there is some enlargement in the ovaries that sometimes prevents us from getting pregnant. And then also it seizes our menstruation sometimes and then it makes you uncomfortable as a woman, you have so many stress" (Adwoa)*

> *Well, what I know is, it is a disease or a condition that affects the ovaries of the female reproductive organ. Its several cysts do occur in the reproductive organ especially the ovaries''. (Aba)*

Ada had this to say on the meaning of PCOS:

> *"What I know concerning PCOS is hormonal imbalance" (Ada)*

4.3.2 Sources of knowledge about PCOS

Findings of the study revealed that the major source of knowledge on PCOS was from the hospital. The majority of the participants got to know about the condition after being diagnosed of PCOS. They reported to the hospital on account of irregular menses, missed menses abdominal pains and years of marriage without children.

Few of the participants indicated their source of knowledge were from friends. Two selected participants expressed their source of knowledge as follows:

> *"Hmm... Ok I was missing my period every 3months so i went to see a gynecologist with my senior sister at the hospital and they run some tests and scans and labs and everything and I was diagnosed of PCOS" (Ada)*

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

"....about 2 to 3years ago I was not feeling well. I was having pains in my lower abdomen so I visited the doctor. And he took a scan and that was when he told me I had PCOS and explained to me what it is" (Akosua)

One of the participants visited the hospital for check-up after two years of marriage without a child. The participant narrated her source of knowledge as follows:

"Hmm....big question there. I got to find out I had PCOS when I visited the hospital. After two years of marriage without issue. So that's where the doctor diagnosed and told me I had PCOS" (Esi)

One of the participants also stated she got to know about PCOS from a friend before she was diagnosed of PCOS.

"I went to the hospital, I was having this problem (cramps) and so the doctor checked and then he said he suspects that. But before that I had a friend who spoke about it. So I said ok let me go and check, so that's how come I found out, I got to know that I have it".(Adwoa)

4.3.3 Causes of PCOS

The majority attributed PCOS to hereditary and hormonal imbalances. A few of the participants attributed PCOS to lifestyles. Below were some quotes from participants that aptly portray their views on causes of PCOS:

"...everything inclusive, it can be genetic. I didn't get it from anybody maybe I was born with it. Maybe to others it can be genetic or as a result of the food we take too" (Adoma)

"For me I think it's in the hormones that are causing that. The main cause is the hormonal imbalance because everything is from the brain. Because everything we do is from our brain and the hormones correspond, so the cause of it is the hormones" (Ama)

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> *"...from what I was told it means that sometimes majority of them is hereditary. Maybe your mum once had it, your grandmother once had it so you carry that genes in you. Which affects you, so it's not a matter of you being an individual it's a matter of you carrying it from birth, from your mum or grandmother? So it's hereditary as well". (Akosua)*

Abena had this to say on lifestyle:

> *"From the little I have read and the little I have heard from my doctor it's usually genetic and probably sometimes the lifestyle we have. Because if the condition is there definitely there must be a trigger to bring it out like the food we eat and so on." (Abena)*

4.3.4 Signs and Symptoms of PCOS

Every disease has some cardinal signs and symptoms. Most of the women who participated in the study indicated that irregular menstruation, lower abdominal pain, growth of beard, hairy body among others were some of the signs and symptoms of PCOS.

The following were typical quotes from four selected participants to buttress their views on signs and symptoms of PCOS:

> *"OK.... You feel pain at the lower abdomen. That's what I know so far" (Esi)*
>
> *"What I know most is that those that have PCOS have hairy skin, we have beards and hair on the skin and your legs or hands. And then you turn to have cramps, me personally I have those cramps. And then you don't really menstruate every month, sometimes you menstruate this month and the next four months. It doesn't even come regularly even the normal five days, mine it's comes like two days... so that is what I know about it" (Adwoa)*
>
> *"....I know of the body hairs, rapid weight gain and hair loss. I know of the menstrual problems, sometimes your menses will seize for months. I have been experiencing that as*

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> *well sometimes restlessness or sleeplessness and constant fatigue and then mood swings". (Abena)*

One of the participants shared her experience on the signs and symptoms as followed

> *"The symptoms that I personally have faced are regular sweat. I sweat a lot and I have this inner hotness, when am there I feel hot within me and when am there the hair at my front is not that good, it's very faint and doesn't grow all that well....sometimes too sleeplessness, fatigue and stuff like that" (Ada)*

4.3.5 Prevention and Control of PCOS

Participants observed that prevention and control of PCOS was mainly through early detection by regular medical check-up from adolescence to adulthood. Participants also stated that the avoidance of too much carbohydrate and fats and rather consuming more vegetables, fruits and to doing regular exercise helps to prevent as well as control PCOS.

These were evident in some interviews typified in the following excerpts of three participants:

> *"Prevention is early detection, going to the hospital early enough. Most of us, we wait till we want to get pregnant or we get married before we check our status. But as we are growing as every young lady at least when you get to your adolescence after let's say 18 years, you start going to the hospital at least once in a year you check your system. So that you can get to know it early. So I think that's the best prevention, early medical check-up" (Adwoa)*

> *"For prevention I don't know, the doctor told me that there isn't prevention but there is management and control. I should mind my eating, not too much of carbohydrate, exercise a lot, more water and fruits and veggies as well. He said I should manage my intake of protein as well." (Abena)*

One of the participants also shared her views on diet as a measure to control PCOS:

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"Okay I personally don't know much but what the doctor told me was not to take in too many fatty foods like ice creams and other stuff. He also told me to take in more of vegetables and something that contains fiber. So that is what I know". (Ada)

4.3.6 Awareness of PCOS

The study revealed that the majority of the participants did not hear about PCOS until they had health problems and went to the hospital only to be diagnosed of PCOS. Below were few testimonies from study participants on their awareness of PCOS:

"I know a lot of people with the symptoms but if you ask them what PCOS is, they will tell you they don't even know what it is" (Adoma)

"Honestly myself I didn't know about it, I was ignorant until I listened about it on Adom FM program. It's just that we don't have education, our hospitals don't help us. And when you go to the hospital to even complain "doctor I have abdominal pain", he gives you medicine and say you will be fine. He wouldn't even tell you what is really happening with you or he will also not go further" (Adwoa)

"I never heard of it until recently I got to know I had PCOS". (Ajo)

"No! I didn't know of PCOS, what I knew was ovarian cyst but for PCOS no". (Akua)

One of the participants also recounted her experience as followed:

"I never heard or didn't know anything about PCOS until I got married and the baby was not coming. So that was when I went to the hospital and found out that I have PCOS. I never knew" (Yaa)

4.4 Perceived Benefits to PCOS treatment

For people to adopt healthy lifestyle, regular medical check-up regarding PCOS, they ought to understand the benefits that come with it. Perceived benefit was one of the main themes.

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

Participants articulated benefits they stand to gain on issues of PCOS and described them in six (6) categories.

4.4.1 Seeking Early Treatment of PCOS

Majority of the participants stated that seeking early treatment prevented complications, brought peace in the family and victims of PCOS can get early advice from doctors on what to do. Below were three typical quotes from participants concerning seeking early treatment:

> *"Well the benefit is you know when you get married and later you realize you have this you cannot produce offspring, it creates problems in the marriage. So if you seek early counseling or treatment it helps you to find solution and bring happiness to you and the family as a whole" (Ama).*
>
> *"I know it helps because seeing the doctor helps him to know what he needs to do to help you. Some people will just sit there and waste the time. Before they realize it's too late. Like my community, some go to churches; some also go to the herbal clinic. Me for instance, I went to the doctor early so he knew what to do to help me. So seeking early treatment is the best" (Ajo)*
>
> *"Well I got to know that PCOS affects fertility as well. So when you seek early treatment your doctors can advise you so that it doesn't affect you in the future when you want to have children. I don't have kids now but definitely I'm trying to have kids "(Akosua)*

One of the participants shared her experience on not seeking early treatment:

> *"Early treatment is the best. If I had done mine early it wouldn't have been on me because I learnt that early detection can cure it. And it can also help me to be more fertile" (Aba)*

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4.4.2 Frequent medical check- ups

Majority of the women observed that frequent medical check-ups were beneficial to them since PCOS can only be detected medically. Also, appropriate advice and treatment were given to manage the condition. One participant narrated her experience on medical check-up as followed:

> *"Medical check-ups has really helped me a lot in so many ways. For example, I now know what do and what not to do in my condition....like the do's are you take your prescribed medication and you check your diet that is the do's. The don'ts are you don't go and do your own research and find out that there is this medicine and you go and take it" (Adoma)*

Another participant shared her take and experience on medical check-ups:

> *So for your own safety and future references you need to go for regular check-ups to benefit your own self. I visit my Doctor every month .... If there is anything unusual he finds on me he draws my attention and action taken immediately for my own good" (Akosua)*

Medical check-ups helped erase spiritual connotations to some of the disease like PCOS. Below was an excerpt from a participant:

> *"... Ghanaians sometimes just wait for something to happen before we go to the hospital but I think once a while we should just pass by the hospital to see what is wrong in the system. ... Maybe you will be faced with this problem of PCOS and you will be saying that your grandmother somewhere is the cause of you not having a baby and all that. So it is good that we go to the hospital and do check-up".(Yaa)*

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4.4.3 Change of diet

Some of the participants also observed that healthy diet helped to control PCOS. Fruits, vegetables, fats free foods, low carbohydrates and sugary beverages were recommended by their doctors. Some of the participants had this to say on diet:

> *"Yes you should be going for regular medical check-ups because the more you go and you are been counselled as to what to eat and what not to eat and then the consequences of it. It will help you in terms of your fertility and then health-wise .... And then dieting or taking a good diet hahaha ...Mostly fruits and vegetables will do and the sugars shouldn't be taken at this time" (Aba)*

> *"Eating plenty vegetables, fruits and then avoiding some of the carbohydrate foods, canned minerals or foods" (Ajo).*

One of the participant reported that ignorance was making people eat anything that come their way which was not good for their health.

> *"...because of ignorance we don't know or we don't really check our diet. Mostly, there are a lot of things that we are not supposed to eat but because we don't know we are ignorant of it. We take everything. Even with PCOS you don't take certain fruits but because we don't know we keep on taking milk, too much fat and all those things. It harms you in the long run" (Adwoa).*

4.4.4 Involvement in physical exercise

Majority of the participants stated that exercise was a good thing to do as it keeps one fit, helps people to lose weight which was important in PCOS management and also helped in maintaining insulin level.

The quotes below were selected views of participants on the importance of exercise:

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"Exercise in general makes you lose weight and we all know that in dealing with PCOS you need to lose weight. Because if you are fat and your insulin goes up it affects you as well. And so the more you are exercising, the more you are working on your ovaries too. Exercise also helps you as well in dealing with your hormones" (Akosua).

"Exercise helps to reduce fat and helps the body to feel healthy" (Ajo).

"Most PCOS patients put on weight so when you do regular exercise it makes you less overweight and then it helps you build yourself up. It doesn't make you too much over weight to stress you down. That's what I think, exercising helps build the body but with PCOS you really need to maintain that weight so that it wouldn't be excess to hurt you"(Ada).

4.4.5 Family support

Most of the participants indicated that they get support from family regarding PCOS treatment including emotional support as contained in the following excerpts from some selected participants:

"Yes for him I don't have a problem at all, there are times that I break down and he consoles me and keeps telling me we will fight through. So for him am confident in saying yes" (Akua)

"One thing also is that my husband is very supportive, there's no pressure from him and the family too is cool with me. So I don't live a stressful life" (Ama)

"I love it when I have friends around. We will chat, talk, laugh, and watch movies, read and all that. But when I am left alone that's when the thinking comes" (Yaa)

One of the participants recounted how her boyfriend has been supporting and encouraging her after she was diagnosed of PCOS:

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"But my boyfriend now encourages me; he used to think it's not an issue. But recently when he found out it's something that used to worry me he's been encouraging me to see my gynecologist. So I think the people around us sometimes help if we let them know what the issue is" (Abena)

4.4.6 Keep track of treatment progress

Normal hormones level reduced hair loss, getting to know whether there is improvement or not was shared as their expectation during treatment of PCOS.

"But I have been given medicines on a regular basis for the hormones to be normal and then for the cyst to also start shrinking .... And then for the hair growth to also reduce" (Adoma)

"*If you are on treatment you get to know how improved you are, if treatment is stagnant or not you will get to know. So I think it's good and also relax. The body does not need all this pressure, it's not easy and you should just take care of your body*" (Ajo).

4.5 Perceived Barriers to PCOS treatment

Perceived barriers to accessing health care on PCOS was one of the main themes of the study. Barriers were important because even when participants knew the benefits that came with accessing health care with PCOS, the main setback possibly was barriers.

The women in this study reported three main barriers as financial difficulties, ignorance and lack of education or information.

4.5.1 Financial Difficulties

All the participants admitted that the major barrier to accessing health care was financial constraints. Participants testified of high cost of scans, high cost of medications and other laboratory investigations. Participants shared their view as followed:

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> *"It is very expensive, very very expensive. Drugs that you need to buy, various scans that you need to take are very expensive.... Unless you are having your own private insurance company, but if you are using the national health insurance card then am sorry it will not work... how long are you going to be going round getting money to go and buy all these drugs? I spend close to GH 1000 almost every month on treatment. Money is one of the biggest barriers to seeking health" (Akosua)*

> *"Very costly, very costly doing tests here and there. Today this or that and then the drugs are also expensive, so it's very costly. I know I always use GH850 on drugs alone last month .Hmm.... the financial aspect of it to me is the barrier. Thus preventing most women from visiting their gynecologist or doctors. Because there's no money in the system" (Esi)*

Two of the participants recounted on the cost of drugs, laboratory tests and diet management:

> *"Hmm .... My bill for every month is above GH1500, thus treatment and diet .As for the cost it's serious, because the medication and even the diet alone. And the labs are not easy but what will you do, you have to take care of your health" (Ajo)*

> *"Hmm it's not easy ooo, it's not easy, and it's not easy. It's expensive, like you need to be taking medications each and every day. There are times that you can't even buy all. Sometimes I tell my husband to buy me the first 10 then I take, so before that one gets finished. Even at times it's so bad that we have to buy 5 of the tablets. Roughly we spent our monthly salary on treatment. Our budget on every monthly check – up is GH900 including drugs." (Afia)*

4.5.2 Ignorance

Majority of the participants opined that ignorance on PCOS was a reason why women were not seeking regular medical check-ups. Also, the women felt that if they were not sick there was no need for any medical screening. Others held the view that PCOS was not going to kill and adamant about their own health. Participants called for education in this regard.

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The quotes below portray their views:

"I really do not know why they don't go for check-ups. Some people don't really see the essence of doing it because they feel like am okay if it doesn't come it will come the next day". (Afia)

"If you have it and you are just being ignorant you will not take it serious it will just not help you. People need to be educated about PCOS, they need to be educated or they need to read on them. Just go online and then they will realize they have being ignorant about it in the first place. So they have to be made aware of it so that they can fight for it. Because if you are there and you are ignorant about it then the more you grow the more you are not sure you will get a womb to carry a baby". (Adoma).

"Some also say if it is not a sickness that will kill them then they are fine". (Ajo)

One of the participants made this observation on ignorance:

"Occasionally, every woman should be going for periodic checks.....if they are ignorant about it they wouldn't go. It could be that they are ignorant; they don't have education on the condition. Or they are ignorant about periodic health checks". (Aba)

4.5.3 Lack of Education or Information

Majority of the participants observed that there was no available information on PCOS in the rural and urban areas of Ghana unlike other conditions such as malaria that were known to people.

Participants shared these views about lack of education or information:

"It still comes down to education. Once we get it known, women will at least be aware of that condition; will be aware of what it takes to treat it. We will know what the whole thing is about but nobody talks about it and it is killing people" (Akua)

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> *"Most women especially in the rural areas don't know and even if the doctor should tell them they will say it is fibroid. That is their assumption ...there is no information on this PCOS disease" (Abena)*

One of the participants posited that she has seen and read posters on tuberculosis and Malaria but non on PCOS.

> *"We all read posters a lot, at times I see posters of malaria and tuberculosis and all that. I have not suffered from tuberculosis but I have been reading, so the same way if there are posters on PCOS they will be reading. Once you read it keeps you informed and at least you know that there is something like this" (Ama).*

Ajo who was a graduate had this to say:

> *"There is lack of education on PCOS. Because even though am a first degree holder that was the first time I heard of it. We all know of malaria, we all know of fibroid and other stuffs. But that was the very first time I was hearing of PCOS so I think there must be education on it". (Ajo)*

4.6 Cues to Action for PCOS

Cues to action influences health behavior. There were events or people that champion a course to get people to change their behavior. Five (5) categories of cues to action were described.

4.6.1 Fear

Some of the women described their fears with regards to the cost of treatment and also break-ups in relationships with their partners. These fears motivated some participants to seek help.

The quotes below were selected views of participants on fear:

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> *"Hmm.... My fear is always with infertility. Yes! Infertility is the major aspect of it. Women with PCOS hardly conceive. When you are having PCOS, the chances are very limited. My biggest fear is my fiancée walking out on this relationship and that is why I came to the hospital for medical care." (Esi).*

> *"Our sex life is no longer enjoyable again, because sometimes I feel pain around my vaginal area and abdomen. Sometimes too the mood swing is so bad that I end up sleeping in the guest room more nights. I know it's affecting the marriage one way or the other. Hmm my biggest fear is my husband cheating on me and also giving birth outside our marriage. I had to do something quickly to save my marriage and that is why I came to see the gynaecologist for care. " (Ada).*

Afia, one of the participants who is not married described her fears with the quote below:

> *"The whole thing doesn't come out well and I can't get pregnant, I have never been pregnant in my life. And I am not married* but I have this fears that I will not make it if I get married, I wouldn't be able to have children. *I run to the hospital to save my future from collapsing. I want to be a mother"* (Afia)

4.6.2 Domestic conflicts

Some of the participants of the study indicated that domestic conflict was a cue to action that influenced a change in their behaviour.

Three selected excerpts of participants revealed the following;

> *"After two years of marriage without issue, my own mother started giving me pressure upon pressure to get pregnant even though my husband was not bothering me with pregnancy. I had a big fight with her one day in my house and when she left that's where I got a wake- up call to visit the hospital''* (Akos).

> *"The church doesn't come directly but there are some utterances that when you hear you see it's like all these prophetic thing. And when they start praying they ask for those believing God for a child, even if you don't own up someone will come and ask you to own up. And the days that you don't go to church when they see you, they will be saying*

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that "eeeeiii last week do you know how church was they were sharing babies, they were doing this and that" and indirectly it kills." (Adwoa).

"Now as I am married, people are asking why for a number of years I have not conceived and I can't give the reason. My husband and I are on separation for a year and half now all because I am not getting pregnant for him." (Yaa).

Akua, who is not married but in a relationship had this to say,:

*"Hmm.... My fiancée told me to get pregnant first before he can marry me even though we are almost through with marriage preparations."(*Akua*).*

4.6.3 Personal conversion

Some participants also expressed that their cues to action for PCOS was through personal conversion. They desired action and faith to change their lives and live a healthy lifestyle.

"Way back in senior high school I used to have a regular cycle but all of a sudden I can't tell what happened or how it started and I started bleeding for about 6 months. We did home remedies and the bleeding was on and off. I visited prayer camps and later a friend told me to seek medical care since someone from her church went through same but now doing okay." (Afia)

*"I have not been having my regular menses as a woman and even if it comes I will bleed for over one month and it will not stop. Sometimes too when am there I have this kind of abdominal pain thinking that I will have my menses but it will not come and other things. A whole lot so I really thought of it that I have to see a doctor, I was thinking it's a normal thing until I went to the hospital."(*Ama*).*

Ada was also with the view on cues to action with the quote below:

"I never had my menses when I was in the university for my four years study and I have never been pregnant in my life. I spoke to my cousin about it recently and I realised I needed a serious help or else if I get married, I wouldn't be able to have children."

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4.6.4 Media

Most of the participants also identified the media as a cue to action that influenced their health belief. The media sources were television, radio and internet. This was shown in the statements below:

> *"Honestly myself I didn't know about it, I was ignorant until I listened about it on Adom FM program". (*Adowa*).*

> *"It was one day when I was watching "Todays woman" on GTV. I went to school and came back around 4 o'clock when I tuned in to my television I saw a discussion on PCOS. It was there that I sat and listened to it and I realized that I was going through the same problem. "(*Aba*).*

On the other hand Akua shared her views with this quote:

> *"I had started growing hairs on my chest and belly and some small beard (scattered beard) (laugh). So I started reading about the female reproductive system on the internet and on Facebook. Through my continuous reading online made I realized it could be a sign of PCOS. "(*Akua)

4.7 Perceived Susceptibility to PCOS

This refers to an individual's perceived threat to sickness or disease and also risk or the chances of contracting the condition. Majority of the participants viewed that lifestyle and genetics pose serious danger to their health regarding PCOS. Perceived susceptibility to PCOS was described in two ways:

4.7.1 Lifestyle

Someone's way of living; the things that a person or particular group of people usually do has an impact on their health status.

One of the participants opined that out of ignorance people eat anything that came their way without recourse to the effects to human health.

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"It's because of ignorance so we don't know or we don't really check our diet. Mostly, there are a lot of things that we are not supposed to eat but because we don't know we are ignorant of it. We take everything which affects our health." (Esi)

Two other selected participants shared their views on lifestyle as followed:

"I think that is it and I do believe is about lifestyle. Sure you have to check a healthy lifestyle, what you take in. As in the food you eat, exercising and other stuffs" (Ada)

"Ladies who do not do exercise and are overweight.... then those who also drink alcohol and smoke are also at risk of getting PCOS." (Aba)

4.7.2 Genetics

Majority of the participants observed that heredity posed serious risk to PCOS. Below are selected quotes from participants:

"I think hereditary or genetic or lifestyle can also cause PCOS. I have a sister who also has PCOS. She also has plenty hair on her body" (Ajo)

"...from what I was told it means that sometimes majority of them is hereditary. Maybe your mum once had it, your grandmother once had it so you carry that genes in you. (Ama)

Which affects you, so it's not a matter of you being an individual; it's a matter of you carrying it from birth from your mum or grandmother. So it's hereditary as well" (Akosua)

"From the little I have read and the little I have heard from my doctor it's usually genetic and probably sometimes the lifestyle we have" (Abena)

"Well I think genetically once you have it the thing is there, it might be hiding but it is there. Maybe your life style triggered it. This same question I asked my gynecologist because I was surprised" (Akua)

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

4.8 Perceived Severity of PCOS

Perceived Severity is the belief that contracting the disease/condition or leaving it untreated may result in serious health consequences. The participants viewed that PCOS posed a threat/causes of infertility and broken homes through divorce.

4.8.1 Infertility

Majority of the participants stated that PCOS causes infertility. Participants opined that PCOS affects the ovaries which plays major role in the fertility of women. These were evidenced in quotes of selected participants:

> *"Well just as I was told it affects fertility because if it affects your ovaries, your ovaries are supposed to release the eggs. And if the eggs are affected, how can you give birth? There's no way so it's very severe and PCOS will link to infertility definitely" (Esi)*
>
> *I think one of the causes of infertility is PCOS. Because this PCOS affects your reproductive organ and that brings about infertility" (Ama).*
>
> *"Yes...most ladies with PCOS have fertility issues and it is this fertility issue that helps in discovering that we have PCOS. So yes it has a link. That's why am saying as a lady you don't need to wait till you want to get pregnant before you check and you find out that you have PCOS." (Afia)*
>
> *"I realize many infertility issues are linked to this sickness. So the doctors must really help the Ghanaian females." (Ajo)*

4.8.2 Broken homes/ Divorce

Broken homes/divorce was reported as a form of perceived severity to PCOS. Most of the participants observed that married women suffering from PCOS have problems in their marriages like broken homes and divorce.

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Once a man gets to know that his woman has PCOS, the man is likely to go in for another woman who is fertile and can give birth. Participants shared their observations in the following quotes:

> *"Well the benefit is you know when you get married and later you realize you have this you cannot produce offspring, it creates problems in the marriage" (Afia).*
>
> *"Some people's marriages have also been destroyed. Some have also had mental problems. Some people also move from one church to the other, malams and herbal clinics. It made a lot of people confused especially women looking for children." (Ada).*
>
> *"It breaks many marriages. So I think broken marriages and broken homes are as a result of PCOS especially when they get to know of it, especially the men think my woman cannot conceive so I have to just leave her or go for another one and let her be." (Ama)*

One of the participants shared her own experience as follows:

> *"Yes it's true. Many ladies or many women or many homes have been broken due to this issue. I can say for a fact because me personally I just got married somewhere December, I tell you what I am going through, it takes the word of God and the people who came to witness our wedding else by now I wouldn't know." (Abena)*

4.9 Psycho-social experience about PCOS

Psycho-social experience was a main theme that emerged from the data analysis. Participants of the study shared their emotional state about PCOS.

Participants get depressed with series of questions on when they will get pregnant and give birth, as well as suffer from sleeplessness and mood swing. The women described their psychosocial experiences in three ways:

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

4.9.1 Depression, Anxiety and Stress

This is the feeling of severe despondency and dejection causing significant impairment in daily activities including sleeplessness, feeling down, having loss of interest or pleasure in daily activities.

Participants of the study expressed their views on depression and anxiety as follows:

> *"...the only time I became so anxious is when my period delayed and it wasn't pregnancy too. That was when I got so down." (Akosua)*

> *"With the sleeplessness I still don't know how to manage it. I try as much as possible to meditate, pray, you doze off a bit and then you come back. And the mood swings too I try as much as possible to let the people around me know that I am not tin a good mood" (Abena)*

> *".....people are going to ask you when you are giving birth, why you have refused to give birth. All these things will come in but you have to try and block most of it, hmm it is not easy."(Ama)*

Another participant shared her view on psycho-social effects of PCOS on women:

> *"Everything you do is you've been married for years; you want to have a child and a whole lot. So at the end of the day you will be stressed out, sometimes you may even end up walking on the road and you'll be talking to yourself. You can't sleep....it is not a sweet life to enjoy."(Ada)*

Stress has become a daily experience as quoted by one of the participants:

> *"Yes, very very much. Stress in particular, seems like it has become part and parcel of me which I go through almost every single day."(Adwoa)*

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4.9.2 Stigma

Stigma was a mark of disgrace associated with a particular circumstance, quality or person. Women living with PCOS are being stigmatised in various ways evidenced in the following excerpts from the participants.

> *"You know this disease, when you go and tell your husband that you have this disease and you know the misconception about you. So the person knows that yes I have it but she doesn't want the stigma or let people know that she has it." (Afia)*

> *"You will be in town and more people don't have hairs on their face or legs and then they are good to go. So you keep asking yourself why all these hairs. And when they see you they go like are you a man? Meanwhile they see you have breasts and all the female features but they still insist they want to know because the hair on your face and legs is too much." (Adoma)*

4.9.3 Low self-esteem

Low self-esteem was one of the aspects of psychosocial experiences reported. Participants expressed self-feeling about PCOS including feeling inferior, inability to mingle with family members for fear of questions regarding pregnancy and child birth.

Below are typical quotes from the participants:

> *Hmm… actually it makes me feel very inferior, I don't feel good. Even in my family they don't even see me as a normal person, so it's not good. My only issue is the menses acne on my face and the hair I just don't like the hair on my face, chin, back, legs. I just don't like it!" (Adoma)*

> *"It hasn't been easy, emotionally, mentally, everything. There are days even when there are family meetings I don't want to go because an aunty or an uncle will see me and go like ever since you got married what have you and your husband been doing? It hasn't been easy at all but we still believe God." (Akua)*

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Ama recounted that she cannot even discuss it with other people. Evident in the quote below.

> *"...but I think once you have not suffered or endured PCOS you wouldn't know because nobody talks about it. Even myself, I don't talk about it to other people not even my friends because this is one thing I am fighting and I don't think I will like people to know."(Ama)*

4.10 Summary of findings

The study findings revealed that these career women were between the ages of 20– 45 years and were all educated. The main themes for this study were as follow: knowledge on PCOS, perceived benefit to PCOS treatment, perceived barriers to PCOS treatment, cues to actions for PCOS, perceived susceptibility to PCOS, perceived severity of PCOS, and psycho-social experience about PCOS.

The outcomes on knowledge on PCOS revealed that all of the participants had little or no knowledge about their condition. On the other hand, the majority of the participants opined that ignorance on PCOS was a reason why most women do not seek regular medical check-ups and as such are diagnosed late in the hospitals. Most of the women believed that, any woman who feels good and not sick has no reason to go for any medical screening. The majority of the women did not know about PCOS until they had health problems and went to the hospital only to be diagnosed. Even though the majority of these women got to know about the condition after being diagnosed of PCOS, some of them also got to know about this disorder through friends, relatives and the internet.

These women also mentioned adopting healthier lifestyle and having regular medical check-ups as their way of maximizing their perceived benefit of PCOS treatment. All the participants

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suggested that the perceived benefit of seeking early treatment for PCOS was to prevent complications which eventually results in peace and harmony in relationships/marriages. Regular medical check-ups, appropriate advice and treatment were given to manage the condition and also keep track of the treatment progress. Additionally, the participants revealed that healthy diet such as fruits, vegetables, low carbohydrates and sugary beverages recommended by their doctor helps to control PCOS. These women also expressed the significant role their families and friends played in their PCOS treatment. They claimed the emotional, financial and physical support given to them gave the hope that they would enjoy the benefit of PCOS treatment by achieving the goal of getting pregnant.

Furthermore, all the participants admitted that the major perceived barrier to PCOS treatment was the high cost involved. Participants testified that the cost of abdominal pelvic scans, expensive medications, hormonal test and other laboratory investigations made it difficult for some of these women to go for treatment. Majority of the participants observed that, the lack of education or information on PCOS compared to other conditions such as malaria also contributed to the low level of knowledge on the condition.

Moreover, the desired action and faith of the participants to change their lives and live a healthy lifestyle was through cues to action for PCOS. Most of the women expressed fear as one of the cues to action that motivated them to seek medical help. Fear of break-ups in relationships/marriages with their partners and domestic conflicts influenced their healthy lifestyle. Some of the women also articulated that their cues to action for PCOS were through personal conversion.

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

The result indicated that the participants suggested that lifestyle and genetics posed serious danger to their health regarding their perceived susceptibility to PCOS. Most of these women opined that ignorance made some women live a particular lifestyle which was unhealthy and this later had a great impact on their health status. The participants also observed that heredity also posed serious risk to PCOS.

Furthermore, the results revealed that PCOS was a potential cause of infertility among most women. Most women perceived that once you are diagnosed of having PCOS, your ovaries are affected, hence the inability to conceive and give birth. Majority of the participants also observed that women suffering from PCOS have problems in their marriages like broken homes and divorce due to infertility. Most women experienced broken homes because husbands of some women believe that their wives are infertile and exhausted in seeking treatment.

Lastly, with regards to the psycho-social experience about PCOS, some of the participants claimed they actually go through a lot of depression, anxiety, stress, feeling dejected and stigmatized. Others also found it difficult to integrate themselves with the community or society, families and friends due to PCOS. The participants got depressed with series of questions from family and friends on when they were getting pregnant and giving birth. Such societal pressure made these women suffer from sleeplessness and mood swings. Also, it was shown that women living with PCOS are being stigmatized.

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CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Introduction

This chapter presents the discussion of the findings of the study in relation to the literature that was reviewed. The discussion was organized according to the main themes and subthemes that were presented in chapter four. The areas discussed are knowledge on PCOS, perceived benefits to PCOS treatment, perceived barrier to PCOS, cues to action for PCOS, perceived susceptibility to PCOS, perceived severity of PCOS and psycho-social experience about PCOS.

5.1 Knowledge on Career women living with PCOS

Findings of the current study revealed that majority of the career women living with PCOS had no knowledge about their illness. Majority of the participants got to know about PCOS after being diagnosed of PCOS in the hospitals. Most of the career women live with the condition since their youthful ages without having knowledge of PCOS though they exhibited and presented some of the prominent signs and symptoms. This was in agreement with previous studies conducted (Nicholson, et al., 2010; Bates & Legro, 2012; West, et al., 2014).

Moreover, the current study revealed that majority of the career women living with PCOS did not have knowledge on how they got PCOS. Some of them were taken by surprise as others were of the view that their illness occurred as a result of spiritual attacks, general infection or fibroid, while some believed that it is hereditary.

However, previous literature indicated that PCOS is a hormonal imbalance, thus affect the ovaries and other organs of these where "anovulation, hyperandrogenism, obesity, diabetes, and infertility" are often seen (Barron, 2004; Glueck, et al., 2005; Nicholson, et al., 2010;Bates & Legro, 2012; West et al., 2014).

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

Furthermore, findings of the current study showed that the career women reported to the hospital on account of irregular menses, missed menses, abdominal pains and years of marriage without children before they were told of PCOS. These women were open to discuss about their condition, seek solutions as to how they were eager to get treated and conceive.

Majority of these women still stated that their source of knowledge on PCOS was during a visit to the hospital for their medical check-ups. A few of the participants indicated their sources of knowledge were from internet and friends, yet they still remained confused and elusive. These findings corroborated with previous research which suggested that primary health care physicians are the initial source of information about PCOS (Sills, Perloe, Tucker, Kaplan, Genton, & Schattman, 2013) to women mainly seeking PCOS information from specialists and the internet (Sills et al., 2013;Ching, Burke, & Stuckey, 2007).

This means that career women and women in general are living in darkness and are prone to PCOS at any time. This calls for the Ministry of Health and its agencies to formulate health education policies and empower health units to improve information dissemination on PCOS and other diseases in Ghana especially in the primary health care setting.

The findings also imply that most career women got PCOS without having knowledge until they were told by health professionals about the condition during hospital visits. This however is critical for the career women and women in general, because once the women visited the hospital because of dangerous signs and symptoms being noticed, PCOS complications have set in already. On the other hand, the public health education units of the Ghana Health service must be strengthened in order to create awareness of PCOS to the vulnerable public especially women for early detection and treatment.

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5.2 Perceived benefits to PCOS treatment

The findings of the present study indicated that majority of the participants stated that seeking early treatment prevents their illness from being complicated. This brings peace in the family and victims of PCOS can get early advice from doctors on what to do. This finding corroborates with a previous study by Hart and Doherty (2015).

It is believed that patients with PCOS are twice more likely to be admitted to hospital in comparison to patients without PCOS. Therefore, accurate and early diagnosis of PCOS is necessary not only to prevent future health comorbidities but also reduce financial cost and burden of the women (Kamangar et al., 2015).

It was also showed that women with PCOS prefer to visit the hospital frequently for their safety which benefits them for future references because of their regular check-ups. However, some of the women think that visiting their doctors for medical check-ups every month will improve their health outcome to help them conceive.

All the participants indicated that exercise was a good thing to do as it keeps one fit, helps people lose weight which is important in PCOS management. Daily exercise has been one of the preventive strategies in managing women with PCOS. In addition, participants also observed that fruits and vegetables, low carbohydrates and very low-calorie diet in-take helps control PCOS.

A previous study has revealed that lifestyle modifications including dietary changes, increased exercise and weight loss are appropriate first line interventions for many women with PCOS (Bates & Legro, 2013). As such, patients with PCOS are fortified to involve in healthy dietary and physical activity behaviors to develop cardinal PCOS symptoms and metabolic status (Moran et al., 2009; Lujan, 2017; Cussons et al., 2005). Similarly, a study conducted in the USA

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also indicated that women were highly perceived to have more benefits in their daily physical exercises since it was believed to have reduced weight and enhance their functional status than women who were interviewed about their social interactions (Thomson, Buckley & Brinkworth, 2016).

The current study revealed that almost all the career women expected to get tested positive for pregnancy. This is due to the expectation from the society and cultural norms that married women need to have children. Moreover a woman in her fertile age and working needs to have children for the society to acknowledge them in social gatherings.

Meanwhile, other career women may expect that if the test is negative, they will just leave it in God's hands because they believe that all hope is not lost. Most career women' expectations sometimes become positive once they start early treatment and regular medical check-ups with their specialist. Most of the women have positive minds towards treatment outcomes though it may be otherwise. These however, eventually relieve stress and anxiety of most of the career women living PCOS (Thomson, Buckley & Brinkworth, 2016).

5.3 Perceived barriers to PCOS treatment

Barriers are important because even when participants know the benefits that come with accessing health care with PCOS, then the main setback could be barriers. However, the current study reported that financial constraints are a main barrier in accessing care. Regular medical check-ups involve money spending, though some of the participants still admitted that they are not able to visit the hospital regularly because of high cost of scans, treatments and other laboratory investigations.

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

This finding is in congruence with other studies which indicated that career women living with PCOS struggle financially to undergo their treatment modalities (Omokanye et al., 2015). The perceived cost of treatment is a major problem affecting career women living with PCOS because the frequent hospital visits to seek for treatment affect the women. Some of the women become defaulters and non-attendance for their medication and decide to seek for herbal medicines due to the high cost of treatment (Omokanye et al., 2015). . From the current study it was observed that the cost of treatment was range from GH650 – GH1500 which is equivalent to $130 - $300 for a month.

The current study revealed that majority of the career women opined ignorance about PCOS. Thus this could be a reason why most women are not seeking regular medical check-ups. They felt once they are not sick there is no need for any medical screening. However, other participants viewed that PCOS will not cause mortality and felt adamant about their own health as reported in the current study. This finding was in line with a study on "polycystic ovary syndrome in globalizing India which concluded that such leviathan prevalence of PCOS owes its existence to the ignorance and lack of awareness among youngsters ''(Pathak & Nichter, 2015).

5.4 Cues to action for women living with PCOS

Career women reported in this current study that early detection of PCOS and following medical advice of doctors prevent serious complications of PCOS. Most of the women believe that periodic check-ups solve these hormonal imbalances.

Early and regular medical check-ups will help solve infertility because they will be educated about their diet and weight management. Most women naturally do not like visiting the hospital for self-medical check-up; thus are likely to get complications of PCOS at the later days since severe signs and symptoms of PCOS is been manifested.

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Furthermore, the current study also revealed that majority of the women with PCOS need regular medical screening so that any abnormality in one's body is detected early and treatment given. Though some of the women still do not lose the hope of getting treated, once one seeks for regular screening and gets early treatment will reduce the risk of getting PCOS.

However, others believe that medical screening should start from the junior high school level and senior high school level, because that is where they start having their first menstrual cycle from and then they continue to the University level. Others opined that PCOS medical screening should be done on women before marriage. Although most women have fear for going to the hospital for regular screening due to high medical cost. The high cost is a big problem faced with women suffering from PCOS who may like to go for self-screening regularly.

5.5 Perceived susceptibility to women living with PCOS

Individual and group health status affect the way of living; the things that a person or a particular group of people usually do have an impact on their health status. Participants reported in the present study that they need to exercise all the time, eat a healthy diet and perform regular medical check-ups to help control and improve their health. Most of the women do not understand why some of their colleagues intend to live a sedentary lifestyle, instead of doing regular exercises to improve their health status. This could attribute to either lack of information or education on PCOS or ignorance as earlier reported. Considering the above finding, it is, however, arguable that a qualitative study conducted in India on polycystic ovary syndrome in globalizing India reported similar about the women emerging lifestyle indicating a sedentary lifestyle behavior such as consuming fatty and junk food always (Pathak & Nichter, 2015).

Furthermore, the current study revealed that heredity is one of the causes of career women PCOS while others are of the view that their PCOS is as a result of spiritual attacks by witches and

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God's making. These may be a perception harbored by the women, which may lead to depression and uncertainties among these women. This current study finding is similar to Pathak and Nichter (2015) who found that genetic pre-disposition and socio-psychological stress contribute to the onset of PCOS.

5.6 Perceived severity of women living with PCOS

Majority of the participants in the present study stated that PCOS causes infertility. The career women opined that PCOS affects the ovaries which plays major role in fertility in women. Though the women believe that their illness could be a cause to their infertility, they however, seek remedies from hospitals, faith healers, and prophets especially those who taught it's a spiritually oriented. In a similar view, a study conducted by Perelman School of Medicine at the University of Pennsylvania in 2017 found that PCOS is the most common cause of infertility affecting 9% to 18% of women around the world. Some studies also revealed that women with PCOS are more worried and dissatisfied with life because of being infertile and the societal stigma that goes with it (Gibson-Helm, Lucas, Boyle & Teede, 2014; Gibson-Helm, Teede, Dunaif & Dokras, 2016; Hadjiconstantinou et al., 2017 & National Institutes of Health, 2017).

Moreover, the present study found that majority of the career women are suffering from PCOS which causes family problems in their marriages like broken homes and divorce. Similarly, many couples divorce their partners due to their economic exhaustiveness and being psychologically distressed about their women's PCOS disease (Omokanye et al., 2015). Once a man gets to know that his wife has PCOS and infertile, then the man is likely to divorce her and marry a woman who is fertile and can give birth.

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5.7 Psycho-social experience of women living with PCOS

The career women reported that they have feeling of severe despondency and dejection among their families, friends and the community as well causing significant impairment in their daily activities. This was expressed in the form of sleeplessness, feeling down, having loss of interest or pleasure in daily activities and feeling isolated. Most women in the global world associate infertility with different psychological disorders such as sadness, anger, depression, hurt, embarrassment and humiliation amongst couples (Barry, Kuczmierczyk & Hardiman, 2011; Bazarganipour et al., 2013, Yvette, 2008). This lowers the self-esteem of women and makes them feel inferior amongst their peers, social events, workplaces and the community in which they live.

Career women living with PCOS have been reported in this current study as being stigmatized because of being infertile and hirsutism. Stigma is a mark of disgrace associated with a particular circumstance, quality or person. So these women feel dejected and isolated. The feelings of these women related to stigma were perceived as being influenced by cultural norms such as infertility because certain cultural backgrounds in particular have problems of women with infertility (Marmarà & Hubbard, 2017) while some cultural attitudes of the society influences the way in which people feel about hirsutism as an African woman. Quite apart, married women are marred by the stigma of infertility and unmarried ones have fear for future infertility (Marmarà & Hubbard, 2017; Sharma & Mishra, 2018).

However, some of the career women reported that they had certain feelings and experiences about PCOS such as feeling inferior, unable to socialize with family members and friends for fear of questioning regarding pregnancy and child birth. Similarly, infertile couples in Pakistan

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found that women experience anxiety, depression, lower self-esteem, spousal and domestic violence and loneliness (Marmarà, Marmar, & Hubbard, 2017).

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CHAPTER SIX

SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter highlights the summary of the research work and the conclusions drawn based on the findings of the study. This chapter also elaborates on the implications of the study for nursing practice and nursing research. The limitations of the study have also been clearly stated and the chapter ends with recommendations based on the key findings of the study.

6.1 Summary

Polycystic ovarian syndrome (PCOS) is the most common endocrine disorder among women of reproductive age. At any age, PCOS can be devastating to women, especially during the reproductive years because PCOS is the leading cause of female infertility. The study therefore explored the experiences of career women living with PCOS in Accra metropolis. The Health Belief Model (2002) was used as an organizing framework for this study and specific objectives were formulated consistent with the constructs of the model. The HBM which was used as the conceptual framework to guide the present research was clearly utilized as the objectives of the study were consistent with its constructs. The model gave clear direction in carrying out this study. Literature review was then conducted on PCOS to enhance understanding of the phenomenon and enrich the discussion of the study findings.

This qualitative research adopted a descriptive exploratory design. Thirteen (13) career women with PCOS who met the inclusion criteria in the Accra metropolis were purposively selected. Data was collected by means of face-to-face interviews using a semi structured interview guide.

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

Each interview lasted forty-five minutes to 1 hour. Audio tape recordings were done with permission from the participants. The interviews were transcribed verbatim and analyzed using thematic content analysis. The findings resulted in six main themes and twenty-four subthemes. The study revealed that the women were aged between 27 and 40 years. All of the participants were Christians.

The study revealed that majority of the participants attributed PCOS to imbalance in the hormones of women, irregular menses and that PCOS affects the ovaries of women. The majority (10) of the participants did not know about PCOS.

Findings of the study revealed that the major source of knowledge on PCOS is the hospital staff. Participants also gained knowledge about PCOS after being diagnosed of PCOS. However, participants' knowledge level was rated to be low. It was clearly stated by majority of the participants that there is no available information on PCOS in the rural and urban areas of Ghana unlike other conditions that are known to people, like Malaria and HIV/AIDS.

All thirteen (13) participants admitted that the major barrier to accessing care is financial constraints. Participants testified of high cost of scans, high cost of medications and other laboratory investigations. Participants opined that ignorance of PCOS is a reason why women are not seeking regular medical check-ups; once women feel alright and not sick, there is no need for any medical screening of participants.

Majority of the participants observed that women suffering from PCOS have problems in their marriages resulting in broken homes and divorce. There is also the feeling of despondency and dejection causing significant impairment in the daily activities of women with PCOS. This was expressed in the form of sleeplessness, feeling down, having loss of interest or pleasure in daily activities. Participants expressed self-feeling about PCOS including feeling of inferior, inability

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to socialize with family members for fear of being asked questions regarding pregnancy and child birth.

Participants also observed that prevention and control of PCOS is early detection through regular medical check-up and screening from the adolescence to adulthood. Participants also stated avoidance of too much carbohydrate and fats, and taking enough vegetables and performing regular exercise as key in preventing and controlling PCOS.

6.2 Implications

The findings of this study brought to light some implications that need to be addressed. These implications are geared towards nursing practice, nursing research and nursing education.

6.2.1 Nursing practice

The study established that awareness level of PCOS among women is very low. In the light of this, it calls for intensive in-service training of nurses and midwives on PCOS to equip nurses and midwives with needed knowledge and skills. The print and electronic media should be utilized by health professionals for awareness and public education to demystify PCOS. The psycho-social threats as established in the data gathered should be addressed by having a psychologist in the health care facilities so women could be counseled once diagnosed with PCOS.

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6.2.2 Nursing research

Nurses play a pivotal role in health care delivery but their knowledge needs to be enriched with current research evidence. Nurses cannot only rely on the findings of other professionals for their practice but will have to get engaged in research to inform their practice.

Further research could include the perspectives of men on PCOS. Quite apart, once the current research was based on career women, future researches could include all categories of women as a whole. This will help comprehend the phenomenon in a broader sense.

During the literature review for this present study, there was scanty research evidence on PCOS in Ghana necessitating the need for more research in this area.

6.2.3 Nursing education

Primary health care is the initial source of information about PCOS .The study acknowledged that there is lack of information on PCOS among health care professionals and it is important for policy formulation for curriculum development in training of nurses and midwives.

In the course of training the following should be ensured in the curriculum; Pathophysiology, signs & symptoms, management, prevention of PCOS .This will improve their knowledge and skills in caring for these women. Also the policy should ensure that the health beliefs of these women respected and necessary recommended preventive behavior designed for them through training. Nurses and Midwives are patience advocate and as such during training they should indulge in public health education on all social platforms to help prevent PCOS in the community as a whole.

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6.3 Conclusion

Polycystic ovarian syndrome (PCOS) affects women physically and psychologically. Globally, it has become a concern because of its infertility nature. Experiences of career women psychologically, perceive that they are infertile and will not conceive, thus resulting in many career women suffering from depression and lack of self-confidence.

The participants observed that the major barrier to accessing care is financial constraints. Participants testified of high cost of ultrasound, high cost of medications and laboratory investigations such as hormonal profile. Ignorance on PCOS such as complications were also opined as a reason why women are not seeking regular medical check-ups.

There is a need for public education on PCOS to create awareness and training of health professionals on the screening, diagnosis, treatment and psychological support of women diagnosed with PCOS in Ghana.

6.4 Limitations of the study

The non-involvement of other women who are not career women but are also diagnosed of PCOS was a major limitation. This is because their perspectives would have been important to allow for a conclusion that will represent all women with PCOS.

6.5 Recommendations

Based on the study results, the following recommendations were made to the Ministry of Health (MOH), Ministry of Gender, Children and Social Protection, Ghana Health Service (GHS) and nursing and midwifery researchers.

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6.5.1 Ministry of Health (MOH)

The Ministry of Health (MOH) should:

1. Establish national PCOS fund headed by the sector Minister to provide financial support to women with PCOS especially adolescents.
2. Include the diagnoses and treatment of PCOS in the National Health Insurance Scheme (NHIS) to reduce the burden of the cost of treatment.
3. Develop a policy framework for functional counseling of women with PCOS in all health facilities in Ghana.
4. Formulate policies that would ensure that nursing staff and doctors play a greater role in supporting couples with PCOS problems as well as providing them with the necessary information they must know.

6.5.2 Ministry of Gender, Children and Social Protection

The Ministry of Gender, Children and Social Protection should:

1. Collaborate with various stakeholders to demystify the preconceived perception and stigma attached to PCOS, especially women living with PCOS through regular health education.
2. Support MOH and the GHS on the awareness creation drive to help increase the knowledge of adolescents and women about PCOS to enable women understand the importance of regular medical check-ups and screening.
3. Involve males so that they can support their spouses/partners with PCOS in the community.

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6.5.3 Ghana Health Service and Christian Health Association of Ghana

The Ghana Health Service (GHS) and the Christian Health Association of Ghana (CHAG) should:

1. Institute a comprehensive education on PCOS screening, diagnoses, treatment and remove barriers to accessing health in order to promote women's health from adolescence to adulthood.
2. Develop a structured in-service training program for current and prospective nurses and midwives about PCOS screening, management strategies and care.

6.5.4 Nursing and Midwifery Researchers

1. Nursing researchers could also explore the knowledge and attitude of nurses, midwives and doctors towards clients with PCOS. This will enable MOH and GHS fashion out the mode and level of training that these professional will need to promote optional care for clients with PCOS

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Appendix A: NMIMR-IRB CONSENT FORM

NMIMR-IRB CONSENT FORM

Title: Experiences of career women living with polycystic ovarian syndrome in Osu Klottey District

Principal Investigator: Cindy Ofori- Appiah

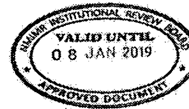
Address: C/O School of Nursing and Midwifery

University of Ghana

P.O.Box LG43 Legon

General Information about Research

I would like to seek your consent on your experiences of living with polycystic ovarian syndrome in the Greater Accra Regional Hospital. The information collected will provide additional information to women who are living with PCOS. It will also inform the general public about the experiences women with PCOS go through to help better appreciate and understand these women. I would engage you in a conversation for 30 – 45minutes. The conversation will be in English and Twi. There will be no right or wrong answer and therefore your experiences are considered to be unique and credible. You are expected to ask questions any time during the conversation. The interview will concern the experiences you go through living with PCOS, the perceived benefits and barriers, the cues of action influencing your health behavior towards medical care. You will be required to sign a consent form to before the interview begins, if you agree to partake in the study. The interview will be tape recorded for academic study with your concern.



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Possible Risks and Discomforts

The study will expose you to no harm. However, if during the interview if you become emotional, the researcher will direct you to a specialist counselor for emotional support (**Mrs. Mavis Amoako 0244517261**).

Possible Benefits

There are no direct benefits to you as a participant. However your response will be used to educate other women in the future.

Confidentiality

The interview will be audio taped, however, you, will be asked not to mention your name during the interview. **Pseudonyms** will be used instead of your real name. **All identifiers in the data collected will be removed.** The information will be locked up in a safe accessible to only the researcher and her supervisors who oversees the work.

Compensation

You will be given a bottle of mineral with pie after the interview for your participation.

Voluntary Participation and Right to Leave the Research

Your participation in this study is entirely voluntary .You have every right to withdraw from the study at any time during the interview process without any sanctions. You have the right to refuse to answer any question which makes you uncomfortable.

2

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Contacts for Additional Information

If you need more clarification about this research or in case of any unforeseen challenges, you can contact me or any of my supervisors.

Cindy Ofori - Appiah (Researcher)

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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

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4

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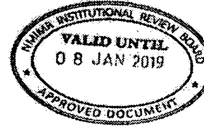
Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.ug.edu.gh



5

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VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title ***(Experience of career women living with polycystic ovarian syndrome in Accra metropolis)*** has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

______________________ ______________________________

Date Name and signature or mark of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

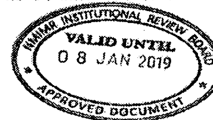
______________________ ______________________________

Date Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

______________________ ______________________________

Date Name Signature of Person Who Obtained Consent



6

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Appendix B: Data Collection Instruments

Data Collection Instruments

Interview Guide

Introduction

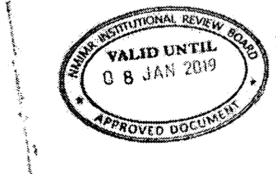
I am Cindy Ofori -Appiah, MPhil nursing student at the University of Ghana, Legon. My research topic is on: Experience of career women living with polycystic ovarian syndrome in Osu Klottey District. This interview is for academic purpose so you are encouraged to answer the questions without any hesitation. Also, you are permitted to ask for clarification to any of the questions that is not clear to you. You may also skip any of the questions if you are not comfortable to respond without any sanctions. Your responses will be kept confidential. You will not be identified with any of your responses. Thank you

BACKGROUND CHARACTERISTICS

1. How old are you? ....
2. Sex ....
3. Marital Status.................................
4. Religion.......................................
5. Employment Status............................ Specify....................
6. Level of education............................

Knowledge on PCOS

1. What do you know about PCOS?
2. Which part of the body does it affect?
3. How did you become a patient of PCOS?
4. What were you told about PCOS?
5. What are the signs and symptoms of PCOS?
6. Do you know about the various ways to prevent PCOS?



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7. If yes, How? Or mention some ways to prevent it?
8. In your opinion, what do you think brings about PCOS?
9. What is your view concerning the fact that there is lack of awareness on PCOS
10. When should a woman go for PCOS screening and why?
11. What are some of the factors that could increase knowledge on PCOS?

Perceived Benefits

12. What in your view are the benefits of seeking early treatment of PCOS?
13. What is the most important behavior in treating PCOS? *(Is it medical checkups, exercise, losing weight, taking medicines, living a stress-free life?)*
14. What are the benefits in exercising- with regards to PCOS?
15. What will be your reaction during treatment, if your pregnancy results show negative or positive?
16. How frequently do you visit your gynecologist?

Perceived barrier.

17. How do you feel about the costs involved in treating PCOS?
18. Is it difficult for you to get funding to finance your medical bills all the time?
19. What do you think are the barriers preventing women from seeking medical care?
20. In what ways can these barriers be overcome?

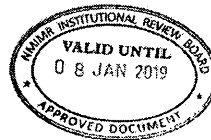
Cues to action

21. What do you think are the reasons why women do not go for periodic gynecological check - ups?

22. What is your view on having periodic gynecological check -up yourself?

23. Who do you think encourages women to go for PCOS screening?

2



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HEALTH BELIEFS OF CAREER WOMEN LIVING WITH PCOS

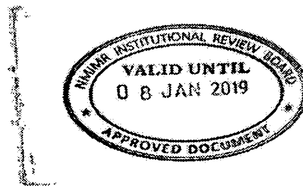
Perceived susceptibility

24. What do you think makes a person susceptible to PCOS?
25. What makes you see yourself as susceptible to PCOS?

Perceive severity

26. Can you describe PCOS in terms of its severity?
27. What link exists between PCOS and Infertility rate of women in the country?

Thank You.



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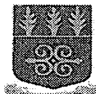
APPENDIX: C Ethical Clearance

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH
Established 1979A Constituent of the College of Health Sciences

University of Ghana

INSTITUTIONAL REVIEW BOARD



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E-mail: nirb@noguchi.ug.edu.gh
Telex No: 2556 UGL GH

Post Office Box LG 581
Legon, Accra
Ghana

My Ref. No: DF.22
Your Ref. No:

9th January, 2019

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824 **IRB 00001276**

NMIMR-IRB CPN 040/18-19 **IORG 0000908**

On 9th January, 2019, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) conducted expedited review and approved your protocol titled:

TITLE OF PROTOCOL : **Experiences of career women living with polycystic ovarian syndrome in Osu Klottey District**

PRINCIPAL INVESTIGATOR : **Ofori-Appiah Cindy MPhil Cand.**

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 8th January, 2020. You are to submit annual reports for continuing review.

Signature of Chair: ....
Mrs. Chris Dadzie
(NMIMR – IRB, Chair)

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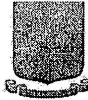
APPENDIX: D Introductory letters



UNIVERSITY OF GHANA
DEPARTMENT OF MENTAL HEALTH
SCHOOL OF NURSING

Ref. No.: SON/A.12 October 18, 2018

The Chairman
NMIMR - IRB
P.O. Box LG 581
Univ. of Ghana
Legon.

Dear Sir/Madam,

LETTER OF INTRODUCTION

This is to introduce to you Ofori-Appiah Cindy, an MPhil second year student of the School of Nursing and Midwifery.

The Scientific Review Committee of the School has approved the thesis topic: **"Experiences of Career Women Living with Polycystic Ovarian Syndrome in Accra Metropolis".**

I hope that the Institutional Review Board will consider the proposal to enable her collect data.

Counting on your usual co-operation

Thank you.

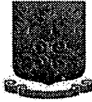
Yours faithfully,

Dr. Florence Naab
Head, Dept. of Maternal and Child Health

COLLEGE OF HEALTH SCIENCES
• P. O. Box LG 43, Legon, Accra, Ghana. • Telephone: +233 (0) 302 513 250 / 0289 531 213

University of Ghana http://ugspace.ug.edu.gh

APPENDIX: E Introductory Letter to Ghana Health Service



UNIVERSITY OF GHANA
DEPARTMENT OF MATERNAL AND CHILD HEALTH
SCHOOL OF NURSING

Ref. No.:....SON/A.12.............................. October 18, 2018

The Chairperson
Institutional Review Board
Ghana Health Service
Accra

Dear Sir/Madam,

LETTER OF INTRODUCTION

This is to introduce to you Ofori-Appiah Cindy, an MPhil second year student of the School of Nursing and Midwifery.

The Scientific Review Committee of the School has approved the thesis topic: **"Experiences of Career Women Living with Polycystic Ovarian Syndrome in Accra Metropolis"**.

I hope that the Institutional Review Board will consider the proposal to enable her collect data.

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Thank you.

Yours faithfully,

Dr. Florence Naab
Head, Dept. of Maternal and Child Health

COLLEGE OF HEALTH SCIENCES

• P. O. Box LG 43, Legon, Accra, Ghana. • Telephone: +233 (0) 302 513 250 / 0289 531 213
• Email: mch.son@chs.ug.edu.gh • Website: www.nursing.ug.edu.gh

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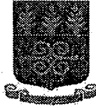
APPENDIX: F Introductory Letter to Greater Accra Regional Hospital



UNIVERSITY OF GHANA
DEPARTMENT OF MATERNAL AND CHILD HEALTH
SCHOOL OF NURSING

Ref. No.: SON/A.12 November 8, 2018

The Medical Director
Greater Accra Regional Hospital
Accra

Dear Sir/Madam,

LETTER OF INTRODUCTION

This is to introduce to you Ofori-Appiah Cindy, an MPhil second year student of the School of Nursing and Midwifery.

The Scientific Review Committee of the School has approved the thesis topic: **"Experiences of Career Women Living with Polycystic Ovarian Syndrome in Accra Metropolis".**

I would be grateful if you could give her the necessary support to enable her collect data for her thesis.

Counting on your usual co-operation

Thank you.

Yours faithfully,

Dr. Florence Naab
Head, Dept. of Maternal and Child Health

COLLEGE OF HEALTH SCIENCES
• P.O. Box LG 43, Legon, Accra, Ghana. • Telephone: +233 (0) 302 513 250 / 0289 531 213
• Email: mch.son@chs.ug.edu.gh • Website: www.nursing.ug.edu.gh

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APPENDIX G: GENERAL PROFILE OF PARTICIPANTS

Participant	Age	Marital Status	Religion	Occupation	Level of education
Akosua	31yrs	Single	Christian	Civil servant	First degree
Esi	31yrs	Married	Christian	Teacher	First degree
Adwoa	36yrs	Separated	Christian	Banker	MBA
Ada	35yrs	Married	Christian	Loan officer	HND
Akua	36yrs	Married	Christian	marketer	First degree
Abena	27yrs	Single	Christian	Insurance Broker	First degree
Ama	31yrs	Married	Christian	Nurse	First degree
Afia	26yrs	Single	Christian	Teacher	First degree
Yaa	29yrs	????	Christian	Social worker	HND
Adoma	27yrs	single	Christian	Banker	First degree
Aba	48yrs	Married	Christian	Teacher	First degree
Naa	39yrs	Single	christian	Executive assistant	Diploma

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Ajo	40yrs	Married	Jehovah Witness	Physiotherapist	First degree