EXPLORING THE INFORMATION BEHAVIOUR OF ADOLESCENT FEMALES SUFFERING FROM PRIMARY DYSMENORRHEA IN GIWA LOCAL GOVERNMENT AREA OF KADUNA STATE

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DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
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SEPTEMBER, 2018

DECLARATION

I, **AMINA MUHAMMAD,** with Registration Number **P16EDLS8265** hereby declare that this dissertation entitled "Exploring the Information Behaviour of Adolescent Females Suffering fromPrimary Dysmenorrhea in Giwa Local Government Area of Kaduna State" is a product of my research work and is original. Authors whose works were used in this dissertation have been duly acknowledged.

Amina Muhammad, _____ _____

Signature Date

CERTIFICATION

This dissertation entitled "Exploring the Information Behaviour of Adolescent Females Suffering From Primary Dysmenorrhea in Giwa Local Government, Kaduna State" meets the requirements for the award of Master's Degree in Library and Information Science, from the Department of Library and Information Science of Ahmadu Bello University, and approved for its contribution to knowledge and literary presentation.

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DEDICATION

This work is dedicated to my family and to all women who have been victims of painful dysmenorrhea.

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ABSTRACT

The studyexplored the information behaviour of adolescent females suffering from dysmenorrhea; the objectives of the study were achieved by formulation of and answering five (5) research questions. Some of the research questions sought to ascertain what are the information needs of adolescent females suffering from dysmenorrhea in Giwa Local Government, what information sources do adolescent females suffering from dysmenorrhea in Giwa Local Government consult to manage the ailment,what factors are responsible for adolescent females suffering from dysmenorrhea not accessing sources of information they feel it's important. To answer the research questions a qualitative methodology was adopted. The methodology was chosen because it provides a framework for uncovering phenomenon from the point of view of the actors. It also provided a systematic approach to data collection, analysis, and synthesis of data leading to the emergence of categories, and themes. In-depth interview was used to collect data from 15 rural female adolescents in Giwa Local Government Area of Kaduna State of Northern Nigeria who reported dysmenorrhea symptoms. Data were analyzed using thematic analysis process, because it enabled the researcher to identify, analyze and interpret patterns within the data collected from participants. The research findings revealed amongst others that adolescent females need information to overcome discomforts, psychological disorder and inability to perform customary responsibilities associated with dysmenorrheapreferred sources of information are primarily interpersonal (family and friends). Factors responsible for not consulting health practitioners for dysmenorrhea information include inhibition (shyness, secretive and embarrassment,), financial barrier and lack of husband permission. Therefore, recommendations were made which includesthe need forgovernment and health professionals to establish a synergistic relationship capable of providing a special information dissemination programme to the deserved beneficiaries; with the aim objective of reducing shyness on issues related to dysmenorrhea. In designing the dysmenorrhea information programme, health information professionals and other stakeholders should include adult males among their target audiences in order to educate them on the consequences and avenues for seeking help in relation to the ailment.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Dysmenorrhea is a painful cramp in the lower abdomen during menstruation; it is a common health ailment that affects adolescent females (Kamatenesi, Oryem & Olwa 2007). Two typologies of dysmenorrhea are discerned in the literature: Primary and secondary (Akinnubi, 2016). The latter is associated with pelvic pain exclusive of pelvic pathology prior to and/or for the duration of menstruation and may not have a specific cause; and the former, is menstrual ache associated with pelvic organ diseases, which could be years after the start of the menstrual function (Dawood 1985; Campbell & McGrath, 1999). Primary dysmenorrhea occurs naturally within adolescent stage, while secondary dysmenorrhea is more frequent in older women (Hacker, Gambone, Hobel, Hacker and Moore, 2010).

Primary dysmenorrhea which is the focus of this study "occurs with each menstrual cycle or with occasional cycles (Durain, 2004). Symptoms of primary dysmenorrhea include: pain in the lower back, vomiting, weakness, low energy, headache, and diarrhea (Hacker, et al, 2010). It is also associated with depression, excitability, irritability, nervousness, inability to concentrate, tiredness, headache, insomnia, hypersomnia, swelling of face (Agrawal 2010; Wong, 2011; Gumanga & Kwame-Aryee, 2012; Iliyasu, Galadanci, Abubakar, Ismail, and Aliyu, 2012). For many females, primary dysmenorrhea is so severe, which incapacitate them for 1–3 days during each menstrual cycle (Joshi, Kural, Agrawal, Noor, Patil, 2014). As a consequence, primary dysmenorrhea is a source of significant concern (Adegbite, Omolaso, Seriki, Akpabio, 2016).

In particular, primary dysmenorrhea is a major cause of absenteeism from school, work and reduced productivity (Akinnubi, 2016; Liong, 2006; Joshi, Kural, Agrawal, Noor, Patil, 2014). The missed work caused by dysmenorrhea is associated with economic loss. For instance, as far back as year 2000 a study conducted in the United States concluded that about $300 millions were lost per day due to problems associated with dysmenorrhea (Liong, 2006; Gordley, Lemasters, Simpson & Yiin, 2000). More so, studies concluded that primary dysmenorrhea have negative effect on quality of life (Joshi, Kural, Agrawal, Noor, Patil, 2014).

Unfortunately, despite the negative consequences of dysmenorrhea, most adolescent females, particularly in developing countries who suffer from dysmenorrhea do not seek professional help; instead they rely on self-care (Lu, 2010). For most females that rely on self-care, particularly those residents in rural areas of developing nations, there is the danger of living with unrelieved pain that undermines their quality of life and wellbeing. This is against the backdrop that the skills and technology to relieve severe pain are advancing (Gagua, Besarion, Gagua, 2013) for improving wellbeing, quality of life, and overall health. Even though, quality of life and health is a subjective phenomenon (Bubien, Knotts-Dolson, Plumb, Kay, 1996; Joshi, Kural, Agrawal, Noor, & Patil, 2014), the World Health Organization defined health as being not only the absence of disease and infirmity but also the presence of physical, mental, and social well-being (Testa, & Simonson, 1996).

Therefore, to improve the quality of life of adolescent females suffering from dysmenorrhea scholars from different backgrounds have undertaken studies with a focus of reducing the negative consequences associated with the aliment. Most of these studies were conducted mainly from medical perspectives (Banikarim, Chacko &Kelder,2000; Patal, et al, 2006; Dawood, 2008). While the medical perspective has helped in better

understanding of dysmenorrhea and has improved dysmenorrhea management options.Unfortunately, studies about the social epistemic dynamics of dysmenorrhea is rare or non-existence particularly in the context of self-care in developing countries. As a result, very little is known about the information behaviors of adolescent females in their search for dysmenorrhea self-care best treatment options. In order to improve dysmenorrhea self-care treatment options among adolescent females, there is the compelling need to uncover dysmenorrhea information behaviors. A potentially useful approach of determining dysmenorrhea information behaviors is social epistemic approach. This approach offers a frame for understandings the knowledge and beliefs of individuals in the context of communal setting. It is concerned with how individuals construct knowledge about their reality (Abdullahi, Senekal, Schalekamp, Amzat and Saliman, 2012). It provides a lens for understanding individual everyday experiences with regard to how knowledge is constructed in social context (Crotty, 1998; Rorty, 1999).

Drawing from the social epistemic approach, this study reports the result of a study that investigateddysmenorrhea self-care management strategies with particular attention to dysmenorrhea information needs behaviors, and dysmenorrhea information source behaviors by adolescent females suffering from dysmenorrhea in the context of a rural setting in Nigeria. The objective is to improve dysmenorrhea self-care management strategies. The result has been proven effective in uncovering information behaviors for information systems design requirements.

1.2 Statement of the Problem

Dysmenorrhea information help the sufferers of dysmenorrhea to have the knowledge about the onset, duration, and characteristics of pain, and also helps women to make an informed choice in terms of patients understanding and compliance with treatment (Guylaine & Odette, 2005). Information provides a summary of up-to-date

evidence regarding the diagnosis, investigations, and medical and surgical management of dysmenorrhea (Pembe & Ndolele, 2011). In spite of the critical importance of information in the management of dysmenorrhea, dysmenorrhea affects 43% to 90% adolescent females worldwide (Wang, et al, 2004; Gumanga, & Kwame-Aryee, 2012; Wijesiri, & Suresh, 2013).

Dysmenorrhea is an ailment that has diverse consequences: Psychological (Wong, 2011; Gumanga & Kwame-Aryee, 2012), Social (Iliyasu, Galadanci, Abubakar, Ismail, and Aliyu, 2012), and Physical (Agarwal, 2010). The psychological consequences are depression, excitability, irritability, inability to concentrate on work, and nervousness. The psychological consequences occur both on the day before and after the stoppage of menstruation (Wong, 2011; Gumanga and Kwame-Aryee, 2012).

Other than psychological problems, females suffering from dysmenorrhea experience social and physical challenges. For instances, psychological problem leads to social problems. Depression is a health condition that is affecting social relation (Iliyasu, Galadanci, Abubakar, Ismail, and Aliyu, 2012). While physical consequences present before and during day of menstruation are lethargy and tiredness. Some females are encountered with insomnia, hypersomnia, fullness and tenderness of breasts, feeling of heaviness in the lower abdomen, pain and swelling in the ankle and knee joints, and swelling of face (Agrawal, 2010).

Therefore, to improve the quality of life of adolescent females suffering from dysmenorrhea, scholars have undertaken studies with a focus of reducing the negative consequences associated with the ailment. Most of these studies were conducted mainly from medical perspective (Banikarim, Chacko & Kelder, 2000; Patal, et al, 2006; Dawood, 2008). While the medical perspective has helped in better understanding of dysmenorrhea, and has improved dysmenorrhea management treatment options;

unfortunately many adolescent females particularly in northern Nigeria are suffering from dysmenorrhea and even though they understand that help exists, but are not predisposed to accessing facilities that offer help (Marjoribanks, Proctor, &Derks, 2010; Wijesiri, & Suresh, 2013). However, we are yet to have a better understanding of the information behaviour of adolescent females in regards to primary dysmenorrhea. Not having an understanding of dysmenorrhea information behaviour is not healthy particularly in developing countries. This is essentially because we cannot say where adolescent females suffering from dysmenorrhea access and use information to reduce the complexity associated with the ailment.

This study adopted Chatman's Theory of Normative Behaviour as a theoretical framework, because the theory is relevant in explaining everyday reality of people who share a similar cultural space. Therefore, the theory explained the information behaviour of adolescent females suffering from dysmenorrhea. The objective is to improve dysmenorrhea self-care management strategies with particular attention to dysmenorrhea information needs behaviors, and dysmenorrhea information source behaviors. Chatman Theory of Normative Behaviour has four constructs: Social norms, Worldview, Social types and Information behaviour. (See Chapter 2).

1.3 Research Questions

This study addresses the following questions:

1. What are the information needs of adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area?
2. What information sources do adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area consult to manage the ailment?

3. What sources of information do adolescent females suffering fromprimary dysmenorrhea in Giwa Local Government Area are aware of but refuse to access?
4. What factors are responsible for adolescent females suffering from primary dysmenorrhea not accessing sources of information they feel are important?
5. How does Chatman's Theory of Normative Behaviour explains the information behaviour of adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area?

1.4 Objectives of the Study

The main objective of this study was to determine the information behaviour.Specifically, information needs and information sources of adolescent females suffering from dysmenorrhea in Giwa Local Government Area of Kaduna State. The study was set to achieve the following objectives:

1. To investigate the information needs of adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area
2. Identify sources of information adolescents' females suffering from primary dysmenorrhea in Giwa Local Government Area consult to manage the ailment.
3. Find out the sources of information adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area are aware of but refuse to access.
4. To identify the factors responsible for adolescent females suffering from primarydysmenorrhea not accessing sources of information they feel is important.
5. To explain Chatman's Theory of Normative Behaviour in relation to how adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area access and apply information to manage the ailments.

1.5 Significance of the Study

The studywould help to increase our knowledge and understanding on the information needs and information sources of adolescent females suffering from primary dysmenorrhea, as well as the factors that prevent them from not consulting some sources of information despite the benefits associated with them. Therefore, determining the dysmenorrhea information needs and information sources is a prerequisite for government and health care providers in planning interventions that seek to improve the management of dysmenorrhea among adolescent females.

The study would also inform the health care information providers, government agencies, policy makers and other stakeholders responsible for dissemination of dysmenorrhea information about possible actions adolescent females take in terms of seeking help. This would go a long way in helping them to take effective action to develop a model that would serve as a guide towards identifying better practices, strategies and new approaches to dysmenorrhea information among adolescent females.

The study applies the Chatman's Theory of Normative Behavior to better understand the information behaviour of adolescent females suffering from primary dysmenorrhea.This would contribute to the growing body of knowledge, specifically in the area of studies utilizing the Theory of Normative Behavior to study health related problems.

The study would communicate the information needs and information sources of adolescent females suffering from primary dysmenorrhea. This may be useful to health care providers in Kaduna State in planning health programs that target on adolescent females. This study could improve the quality of life and productivity of adolescent females in Giwa Local Government Area of Kaduna State since the most effective information needs and information sources will be identified. Furthermore, the study

would complement the efforts of other researchers, and also serve as a point of reference for future studies.

1.6 Scope of the Study

The scope of the study was restricted to only adolescent females experiencing dysmenorrhea in Giwa Local Government Area, Kaduna State in Northern Nigeria. The study covers the information needs and information behaviour of adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area of Kaduna State.

1.7 Operational Definition of Terms

The following terms are defined operationally as used in the study:

Adolescent: this has to do withfemales suffering from dysmenorrhea from the age of 15-24.

Dysmenorrhea: Dysmenorrhea simply means menstrual pain or a sharp painful cramp in the lower abdomen during menstruation.

Information Behaviour: encompasses the information needs and information sources of adolescent females suffering from dysmenorrhea.

Primary dysmenorrhea: Is defined as a cramping pain that is not associated with macroscopic pelvic pathology.

References

Abdullahi, A.A., Senekal, A., Schalekamp, C.V., Amzat, J., Saliman, T. (2012). Contemporary Discourses in Qualitative Research: Lessons for Health Research in Nigeria. *Journal of Public Health and Epidemiology, 3*(5): 204-209.

Adegbite, O. A., Omolaso, B., Seriki, S. A., Akpabio, N. (2016). Prevalence of Dysmenorrhea and Menstrual Bleeding in Relation to Packed Cell Volume among Female Students of Bingham University. *International Invention Journal of Medicine and Medical Sciences*, 3(2), p. 21-31. Available from http://internationalinventjournals.org /journals /IIJMMS

Agrawal A.K. (2010). A Study of Dysmenorrhea During Menstruation in Adolescent Girls: *IndianJ Community Med*.;35:59–164.

Akinnubi, C. F. (2016). Influence of Dysmenorrhea and Menorrhagia on Academic Performance Among Female Students in Tertiary Institutions in Ondo State Nigeria. doi:10.5430/wjss.v3n2p34

Banikarim, C., Chacko, M.R. & Kelder, S.H. (2000). Prevalence and impact of Dysmenorrhoea on Hispanic Female Adolescents: *Archives of Pediatrics and Adolescent Medicine, 154*, 1226-1229.

Bubien, R.S, Knotts-Dolson, S.M., Plumb, V.J. & Kay, G.N. (1996). Effect of RadioFrequency Catheter Ablation on Health-Related Quality of Life and activities of Daily Living in Patients with Recurrent Arrhythmias. *Circulation,94*:1585–91

Campbell M. A., & McGrath P J. (1999). Non-Pharmacologic Strategies Used by Adolescents for the Management of Menstrual Discomfort. *Clin J Pain*., *15*, 313–20. http://dx.doi.org/ 10.1097/00002508-199912000-00008

Chatman, E.A. (2000). Theory of Normative Behavior. *Journal of the American Society for Information Science. Vol. 23 P. 233-45.*

Crotty, M. (1998). *TheFoundations of Social Research: Meaning and Perspective in the Research Process*. London: Sage Publications.

Dawood M.Y. (2008). Overall Approach to the Management of Dysmenorrhea: Department of Obstetrics and Gynecology, Baystate Medical Center, Tufts University School of Medicine, Springfield, Massachusetts, USA.

Dawood, M.Y. (1985). Dysmenorrhoea. *Journal of Reproductive Medicine, 30*, 154-167.

Durain, D. (2004). Primary Dysmenorrhea: Assessment and Management Update. *Journal of Midwifery & Women's Health, 49*, 520-528.

Gagua, T.; Besarion, T.; Gagua, D. (2013). Pain and Quality of Life of Adolescents with Primary Dysmenorrhea in Tbilisi, Georgia, 2008. Cross sectional study. *Revista Colombiana de Obstetricia y Ginecología, 64*(2). 154-162

Gordley, L.B., Lemasters, G., Simpson, S.R. & Yiin, J.H. (2000). Menstrual Disordersand Occupational, Stress, and Racial Factors Among Military Personnel. *Journal of Educational and Environment Medicine, 42*(9), 871-881

Gumanga, S.K. & Kwame-Aryee, R. (2012). Prevalence and Severity of Dysmenorrhoea Among Some Adolescent Girls in a Secondary School in Accra, Ghana.*Postgrad Med J Ghana*, 1:1-6.

Guylaine, L. & Odette, P. (2005). Primary Dysmenorrhea Consensus Guideline: *Journal of Obstetrics and Gynaecolgy Canada. 169*

Hacker, N.F., Gambone, J.C., Hobel, C.J., Hacker, J. & Moore, S. (2010). *Essentials of Obstetrics and Gynecology* (5th ed.). Philadelphia, PA: Saunders/Elsevier; 256–7.

Iliyasu, Z., Galadanci, H.S., Abubakar, I.S., Ismail, A.O. & Aliyu, M.H. (2012). Menstrual Patterns and Gynecologic Morbidity Among University Students in Kano, Nigeria.*J Pediatr Adolesc Gynecol*, *25*:401-406.

Joshi, T., Kural, M., Agrawal, D. P., Noor, N. N., Patil, A., (2014). Primary Dysmenorrhea and its Effect on Quality of Life in Young Girls. *International Journal of Medical Science and Public Health,4*(3), 312-318.

Kamatenesi-Mugisha, M., Oryem-Origa, H. & Olwa-Odyek (2007). Medicinal Plants Used in Some Gynecological Morbidity Ailments in Western Uganda. *African Journal of Ecology, 45*(1), 34-40.

Liong, C.J. (2006). The Association of Primary Dysmenorrhea with the Perception of Pain, Work Stress and Lifestyles of Nurses. University of Hong Kong, Pokfulam, Hong Kong SAR. Retrieved from http://dx.doi.org/ 10. 535 3/th_b4501182

Lu, I. (2010). Dysmenorrhea and Related Factors in Taiwanese Adolescent Girls. Ph.D Dissertation. The University of Texas At Austin, 2010, 175 pages; 3417470

Marjoribanks J, Proctor M, Farquhar C, & Derks RS. (2010). Nonsteroidal Anti Inflammatory Drugs for Dysmenorrhoea. In *Cochrane Database of Systematic Reviews*. John Wiley & Sons, Ltd; doi:10.1002/14651858.CD001751.pub2

Patel, V., Tanksale, V., Sahasrabhojanee, M., Gupte, S. & Nevrekar, P. (2006). TheBurden and Determinants of Dysmenorrhea: A Population-Based Survey of 2262 women inGoa, India BJOG. *An International Journal of Obstetrics and Gynecology, 113*, 453 463.

Pembe, AB. & Ndolele, NT. (2011). Dysmenorrhea and Coping Strategies Among Secondary School Adolescents in Ilala District, Tanzania. *East Africa V Public Health, 8(3) 232-6.*

Rorty, R. (1999). *Philosophy and Social Hope*. London: Penguin.

Spink, A., & Cole, C. (2004). A Human Information Behavior Approach to the Philosophy of Information. *Library Trends, 52*(3), 373–380.

Testa, M.A. & Simonson, D.C. (1996). Assessment of Quality-of-Life Outcomes. *N Engl J Med, 334*:835–40

Wijesiri, H.S.M.S.K. & Suresh, T.S. (2013). Knowledge and Attitudes Towards Dysmenorrhea Among Adolescent Girls in an Urban School in Sri-Lanka.*Nurs Health Sci.*, 15:58-64.

Wong, L.P. (2011). Attitudes Towards Dysmenorrhoea, Impact and Treatment Seeking Among Adolescent Girls: A Rural School-based Survey.*Aust J Rural Health*, 19:218 223.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The focus of this Chapter is to review previous studies that are related to the present study in order to compare both studies. Hence, the Chapter describes the study's underlying philosophical assumptions, as well as various concepts, including paradigms, meta-theory and theories relevant to the tasks of research. The theoretical framework guiding the research which is Chatman Theory of Normative Behaviour is explained. The Chapter is arranged thematically as follows:

2.2 Research Paradigm: Interpretive Paradigm

2.3 Social Constructionism

2.4 Social Epistemology

2.5 Human Information Behaviour

2.6 Theory of Normative Behaviour

2.7 Previous Studies that AdoptedTheory of Normative Behaviour

2.8 Summary of the Review

2.2 Research Paradigm: Interpretive Paradigm

A research is guided within a scholarly paradigm. Paradigm helps scholars with the lens of enquiry. It is defined as a set of basic beliefs representing the holders' (or researchers') worldview (Guba and Lincoln, 1994). It defines the nature of the world and the relationship between individuals and the surrounding world. Several research paradigms exist positivisms and interpretative. Positivisms paradigm believes in an objective reality. To base inquiry on this approach means employing what Lee & Baskerville (2003) refers to as "hypothetico-deductive" logic, proceeding from general hypotheses to particulars with the objective of explaining the "real word". Interpretative

on the contrary, believes that a theory will always belong to the specific setting and circumstances where and under which it was developed. This approach of qualitative inquiry does not strive for universal laws as it recognizes that the subjective meaning of people's experiences is what matters and shape reality (Lee & Baskerville, 2003). This research paradigm guided the researcher to capture the subjective meaning of experiences of adolescent females suffering from dysmenorrhea.

An interpretive philosophy seems to be a highly appropriate approach to use here, in order to give an account of the study that captures the views of adolescent females suffering from dysmenorrhea, and in order to learn how the sufferers communicate and interact with information to manage the ailment. Interpretive research paradigm is that knowledge is gained, or at least filtered, through social constructions such as language, consciousness, and shared meanings (Klein & Myers, 1999). In addition to the emphasis on the socially constructed nature of reality, interpretive research acknowledges the intimate relationship between the researcher and what is being explored, and the situational constraints shaping this process.

Furthermore, uniform causal links that can be established in the study of natural science cannot be made in the world of the classroom where teachers and learners construct meaning. Therefore, the role of the scientist in the interpretivist paradigm is to "understand, explain, and demystify social reality through the eyes of different participants" (Cohen, Manion, and Morrison, 2007). Researchers in this paradigm seek to understand and explain social phenomenon rather than predicts. Scholars adapting interpretative paradigm have many option of adapting interpretative, one way is social constructionism.

2.3 Social Constructionism

Social constructionism draws attention to the fact that human experience, including perception is mediated historically, culturally and linguistically. That is, what we perceive and experience is never a direct reflection of environmental conditions but must be understood as a specific reading of those conditions (Willig 2001). Social constructionism believes that a great deal of human life exists as it does due to social and interpersonal influences (Gergen, 1985). The use of a social constructionist metaphor opens the possibility for one to consider the way in which every human being's social, interpersonal reality is constructed through interaction with other human beings and focuses on the influences of social realities on the meaning of people's lives (Burr, 1999; Freedman & Combs, 1996; Gergen, 1999). The metaphors by which we structure our lives have a profound impact on what we perceive and what we do. Adopting a social constructionist worldview offers useful ideas about the 'truth' on how adolescent females suffering from dysmenorrhea construct meanings.

Realities are Socially Constructed. A central tenant of social constructionism is that beliefs, laws, social customs are the products of social interaction (Freedman & Combs 1996). Our shared versions of reality are shaped by the goings-on between people in the course of their everyday lives. Burr, (1995) states that the implication of this is that realities are historically and culturally relative.

Social constructionists place great emphasis on the intersubjective influence of language, family, and culture on the construction of the meanings and metaphors by which we live. From this standpoint, our traditions are sustained by a continuous process of generating meaning together (Burr, 1995). This has important ramifications for how we view the nature of dysmenorrhea ailment. If realities are socially constructed, then the meaning of dysmenorrhea is to be found in the social practices. The social practices of all

life begin, are recreated in the present and eventually end. The ability and ways of interpreting things and people differ in race and region as well as the cultural practice, and then we say right from the start that there is no universal human nature.

Realities are constituted through Language. Perhaps, the most pervasive impact that the postmodern social constructionist derives from its use of interpretive methodologies based on the model of language and discourse (Sey, 1999). Social constructionism asserts that the language we use constitutes our world and beliefs. It is in language that humanity creates their views of reality. The only worlds that we can know are the worlds we share in language. Furthermore, language is not only a passive receiving of pre-exiting truth but an active, interactive process (Freedman & Combs, 1996). Language organised into discourses has an immense power to shape the way our experience and behaviours in the world. Language contains the basic categories that we use to understand ourselves and affect the way we act as women or as men, and reproduces the way we define our cultural identity (Burman & Parker, 1993). When we talk about any phenomenon (our personality, attitudes, emotions for example), draw on shared meanings. Burman and Parker (1993), state that language produces and constrains meaning. Meaning does not only reside within the individual's head.

Realities are organized and maintained through narratives. If the realities we inhabit are brought forth in the language that we use, they are then kept alive and passed along in the narratives we live tell (Freedman & Combs 1996). In effect, we identify ourselves through narration (Gergen, 1999). A narrative help person makes sense of their experiences such as joy and sadness. People live according to these narratives (Morgan, 2000). In view of this, the researcher explored how adolescent females suffering from dysmenorrhea make sense of dysmenorrhea information.

There are no essential truths in social constructionist worldview, since one cannot objectively know reality all we can do is to interpret and explore experience. There are many possible experiential realities (Freedman & Combs, 1996; Gergen, 1999). Knowledge is seen as value laden and subjective and hence objective neutrality is impossible. Social constructionism is critical that knowledge is taken for granted, as knowledge is sustained through social practices which are constantly shifting (Doan, 1997). The world within which we exist is governed by institutions that are socially constructed by its members over many generations (Henning, 2005). These institutions are our society or culture, and they establish the beliefs, practices, customs, and words that direct our behaviour and give expression to our experiences (Henning, 2005). Reality is subjective as we view it through the lenses bestowed on us by culture (Henning, 2005).

A social constructionist is therefore interested in the normative or grand narratives that are formed by and in turn influence people and against which people measure themselves. It is partly through identifying the dominant discourse prevailing in our society and challenging them that new meaning can emerge (Rapmund, 1996). This leads to explore the information behaviour of adolescent females suffering from dysmenorrhea from social epistemic approach. This approach offers a frame for understandings the knowledge and beliefs of individuals in the context of communal setting.

2.4 Social Epistemology

Social epistemology offers a frame for exploring the ways and the extent to which knowledge and practices are social. It is concerned with how individuals construct knowledge about their reality (Kusch, 2010). This definition indicates that social epistemology studies the processes by which society as a whole seeks to achieve an understanding relation to the total environment- physical, psychological, and intellectual. This approach will help in understanding the social nature of knowledge in a communal

setting. Knowledge is always embedded in some social collectivity and is subject to cultural assumptions, practices, and power relations operating within that communal setting. Therefore, this will explore the information behaviors of adolescent females in their search for dysmenorrhea self-care best treatment options.

2.5 Human Information Behavior

Information Behavior (HIB) is conceptualized as "the totality of human behaviour in relation to sources and channels of information, including both active and passive information seeking and information use" (Wilson, 2002). HIB is focused on understanding the behavior of people as they interrelate with information. Drawing from the conceptualization of HIB, dysmenorrhea information behavior is described as: how females *need*, *seek*, *search*, *select*, and *make sense* of information to respond to challenges associated with the ailment. It also encompasses how females *share* information, how they *avoid*, *resist*, *use*, and/or discard information in response to the challenges associated with the ailment. Two components of IB are discussed in this study: information need, and information sources.

Information need is conceptualized as gap which acts as a barrier to reaching a desired goal (Savolainen, 2006). Drawing from Savolainen definition, dysmenorrhea information need is defined in terms of females identifying a gap in their state of health, wellbeing and quality of life as a result of dysmenorrhea. Dysmenorrhea information need activates females' desire for a better understanding of their situations. In this sense, identification of dysmenorrhea information need is an important step towards identifying strategies and skills for reducing the negative consequences associated with dysmenorrhea for improving quality of life and wellbeing. For decades, scholars have stressed the benefits of identifying health information needs noting that it has helped patients in coping with health problems (Freimuth et al., 1989; Marshall, 1993). For

example, females suffering from dysmenorrhea may identify the need for information and consciously seek for information to gain better understandings of their state of health.

Closely related to the concept of information need is the notion of information sources which is defined as "information channels" (Spink & Cole, 2001). In this sense, dysmenorrhea information sources are sources for females which come in many different forms: print sources, electronic sources, and interpersonal sources. Electronic sources comprise online and offline resources. Print sources include leaflets, books, newspapers, magazines, and other printed sources. Interpersonal sources comprise orthodox health professionals, traditional unorthodox health professionals, family and friends. There are several theories that are authorized in understanding human information behaviour. One of the theories is Chatman's Theory of Normative Behaviour.

2.5 Theory of Normative Behaviour

The Theory of Normative Behaviour (TNB) by Chatman explains the common or routine events that characterize the everyday reality of people who share a similar cultural space. TNB attempts to address how social expectations and behaviour affect information practice (Burnett, Besant, & Chatman, 2001). The Theory of Normative Behaviour constitutes four constructs: social norms, worldview, social types and information practice.

Social norms: refers to a sense of rightness and wrongness in social appearances within a small world; Small world is defined as a social group in which "mutual opinions and concerns are reflected by its members and in which the interests and activities of individual members are largely determined by the normative influences of the small world as a whole" (Chatman, 1999). Social norms, consists of the "standards with which members of a social world comply in order to exhibit desirable expressions of public behaviour" (Chatman, 2000). These are guidelines, often implicit, which structure and

standardize behaviour. Social norms are the 'matter of everyday life,' these indicate that social norms play a prominent role in holding a small world together. Although done through an element of control, it allows members of a small world to have a sense of order and balance. Even though the boundaries of that world are set by social norms, most members feel disinclined to cross them (Chatman, 2000).

Worldview: is a comprehensive philosophy that shapes a body of beliefs about human life. "Is a system of shared experiences that provides an outlook or point of view" (Pendleton & Chatman, 1998). Chatman (2000) explains that worldview includes language, values, meaning, symbols—all those things that members of a group jointly hold to be of importance and things deemed trivial or unimportant. In turn, this results in the production of common customs and understandings of similar experiences. One's worldview "can remain [the same] throughout one's lifetime, reinforced by the small world one inhabits, or [it] may change as the small world is expanded, contracted, or otherwise altered" (Jaeger & Thompson, 2004). The value of having a worldview is that it gives a collective approach to the same value as they enter a person's awareness. It is the learning of perception in concert with others that alerts members to be conscious of those things that they ought to know.

Social types: a system of generalizations about people, their roles, and the typical behaviour associated with those roles (Pendleton & Chatman, 1998; Chatman, 2000; Burnett, Besant, & Chatman, 2001). Through the creation of social types, members of a group gain sensible clues to the ways in which to behave, converse, and share information. Social typification may be a recursive process; these generalized, classified behaviours may "give that person a certain signature, which defines what role that person plays in his social world" (Chatman, 2000).

Pendleton & Chatman (1998) extended the concept of social type to include a commonsense system in which to create a typology of persons based on predictable behaviours. In turn, these behaviours give that person a certain signature, which defines what role that person plays in his social world. For example, one can be social type called 'student', 'parent', 'liar' and so forth.

Information behaviour: It refers to acting or not acting on available information (Chatman, 2000). This can include information use or non-use and information seeking or avoidance. This concept "connotes a broader view of information in the lives of people" (Pendleton & Chatman, 1998,). As Burnett, Jaeger, & Thompson (2008) note, "within specific contexts, information practices—like other day-to-day activities—must be seen as normative". Dervin (1977) raised the issue of "how can you predict information practice?" this implies that to understand information practice, it is necessary to understand the situation that generated the need for information. Another important theorist dealing with the concept of information practice is Wilson (1999) exploring models of information practice: The 'uncertainty', 'project' it creates a model that depicts the various ways to examine information practice inthe light of the information seeking paradigm.

Chatman (2000) suggests five "propositions" that emerge from TNB; these are general statements that describe the relationships among the four primary concepts (social norms, worldview, social types, and information practice). These prepositions can aid subsequent researchers in describing the small worlds of their subjects. Five prepositions emerge from theory of normative behaviour.

- Social norms are standards with which members of a social world comply in order to exhibit desirable expressions of public behaviour.

- Members choose compliance because it allows for a way by which to affirm what is normative for this context at this time.
- World-view is shaped by the normative values that influence how members think about the ways of the world. It is a collective, taken-for-granted attitude that sensitizes members to be responsive to certain events and to ignore others.
- Everyday reality contains a belief that members of a social world do retain attention or interest sufficient enough to influence behaviour. The process of placing persons in ideal categories of lesser or greater quality can be thought of as social typification.
- Human information practice is a construct in which to approach everyday reality and its effect on actions to gain or avoid the possession of information. The choice to decide the appropriate course of action is driven by what members "beliefs are necessary to support a normative way of life.

2.6 Previous Studies that AdoptedTheory of Normative Behaviour

Scholars have applied Chatman's (2000) TNB to study how individuals interact with information in a virtual world (Burnett and Nocasian, 2008). Using the four concepts from Chatman's (2000) TNB, Burnett and Nocasian examined a print-based virtual community that interacted in the pages of the Romanian MagazineFormula As. The authors considered readers of Formula As to be a small-world group. The magazine published letters from its readers, who sought practical information on many aspects of life, including traditional Romanian medicine, Romanian cultural tradition, Romanians viewed from abroad, emigration, and so on.

The findings of Burnett and Nocasian (2008) indicate worldview of the Formula As Small World is, to some extent, a matter of editorial policy and choice; certainly the editors establish the basic categories into which the letters they publish are organized.

However, beyond such editorial direction, the Small World of the magazine is unified by its readers' shared linguistic and cultural background: Formula As is published in Romanian and is explicitly targeted at a Romanian audience, whether at home or abroad. The Social Norms of the Formula As Small World depends for its very existence on a specific set of such public behaviours, as well as a strong belief in the accuracy and reliability of the information offered by others (Burnett and Nocasian, 2008).

The concept of Social Types refers to the ways in which individuals are perceived and labeled within a Small World. In the Formula As Small World, social typing takes place in three primary ways. First, certain individuals - particularly Sanziana Pop, the magazine's editor - are consistently typed in specific ways; second, the magazine itself is consistently anthropomorphized, referred to as an active agent or character within the Small World; third, the readers of the magazine are commonly typecast into a single group of people whose similarities are more significant than their differences. The concept of Information practice in the Formula As Small World share a specific set of interests that are reflected in the titles of the magazine's sections, including "Health," sections - and in others - support ongoing information-seeking and exchange for the Formula As community.

However, the acceptability of information is not just a matter of who it comes from - a function, that is, of social type - it is largely a matter of how it is presented, a matter of normative information practice. Burnett and Nocasian (2008).

Musa (2013) applied Chatman's (2000) TNB to study the social and cultural factors in resistance to polio immunization information in Kano. The goal is to provide fresh and enhanced insights into the phenomena of resistance to polio immunization information. These insights may guide future actions by public or private agencies charged with providing access to polio-specific information on immunizations and the

ultimate elimination of polio in Kano State. Using the constructionist view of reality and Chatman's (2000) TNB, the following questions were raised: What are the reasons for resistance to polio immunization information in Kano State, Nigeria, and how do these compare to those identified by Renne (2010) in Zaria, Kaduna State, northern region of Nigeria? How does Chatman's (2000) theory of normative behaviour and her perspective on social norms, worldview, social type, and information practice explain resistance to polio immunization information in Kano State, Nigeria? What human information practices exist that are associated with resistance to polio immunization information in Kano State, Nigeria? The researcher adopted content analysis method; this study adopted a system for coding and identifying themes from the selected published content relevant to the reasons for resistance to polio immunization information in Kano State. According to Elo & Kynga (2008), themes in content analysis can explain a phenomenon or build a model.

The findings of Musa (2013) indicate the social and cultural factors relevant to polio information resistance in Kano as follows: suspicion of Western nations; they placed polio as a lower health priority; suspicion of the polio vaccines; distrust of the Western health care system; concerns about the administration of polio immunization services; and the negative perception of promoters of polio immunization services. Findings interpreted using Chatman's theory suggest that to have a sustained acceptance of polio immunization information, there must be a change in the manner that information is communicated within the peculiarities of the social norms and worldviews of the discourse groups.

In Kano, the health beliefs of local Kano residents appeared to influence strongly the social norms present at the time of this research. Such beliefs set standards of treating illnesses and accepting orthodox health care services. What follows is an overview of the

conflicts arising between local standards of treatment and accepting orthodox health care services. Conflicts in treatment behaviours or beliefs about cure are partially responsible for the resistance to polio immunization information in Kano.

A study conducted by Landry, (2014) to determine how time pressure and emotion influence people's information behavior when engaging in high stakes decision-making within the home buying domain. Additionally, the study tested Chatman's Theory of Normative Behavior (Chatman, 2000), and the study found that Chatman's Theory of Normative Behavior explains high stakes deciders' information behavior, but demonstrates limitations regarding the "information behavior" aspect of the theory. The following research questions were raised: What extent does the interaction of time pressure and emotion influence people's information behavior when engaged in high stakes decision-making? How do high stakes decision makers experience information when the decision is made under time pressure? How do high stakes decision makers experience information when a decision is emotionally charged? How effectively does Chatman's (2000) Theory of Normative Behavior explain people's information behavior when making high stakes decisions? How do Information Grounds (Fisher, Durrance, & Hinton, 2004) emerge and support people's information behavior when making high stakes decisions? The study used qualitative methodology and conducted 33 semi-structured interviews using a timeline strategy and carried out eight observations with participants from the Seattle, Washington metropolitan area. Participants included homebuyers and home buying stakeholders such as real estate agents, lenders and escrow agents. The study identified two specific information behaviors among findings: information use by proxy and altering one's typical IB. The findings highlight the effectiveness of Chatman's Theory of Normative Behavior for explaining people's information behavior when engaged in high stakes decision-making while pinpointing the

limitations of Chatman's information behavior definition. The study also underscored the supportive nature of deciders' Information Grounds as well as instances in which information behavior went unsupported. The insights and recommendations arising from this study are potential benefits to the field, as systems can be developed to assist people's information behavior when decisions are emotionally charged or when deciders are compelled to make choices under severe time stress.

Another study conducted by Worrall (2015) used the concept of social norms, social type and information behavior derived from the theory of normative behavior to examine the roles digital libraries play, from a social perspective, as boundary objects within and across social worlds, information worlds, and communities. The purpose of the study is to increase understanding of the organizational, cultural, institutional, collaborative, and social contexts of digital libraries, contexts with important effects on users, communities, and information behavior. The following two research questions were raised: what roles do LibraryThing and Goodreads play, as boundary objects, in translation and coherence between the existing social and information worlds they are used within? What roles do LibraryThing and Goodreads play, as boundary objects, in coherence and convergence of new social and information worlds around their use? The researcher employs a case study approach and a mixed methods research design. The study presents findings on the roles that two digital libraries and virtual book club communities, LibraryThing and Goodreads, play in the existing and emergent communities of their users. Findings also identified more use of existing technology as a boundary object in most LibraryThing groups, while using the digital library as an emergent site and technology was more common in many of the Goodreads groups. Many of the Goodreads groups also featured more emergent social norms, often enforced by moderators and active group members. Most of the LibraryThing groups featured more

emergent social types, with greater social ties present. At least two different types of communities appear to exist and be supported: those bounded by common norms and technology, and those bounded by social networks and social ties.

Burnett, Jaeger, & Thompson (2008) applied theory of normative behaviour to study the social aspects of information access. Chatman's collaborators, begins by positing three types of impediments to information access—those being physical (in terms of the physical forms of information, including digital), intellectual (focusing on individual characteristics), and social (as per small world theory). It then documents three instances where ―small worlds supposedly come into contact with each other regarding their notions of information and access to it. In the first, old and new notions of what constitutes ―a library clash over San Francisco's new digitally-equipped public library. In the second, a librarian imbued with ALA freedom of information values was fired by public officials in her tiny Oklahoma town in 1951. In the third, George W. Bush's administration was taken to task for unilaterally taking all kinds of formerly public information out of circulation. Interesting cases all, but this scarcely seems like Elfreda Chatman's ideas concerning small worlds. Using the concept of worldview from Chatman's (2000) TNB, Burnett and Nocasian (2008) demonstrated that a public library consists of two small-world groups: the library staff and the library users.

Drawing on Chatman's (2000) work, Adler (2013) used the TNB as a lens to study gender expression in a small world: Social tagging of transgender-themed books. In other to examine the tagging of transgender-themed books in LibraryThing to provide insight into the significance of folksonomies for information sharing within online communities. The study is to get a general picture of who tags genderqueer and transgender-themed books, why they participate in LibraryThing, and how they view themselves as being part of a community. Questions were written to begin to draw out

patterns and gather data to begin answering questions about whether this community is a small world. This was created using SurveyMonkey. The survey data can be categorized according to the four components of a small world: social norms, worldview, social types, and information practice. The author suggests that the community of people who tag transgender-themed books in LibraryThing is, in fact, a small world. It also indicates that an information practice tagging contributes to a social norm that is vital to the existence of the social network site (SNS), and inscribes and reflects norms of gender expression among members.

2.7 Summary of the Review

In this chapter the difference between philosophical assumptions were explored, positivisms and interpretative research paradigm. The paradigm adopted for the study was interpretative paradigm which believes that the subjective meaning of people's experiences is what matters and shape reality. Social constructionism perspective was explored which believes that a great deal of human life exists as it does due to social and interpersonal influences.

The chapter also discussed Chatman's theory of normative behaviour as a theoretical framework for the research and studies that adopted the theory from variation of field. All the reviewed studies that applied theory of normative behaviour were conducted outside Nigeria except Musa (2013). More so, Musa's (2013) study was conducted to identify the social and cultural factors in the resistance of polio immunization information in Kano. Therefore, this study adopted a qualitative methodology to explore the information behaviour of adolescent females suffering from primary dysmenorrhea in the context of a rural setting in Northern Nigeria.

References

Adler, M. (2013). *Gender Expression in a Small World: Social Tagging of Transgender Themed*Books. Lexington, KY 40506-0224 melissa.adler@uky.edu

Burman, E. & Parker, I. (Eds). (1993). *Discourse Analytic Research: Repertoires and Readings of Texts in Action*. New York: Routledge.

Burnett, G., Besant, M., & Chatman, E. A. (2001). Small Worlds: Normative Behavior in Virtual Communities and Feminist Bookselling. *Journal of the American Society for Information Science and Technology*, *52*(7), 536-547

Burnett, G., Jaeger, P. T., & Thompson, K. M. (2008). Normative Behavior and Information: The Social Aspects of Information Access. *Library & Information Science Research*, *30*(1), 56-66.

Burr, V. (1995). An Introduction to Social Constructionism. London: Routledge.

Burnett, G., & Nocasian, M. (2008). A Romania of the Imagination: Formula As, Virtual Community, and Normative Behavior. First Monday, 13, 11 – 13.

Chatman, E.A. (1999). A Theory of Life in the Round. *Journal of the American Society for Information Science, 50*, 207–217.

Chatman, E. A. (2000). Framing Social Life in Theory and Research. New Review of Information Behavior Research: Studies of Information Seeking in Context, 1, 3-17.

Chatman, E.A. (2000). Theory of Normative Behavior. *Journal of the American Society for Information Science.*

Cohen, L. Manion, L. and Morrison, K. (2007). *Research Methods in Education*. 6th edition. London: Routledge.

Doan, R.E. (1997). Narrative Therapy Postmodernism, Social Constructionism and Constructivism: Discussion and Distinctions. *Transactional Analysis Journal, 27*(2), 128-133

Freedman, J. & Combs, G. (1996). *Narrative Therapy: The Social Construction of Preferred Relatives*. New York: Norton.

Gergen K.J. (1999). *An Invitation to Social Constructionism*. London: Sage

Gergen, K.J. (1985). The Social Constructionist Movement in Modern Psychology. *American Psychologist, 40*(3), 266-275.

Guba, E. & Lincoln, Y. (1994). 'Competing Paradigms in Qualitative Research', in Denzin, N. and Lincoln, Y. (editors) *Handbook of Qualitative Research*, Thousand Oaks: Sage Publications, pp.105-117.

Henning, D. (2005). Courage Under Fire: Stories of Adolescents WhoSurvived the Destruction of Divorce. Unpublished Master's Dissertation: University of South Africa, Pretoria.

Klein, H. & Myers, M., (1999), "A Set of Principals for Conducting and Evaluating Interpretive Field Studies in Information Systems". *MIS Quarterly*, 23(1), 67-94.

Kusch, M. (2010). Social Epistemology: The Routledge Companion to Epistemology, London: Routledge, 874-884

Landry, C, F. (2014) The Impacts of Time Pressure and Emotion on the Information Behavior of High Stakes Decision Makers: The Home Buying Experience. Information School, University of Washington

Lee, A. S., and Baskerville, R.L. (2003). "Generalizing Generalizability in Information System Research," Information System Research (14:3), pp.221-243.

Musa, I.A. (2013). Resistance of Polio Immunization Information in Kano, Nigeria. A Dissertation Presented to School of Library and Information Management, Emporia State University, Kansas. USA

Pendleton, V. & Chatman, E.A. (1998). Small World Lives: Implications for the Public Library. *Library Trends*, *46*(4), 732-752.

Rapmund, V.J. (1996). Social Support and Depression in Women: A Constructivist Approach. Unpublished Master's Dissertation: University of South Africa, Pretoria.

Renne, E.P. (2010). The Politics of Polio in Northern Nigeria: Bloomington, Inc.: Indiana University Press.

Sey, J. (1999). *Postmodernism: A Critical Practice? Research in Practice: Applied Method for the Social Sciences*. P. 462-475. Cape Town: UCT press.

Willig, C. (2001). *Introducing Qualitative Research in Psychology*. Buckingham: Open University Press.

Wilson, T. D. (1999). Models in Information Behavior Research. *Journal of Documentation, 55*(3), 249-270.

Wilson, T. D. (2002). HumanInformation Behavior:*Journal of Documentation, 3*(2), 1-5.

Worrall, A. (2015). Social Digital Libraries: Their Roles Within and Across Social Worlds, Information Worlds, and Communities, Florida State University College of Communication and Information.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This study sought to understand the information behaviour of adolescent females suffering from dysmenorrhea in rural setting of Northern Nigeria. This Chapter discusses the methodology utilized in this study andalso explains the sample selection, data collection, and data analysis considered to be the most suitable for addressing the formulated research questions. Specifically, the Chapter was discussed under the following sections.

3.2 Research Method Adopted

3.3 Research Design

3.4 Population of the Study

3.5 Sample and Sampling Technique

3.6 Instruments for Data Collection

3.7 Procedures for Data Collection

3.8 Procedure for Data Analysis

3.9. Trustworthiness, Rigour of the Study

3.2 Research Method Adopted

Research method can be defined as a way of thinking and a way of studying social realities (Straus and Corbin, 2008). It refers to a model to conduct a research within the context of a particular paradigm. It comprises the underlying sets of beliefs that guide a researcher to choose one set of research methods over another. There are basically three types of research methodology that is qualitative, quantitative and mixed. For the purpose of this study, qualitative research method was adopted. Qualitative research method, according to Denzin and Lincoln (2003), involves an interpretive and naturalistic

approach to its subject matter; it attempts to make sense of, or, to interpret, phenomena in terms of the meaning people bring to them. Provide deeper understanding of social phenomena (Silverman, 2010). The purpose of this study was to explain the information behaviour of adolescent females suffering from dysmenorrhea. Qualitative research was chosen as a paradigm to facilitate this purpose. Qualitative method is ideal because it is effective in the study of behaviour and behaviour changes. It aims to gather an in-depth understanding of human behaviour and the reasons that govern such behaviour (Denzin, & Lincoln, 2003).

The researcher adopted qualitative research because it allowed experiences to be presented, private feelings expressed, and the process of trust building. It appreciates the holistic manner of life including social aspect, cultural aspects (traditional health belief, values, norms believe) life style and behaviour, which quantitative research cannot do as well.

3.3 Research Design

Research design is associated with the research approach which the researcher intends to collect and analyze data. There are several research approaches under qualitative methodology, such as: case study, phenomenology, critical pedagogy, ethnography, feminism, postmodernism etc. For this study, aqualitative case study research design was used to explore the research problem. According to Lincoln and Guba (2002), a qualitative case study is a "construction that uses conventions of narratives to explore insightfully and evocatively issues with which the researcher has intellectually wrestled with, in order to challenge, empower and help reader understand a problematic case in new way." Yin (2014) defines a qualitative case study as an empirical inquiry that investigates a contemporary phenomenon within its real-life context,

especially when the boundaries between phenomenon and context are not clearly defined. Therefore, qualitative case study as research design allows for an in-depth examination of events, phenomena, or other observations within a real-life context for purposes of investigation, theory development and testing, or simply as a tool for learning (Merriam, 1998). Qualitative case study approach was suitable for this study because, it allows the researcher to develop categories and understand a problematic case surrounding the females suffering from dysmenorrhea.

3.4 Population of the Study

Population for this study comprise adolescent females from the ages of 15-24 experiencingprimary dysmenorrhea in Giwa Local Government Area. According to Ifidon and Ifidon (2007), population is generally a large collection of individuals or objects that is the main focus of a scientific query. Similarly, Tuckman (2011) defined research population as a well-defined collection of individuals or objects known to have similar characteristics. All individuals or objects within a certain population usually have a common, binding characteristics or traits. However, due to the large population, researchers often cannot test every individual in the area because it is too expensive and time-consuming. This is the reason why researchers rely on sampling techniques.

3.5 Sample and Sampling Techniques

In research, a representative portion of the population can be selected as sample for the research. Sampling is basically a process whereby a researcher uses to identify people/elements for a study (Sprenkle & Piercy, 2005). Sampling in qualitative research is purposive rather than randomly (Tashakkori & Teddlie, 2003). Purposive sampling leads to greater depth of information from a smaller number of carefully selected cases (Mason, 2002; Patton, 2002). Describing a purposeful sampling strategy, Patton (1990) stated that purposive sampling lies in selecting information-rich cases (phenomena) for

study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of research, several other authors have also presented typologies of purposive sampling techniques these include Kuzel, (1992), LeCompte & Preissle, (1993), Miles & Huberman, (1994) and Patton, (2002).

In this study, snowball sampling technique was adopted. Snowball sampling technique also known as chain referral or referral sampling. It helps researchers to identify and locate members of his/her targeted population especially when they are hidden or difficult to locate. This involves asking participants for recommendations of participants who might qualify for participation, leading to referral chain. This type of sampling technique is useful when the population being studied is unlikely to respond to interview questions due to the nature of the topic (Heckathorn, 2002; Cohen and Crabtree, 2008). A colleague introduced the researcher to a female family friend at the area of study, after which the researcher visited the site twice before the commencement of the data collection in order to build a rapport and gain confidence and trust.

Sample Size

As a result of the numerous factors that determine sample size in qualitative studies, many researchers suggest what constitutes a sufficient sample size. Morse (1994), suggest 30-50 sample size. While Creswell, (1998) suggested 5-25 sample size. Moreover, Bertaux, (1981) stated that 15 is the smallest sample size in all qualitative research. Contrary to all the above scholars' views, Bryan (2013) suggested that there are no specific rules for the determination of sample sizes in qualitative research, but, rather the qualitative researcher is expected to reach data saturation stage. Data saturation means the ability where the researcher understand that based on each question asked, there were no any interesting new data, ideas, themes or patterns emerging from the participant (Ritchie, Lewis and Elam 2003; Bryan, 2013).Therefore, in this study, fifteen (15)

respondents wereselected based on the saturation of the data that is, the point at which no new information was being elicited from the interviews.

Criteria for Selecting Participants in the Study: The following criteria were utilized in a purposive selection of a small sample that would provide rich, in-depth information regarding the phenomena under consideration:

- Participants must be between the ages of 15-24. The age group was selected based on the assumption that participants in this group have a relatively well-formed idea of what it is they believe.
- Participants must have started menstruating.
- Participants must be suffering from dysmenorrhea. The assumption informing this decision is that the individuals will provide more extensive knowledge on the issue.

3.6 Instrument for Data Collection

In qualitative research, various methods can apply, such as interviews, ethnographic studies or focus groups. Since this research adopted interpretative paradigm where by Interpretivist main tenet is that research can never be objectively observed from the outside rather it must be observed from inside through the direct experience of the people (Cohen, Manion and Morrison, 2007). For this reason, interview seem to be a suitable method because Interview are widely used tool to access people's experiences and their inner perceptions, attitudes, and feelings of reality (Denzin & Lincoln, 1994) So every interview generates a subjective information product shaped by the interviewees' experiences.

Based on these considerations, it becomes clear that the goal of qualitative interviewing is to provide understanding of things that cannot directly be observed, such as feelings, thoughts, opinions, attitude or behaviours of interviewees. Since qualitative

interviewing is based on the assumption that the perspective of others is meaningful and knowable, entering into their perspective becomes a major objective for the qualitative researcher, the tools of interviewing are often used in a complementary way (Patton, 2002)

The option for conducting interviews opened a vast avenue of various types of interviews. There are three types of interviews: structured interviews, semi-structured interviews and unstructured interviews (Patton, 2000). This study had choice of semi-structured interview data collection method.

Semi-structured interviews consist of several key questions that help to define the areas to be explored, but also allow the interviewer or interviewee to diverge in order to pursue an idea or response in more detail (Britten, 1999). Similarly, Rubin and Rubin (2005) assert that semi-structured interview is a type of interview that allows depth to be achieved by providing the opportunity on the part of the interviewer to probe and expand the interviewee's responses. Hence, semi-structured interview was considered appropriate for the study since it is a powerful way of getting in-depth information on information behaviour of adolescent females suffering from dysmenorrhea in Giwa Local Government Area of Kaduna State. In addition, an interview guide was developed based on a predetermined set of open-ended questions which guided the whole process of the interview.

3.7 Procedures for Data Collection

The procedure used for collection in this study was guided by snowball sampling techniques in which research participants were asked to assist researchers in identifying other potential subjects. To find respondents who would talk about themselves frankly and freely, the researcher needed the intervention of a friend willing to present me to these respondents as worthy of their confidences. The researcher was introduced to a

female friend at the area of study, after which the researcher visited the site twice before the commencement of the data collection in order to build a cordial relationship with the participants to gain confidence and trust.

Moreover, the researcher with the help of research assistant conducted the interview, before the session, a verbal consent was taken. The participants were briefed on the description, nature and purpose of the study. The participants were assured that the session will not be longer than 1 hour. The interview started atabout 9:30 am in their various homes with the aid of tape recorder and jotter to take points during the session.

3.8 Procedure for Data Analysis

The process of data analysis involved the drawing of inferences from raw data gathered by the researcher. Thematic Analysis was used to analyze data, because it enabled the researcher to identify, analyze and interpret patterns within the data collected from the participants. It illustrates the data in great detail and deals with diverse subjects via interpretations (Boyatzis, 1998). Therefore, all the collecteddata in the study were analyzed based on the following thematic analysis steps:

Step 1: The entire voice recorded interview was transcribed into written document.Subsequently, the researcher read and re-read through the entire data set to get familiar with the data, with the help of highlighter pen in order to search for phrases which directly answered the research questions.

Step 2: All the underlined phrases identified from narratives were grouped as open codes**Step 3:** Open codes were condensed together to form sub-categories.

Step 4: All the sub-categories based on each research questions were grouped together (related sub-categories) and formed several categories.

Step 5: At this point, the researcher further named the categories to be presented for the analysis.

3.9 Trustworthiness, Rigour of the Study

Trustworthiness depends on how the research process has been carried out and how closely the findings represent the experiences of the participants (Clayton and Thorne, 2000). Certain methods can be used to enhance trustworthiness (Leininger, 1994; Slevin and Sines, 1999; Sandelowski and Barroso, 2003), but they must be congruent with the philosophical underpinnings of the study. Qualitative or Quantitative research studies must be open to critique and evaluation. The essence is to assess the worth of a study – the soundness of its method, the accuracy of its findings, and the integrity of assumptions made or conclusions reached (Long & Johnson, 2000). Rigor in qualitative research has to do with the ability to determine if the conclusions drawn by researchers are trustworthy which makes them comparable to validity and reliability in quantitative research. The trustworthiness of this study was determined using of the four criteria proposed by Lincoln and Guba (1985) - Credibility, Dependability, Confirmability and Transferability.

- **Credibility** refers to the value and believability of the findings (Leininger 1994; Polit and Beck 2006). Prolonged engagement and persistent observation, Triangulation, Peer debriefing, Member checking are strategies used in establishing credibility (Lincoln and Guba, 1985; Houghton, Casey, Shaw Murphy, 2013). The researcher adopted member-checking by reading the transcription of the interviews to ensure that these have been accurately recorded and are therefore credible. Member-checking was also conducted by the research assistant and the supervisors in order to cross-check the transcribed interview.
- **Dependability** corresponds to the notion of reliability which promotes repeatability **(**Wahyuni, 2012). Dependability is said to be achieved when a study can be replicated, or repeated under the same circumstances in another location

and time (Graneheim and Lundman 2004; Tobin and Begley 2004). Wahyuni (2012) posits that dependability concerns taking into account all the changes that occur in a setting and how these affect the way research is being conducted. In this study, audit trail was used to achieve dependability. The researcher presented detailed and step-by-step explanation of the research processes undertaken, as well as providing the main instruments used to gather empirical data. Dependability of this study can be achieved using similar research framework in another location in Northern Nigeria.

- **Conformability** refers to the extent to which the data, interpretations, and outcomes of inquiries are rooted in contexts and participants rather than biases held by the researcher (Lincoln & Guba, 1989). The data analyzed by the researcher is well supported with extracts from the data to make the analysis transparent to an external examiner. The data was examined by well knowledgeable authority in qualitative data analysis.
- **Transferability** is the degree of similarity between the context of the study and the context of the setting to which the study results may apply (Lincoln & Guba, 1989).The researcher kept the study flexible to the extent that newly and developed ideas and insight could be reflected in subsequent processes. Also, the researcher kept widening her literature review constantly every time any new data emerged.

References

Bertaux, D. (1981). From the Life-History Approach to the Transformation of Sociological Practice. *In Bertaux Daniel(Ed), Biography and Society: TheLifehistory Approach in the Social Science.* London: Sage. (pp.29-45).

Boyatzis, R.E. (1998). Transforming Qualitative Information: Thematic Analysis and Code Development. Sage Publication

Britten, N. (1999). Qualitative Interviews in Healthcare. *In Pope C, Mays N (eds) Qualitative Research in Health Care*. 2nd ed. 11–19. London: BMJ Books.

Bryan, M (2013). Qualitative Research: Sampling and Sample SizeConsiderations. *School of Psychology Review*, 27: 260-222.

Clayton, A., & Thorne, T. (2000). Diary Data Enhancing Rigor: *Analysis Framework and VerificationTools. Journal of Advanced Nursing*. Hull Enland. 32(6), 1514-1521

Cohen D. & Crabtree B (2008). Qualitative Research Guidelines Project: Robert Wood Johnson Foundation Retrieved at http://www.qualres.org/HomeTria-html on 22/06/16

Cohen, L., Manion, L., & Morrison, K. (2007). Research Methods in Evaluation. 6th edition. London: Routledge

Creswell, J. (1998). *Qualitative Inquiry and Research Design: Choosing Among Five Traditions.* Thousand Oaks, CA;Sage.

Denzin, N.K & Lincoln, Y.S. (2003). 1. Introduction: The Discipline and Practice of Qualitative Research. In: N.K.Denzin & Y.S.Lincoln (Eds.), *The Landscape of Qualitative Research. Theories and Issues*, (pp. 1-45). Thousand Oaks: Sage Publications.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (1994). *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage.

Frey, Lawrence R., Carl H. Botan, & Gary, L.K. (2000). *Investigating Communication: An Introduction to Research Methods*. 2nd ed. Boston: Allyn and Bacon.

Graneheim, U.H., & Lundman, B. (2004). Qualitative Content Analysis in Nursing Research: Concepts, Prosedures and Measures to Achieve Trustworthiness. *Nurse Education Today*, 24(2), 105-112.

Heckathorn, Douglas D. (2002). Respondent-driven sampling: Deriving Valid Population Estimates from Chain-Referral Samples of hidden populations. *Social problems*. Boston, MA: Blackwell publishing; 49: 11-29.

Hougton, C., Casey, D., Shaw, D. & Murphy, K. (2013). Rigour in Qualitative Case-Study Research: *Nurse Researcher*. 20(4).

Ifidon, S.E. & Ifidon, E.I. (2007). *Basic Principles of Research Methods*. Benin-City: Good news Express Communications

Kuzel, A.J. (1992). Sampling in Qualitative Inquiry. In B. F. Crabtree & W. L. Miller (Eds.), *Doing qualitative research* (pp. 31-44). Newbury Park, CA: Sage.

LeCompte, M. D., & Preissle, J. (1993). *Ethnography and Qualitative Design in Educational Research*(2nd ed.). New York: Academic Press.

Leininger, M. (1994). Evaluation Criteria and Critique of Qualitative Research Studies: *Critical Issues in Qualitative Research Methods.* Sage. 95-115

Lincoln, Y.S and Guba, E.G.(1985). Naturalistic Inquiry. Baverly Hills, CA: Sage.

Lincoln, Y.S and Guba, E.G. (2002). Competing Paradigms in Qualitative Research" in Denzin and Lincoln (eds.), *Handbook of Qualitative Research*, Sage, Thousand Oaks..

Long, T. & Johnson, M. (2000). Rigour, Reliability and Validity Research. Clinical Effectiveness in Nursing. 4(1), 30-37

Mason, J. (2002). Qualitative Researching, 2ndEdition. London: Sage.

Merriam, S.B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass Publishers.

Miles, M. & Huberman, M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*(2nded.). Thousand Oaks, CA: Sage.

Morse, Janise M. (1994). *Designinhg Funded Qualitative Research*. In Norman K. Denzin & Yvonna S. Lincoln (Eds), *Handbook in Qualitative Research.* 2nd ed., 220-35. Thousand Oaks, CA:Sage.

Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods*. Thousand Oaks, CA: Sage.

Patton, M.Q. (2002). *Qualitative Research and Evaluation Methods*(3rd ed.). Thousand Oaks, CA: Sage.

Polit, D.F. &Beck, C.T. (2006). International Differences in Nursing Research: *Journal of Nursing Scholarship.* 41, 44-53

Ritchie, J., Lewis, J., & Elam, G. (2003). Designing and Selecting Samples. In Jane Ritchie & Jane Lewis (Eds.), *Qualitative research practice. A Guide for Social Science Students and Researchers* (pp.77-108) Thousand Oaks, CA: Sage.

Rubin, H.J. and Rubin, I. (2005), *Qualitative Interviewing: The Art of Hearing Data,* 2ndedn, Sage Publications, Thousand Oaks,California.

Sandelowski, M. & Barroso, J. (2003). Writing the Proposal for a Reading Qualitative Resaech Methodology Poject: *Qualitative Health Research.* 13(6), 781-820. Sage.

Slevin, E. & Sines, D. (1999). Enhancing the Truthfulness, Consistency and Transferability of a Qualitative Study: *Utilizing a Manifold of Approaches. Nurse Researcher;* London. 7(2). RCN Publishing Company.

Sliverman, D. (2010). Doing qualitative research. 3rd ed. London. Sage

Sprenkle, D.H. & Piercy, F.P. (2005). *Research Methods in Family Therapy*. New York: The Guilford Press.

Straus, A. & Corbin, J., (2008). Basics of Qualitative Research: *Techniques to Developing Grounded Theory*. 3rd ed. Los. Angeles, C.A: Sage.

Tashakkori, A. & Teddlie, C. (Eds.). (2003). *Handbook of Mixed Methods in Social &Behavioral Research*. Thousand Oaks, CA: Sage.

Tobin, G.A., & Begley, C.M. (2004). Methodological Rigour within a Qualitative framework. *Journal of Advanced Nursing*. 48(4), 388-396.

Wahyuni, D. (2012). The research design maze: Understanding Paradigms, Cases, Methods and Methodologies; Journal of Applied Management Accounting Research, vol.10, no. 1 winter. Pp.69-80

Yin, R. K. (2014). Case Study Research: Design and Methods. 5th ed. London: Thousand Oaks. CA:Sage publications.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

This Chapter presents an analysis of the data collected from the interviews with adolescent females suffering from dysmenorrhea in Giwa Local Government Area. Specifically, the Chapter was sub-divided under the following:

4.2 Demographic Composition of Respondents

4.3 InterviewAnalysis

4.4 Description of Emergent Categories

4.5 Discussion of Findings

4.2 Demographic Composition of Respondents

Fifteen (15) participants were interviewed. Participants were chosen for the study based on the already established criteria (as indicated in Chapter Three). The participants were located in four (4) different wards namely Layin-Marayu, Hayin-Madara, Anguwan-Shehu and Layin-Taki.

4.3 Interview Analysis

Each of the fifteen (15) interviews were read, examined, re-examined usingthematic process,while reading the transcribed interviews, the researcher underlined sentences, phrases, and words that best describe the following: dysmenorrhea information needs of adolescent females suffering from dysmenorrhea, and sources of information adolescent females suffering from dysmenorrhea access and apply to manage the ailment. Following this step, one hundred and fifty-six (156) narratives were underlined which explained all the research questions. The narratives were highlighted and recorded in the coding sheet as open codes. The open codes were collapsed according to related codes resulting into having twenty-three (23) topics as classification sub-categories. The

classifications of sub-categories were then further collapsed in ten (10) emergent categories.

4.4 Description of Emergent Categories

There are ten (10) categories explaining dysmenorrhea information needs and information sources of adolescent females suffering from dysmenorrhea. (1) information need to overcome discomfort, (2) information need to overcome psychological disorder and (3) information need to overcome the difficulty in performing customary responsibilities reflected narratives related to information needs of adolescent females about dysmenorrhea; (4) family, (5) friends, and (6) health professionals reflected narratives related to information sources adolescent females suffering from dysmenorrhea consults to manage the ailment (7) orthodox health professionals revealed narratives related to sources of information females suffering from dysmenorrhea are aware of but refuse to access; (8) inhibition, (9) financial reasons and (10) lack of husband permission reflected comments related to factors responsible for females suffering from dysmenorrhea not accessing sources of information they feel it's important.Categories emerged from the data collected are discussed below

4.4.1 DysmenorrheaInformation Needs of Adolescent Females Suffering fromPrimary Dysmenorrhea in Giwa Local Government Area

The first research question sought to understand the information needs of adolescent females suffering from dysmenorrhea in Giwa Local Government Area. Accordingly, findings revealed three information needs of adolescent females suffering from dysmenorrhea. Information need to overcome discomfort, information need to overcome psychological disorder, and information need to overcome inability to perform customary responsibilities. These categories are described below.

4.4.1.1 Information Need to Overcome Discomforts

This category discusses responses related to dysmenorrhea information needs of adolescent females suffering from dysmenorrhea. The category is however, divided into three related sub-categories based on responses, the related sub-categories included; 'Pains', 'Pelvic disorder', and 'Abdominal disorder', which are described below:

4.4.1.1.1 Pains:this sub-category entails narratives related to information need of adolescent females about menstruation. The researcher found out that pain usually occurs before the onset of bleeding and may persist for hours or days. A respondent stated that;

> *"Hum!! the way I feet before it (menses) comes makes me wished I were not menstruating, when I am menstruating, all part of my body use to be in pains, and I don't use to feel comfortable whenever its time (menstruation) reaches because it uses to subject me to severe pain and sickness".*

Another respondent also disclosed that:

> *"I use to feel severe waist pain with the severity I do feel as if my anus is going into pieces and I do feel the pain for the period of 3days before the commencement of my menstrual flow. I need assistance to overcome this challenge."*

4.4.1.1.2 Pelvic disorder:This sub-category reveals the challenges/experiences of females suffering from dysmenorrhea. Majority of females experienced pelvic disorder before and during menstruation. A respondent note that: "*Before the coming of my period, I use to have severe pelvic cramps as if they are piercing needle on me".* Another respondent was able to point out that the pelvic disorder does occur during the flow of menstruation;

> *"When it comes, I use to have pelvic pain, sometimes I use to feel like throwing up and sometimes I even go to an extent of vomiting, it uses to discomfort me to the core, it is only with God intervention that the pain use to be eased."*

4.4.1.1.3 Abdominal disorder:this sub-category encompasses the narratives related to challenges by adolescent females during menstruation. Abdominal disorder usually occurs before, during and after menstruation. A respondent simplified that; *"I used to have a severe stomachache before the commencement of my period."* Another respondent stated that; *"Humm!! During my period flow I have stomach ache and feel sick."* A respondent shared her experiences regarding menstruation which occurs after the conclusion of her menstrual period. She stated that; *"After the period I have a mild abdominal pain but it will stop after a day or two."*

4.4.1.2 Information Need to Overcome Psychological Disorder

This category discussed responses related to dysmenorrhea information needs of adolescent females in Giwa Local Government suffering from dysmenorrhea. The category was however, divided into two related sub-categories based on responses, which represent their challenges during menstruation. The related sub-categories include 'Feeling uncomfortable', and 'Emotional disorder', which are described below:

4.4.1.2.1 Feeling uncomfortable:This sub-category reveals the challenges of adolescent females suffering from dysmenorrhea, it includes narratives related to discomfort, weakness, stress and difficulties to perform routine activities. Many females have unconformable feelings before their period. A respondent note that; *"I feel week and unstable frequently going to the toilet to check in case the blood has not stained my cloths*."

While some females experience uncomfortable feelings during their menstrual period, during this circle various changes occur in the body, many adolescent females get these feelings for a few days when their period starts. A respondent also confirmed that; *"I feel very uncomfortable with my body system like feeling weak."* Similarly, another

respondent noted that; *"During my period I experience some changes on my body example feeling a bit emaciated; I use to feel uncomfortable."*

4.4.1.2.2 Emotional Disorder: emotional condition causes extreme mood shifts that can disrupt your work and damage relationships. This sub-category discusses respondent challenges during menstruation. One of the respondents highlighted that; *"During my period I feel emotionally imbalance.my mood changes feel very disgusting"*

4.4.1.3 Information Need to OvercomeDifficulty in Performing Customary Responsibilities

This category depicts the understanding of how dysmenorrhea interferes with the respondents' daily activities and it comprises five sub-categories: absent from school, can't perform routine tasks, lack concentration during classes, social phobia, and slow down activities. These six sub-categories are explained below.

4.4.1.3.1 Absent from school:In the in-depth interviews, some of the respondents expressed their feelings on how dysmenorrhea interferes with their school. The respondents reported that they can't attend school when suffering from dysmenorrhea. "*The stomach ache doesn't allow me feelcomfortable and it stop me from going to my school because I don't want my class mate to knowthat am impure"*

4.4.1.3.2 Can't perform routine tasks:Majority of the respondents interviewed, expressed how dysmenorrhea disengaged them from performing their routine tasks. Many adolescent females in Giwa Local Government Area experience discomfort at the time of their periods, their monthly period is painful and in some cases disabling. This reveals how common everyday pain, experienced by women each month, affects their ability to perform a range of tasks, for example, eating and sleeping. This shows that the effect of pain goes beyond physical pains to emotional.

"The problem (dysmenorrhea) stops me from eating and I don't get enough sleep" Similarly, adolescent females interviewed in Giwa Local Government expressed how dysmenorrhea stops them from discharging their domestic chores. Majority of the respondents having a severe dysmenorrhea are unable to carryout household chores; such as cooking and washing of cloths. *"The pain (dysmenorrhea) interferes withmy domestic activities until it subsides, the pain triggers up heartache and because of this particular reason I can't attend to my domestic chores"*

4.4.1.3.3 Lack of concentration during classes:A respondent reported decreased concentration in class. *"I lack concentration during classes at school. Allmy attention will be focused on the flow of blood"*

4.4.1.3.4 Social phobia:Majority of the respondents interviewed admitted that during this period (menstrual) they cannot mingle with people. Interaction with people during this period usually occurs as a result of their menstrual discomforts.

> *"Actually, I don't feel* comfortable *with my body system during the period and it gives me an excruciating pain as if am dying, and whenever am in the midst of people I do feel as if they will be able to figure out what is wrong with meso I avoid being in the midst of people"*

4.4.1.3.5 Slow down:Some respondents depicted reduction in activity when suffering from dysmenorrhea *"As at the time I am going through this difficulty (dysmenorrhea) my daily activities reduce to the barest minimum. During this period, I avoid house chores.*

4.4.2. Sources of Information Adolescents' Females Suffering fromPrimary Dysmenorrhea Consult to Manage the Ailment

The second research question sought to discusses sources of information adolescent females suffering from dysmenorrhea consult to manage their ailment. Accordingly, Findings of the study reveal that some respondents suffering from dysmenorrhea in Giwa Local Government Area consult family members and close friends as sources of information. Findings of the study also reveal that some respondents suffering from dysmenorrhea in Giwa Local Government Area consult health professionals.

4.4.2.1 Family and Friends

This category depicts narratives related to sources of information adolescent females suffering from dysmenorrhea consult to manage the ailment, it comprises three sub-categories: Mothers, Sisters and Friends. These three sub-categories are explained below.

4.4.2.1.1 Mothers as source of primary dysmenorrhea information:This sub-category depicts narratives related to sources of information adolescent females in Giwa local Government suffering from dysmenorrhea consult to manage the ailments. Some of the respondents prefer to seek help from their mothers. *"I seek help from my mother because I trust my mother and she is the right person totake care of my health most especially issues related to women".* Another respondent revealed that: *"whenever I am in pain the only person I can consult is my mother because she is a woman like me and have passed through what am going through now".*

4.4.2.1.2 Sisters as source of primary dysmenorrhea information: sisters are sub-category that depicts narratives related to sources of dysmenorrhea information adolescent females consult to manage their ailments. Adolescent females prefer to seek help from their sisters. *"Honestly, I do seek help from my sister when I am experiencing any kind of pain during menstruation, because she is the only one I can discuss such an issue with".* Another respondent revealed that: *I can only consult my sister about*

menstruation and dysmenorrhea because I am shy. I don't discuss it with anyone except my elder sister and my aunty."

4.4.2.1.3 Friends as source of primary dysmenorrhea information:It was also obvious that adolescent females in Giwa Local Government who suffer this health problem (dysmenorrhea) do seek helpthrough peers. *"I do seek for help frommy friends because friends are those I can confide in and because they are women like me"*. Another respondent revealed that: *"I always seek help from my friend (a close friend) because issues related to menstruation and dysmenorrhea can only be discussed with someone close to you and my friend is the only person I can share this secret with".* Furthermore, the respondent revealed the reasons why they consult family and friends astheir source of information. The reason is "Trust and believe" the respondents consult theirrelatives because of the trust they have in them.

4.4.2.2. Health Professionals as Source of Dysmenorrhea Information

This category portrays narratives related to sources of information adolescent females suffering from dysmenorrhea consulted to manage the ailment and it consists of two sub-categories: Orthodox health practitioners, and traditional health practitioners. These two sub-categories are explained below.

4.4.2.2.1 Orthodox health practitioners:this sub-category is one of the sources of information adolescent females suffering from dysmenorrhea in Giwa Local Government consult to manage the ailments. Very few of the respondents depict that they seek help from the hospital. *"I seek for help from the hospitalbecause hospitalwill understand my problem better".*

4.4.2.2.2 Traditional health practitioners:The data collected revealed that some adolescent females in Giwa Local Government consult traditional herbalists as a source of information to manage dysmenorrhea. *"Sometimes I seek help from traditional herbalist*

because I believe in them and byGod grace I might be lucky if at all the hospital prescription failed then I opt for traditionalherbs". However, minority of respondents who considered health professionals as a source of information believe that hospitals and traditional herbalists are relevant sources of information in management of dysmenorrhea.

4.4.3 Sources of Information Adolescent Females Suffering from Primary Dysmenorrhea AreAware of but Refuse to Access

This question depicts narratives related to sources of information adolescent females suffering from dysmenorrhea in Giwa Local Government are aware of but refuse to access. One (1) major category emerged in response to the question; health professionals and is presented and discussed below:

4.4.3.1 Health Professionals

This category depicts narratives related to sources of information adolescent females suffering from dysmenorrhea in Giwa Local Government are aware of but refuse to access. Majority of the respondents revealed that the health professionals such as orthodox and unorthodox practitioners are important sources of information they are aware of but refuse to access. *"Hospital is a place one can get help to manage any kind of ailment, from medical personnel but I don't access information to manage dysmenorrhea from medical personnel".* Another respondent revealed that: *Truly speaking, orthodox practitioners and unorthodox are the only places that a woman issupposed to seek for any medical help".*

4.4.4 Factors Responsible for Adolescent Females Suffering from Primary Dysmenorrhea NotAccessing Sources of Information TheyFeel AreImportant

This category depicts narratives related to the factors responsible for adolescent females suffering from dysmenorrhea not accessing sources of information they feel it's

important. This consists of four sub-categories: inhibition, financial reasons, and lack of husband's permission. These are presented and discussed below:

4.4.4.1 Inhibition

This category depicts narratives related to the factors responsible for adolescent females suffering from dysmenorrhea not accessing sources of information they feel it's important. This consists of four sub-categories: Shyness, Embarrassment, dysmenorrhea is not an issue to be discussed and majority of the health professionals are men. These four sub-categories are explained below.

4.4.4.1.1 Shyness: Thisstudy depicts that majority of the respondent interviewed do not seek for helps in despite knowing that orthodox practitioner is an important source of information for management of dysmenorrhea. Some of the adolescent females suffering from dysmenorrhea in Giwa Local Government narrated that "shyness" is one of the factors that contributed to not consulting sources of information they feel it's important. *"I am shy. I find it hard to tell anyone that am having menstrual pain not even my parents because it is unbecoming of a woman to discuss problems associated with women I do have difficulty telling them".* Another respondent reported that: *honestly I am shy to discuss my pain with orthodox practitioners because I cannot disclose this issue with anyone except my friend."*

4.4.4.1.2 Embarrassment: This sub-category explores that some of the adolescent females suffering from primary dysmenorrhea feel embarrass to consult sources of information they feel it's important. A respondent revealed that: "*when my cloth stains: my friends laugh and tease me, I feel really ashamed, embarrassed, and sad, and sometimes it can make me cry".*

Another respondent reported that:

I feel very embarrassed when I am in pain during my menstrual circle, this happened during school hours, I reported the case to my school teacher that I am having stomach pain, only for the teacher and his colleagues to laugh and asked me if I am on my monthly period. I felt really embarrassed.

4.4.4.1.3 Dysmenorrhea is not an issue to be discussed: This sub-category portrays narratives related to factors responsible for adolescent females in Giwa Local Government not accessing sources of information they feel it's important. Some of the respondents describes that menstruation is not an issues to be discussed with anyone. Therefore, one needs to bear with the pain. *"Hmmm it is not an issue to be discussed because the general public around you will see you as irresponsible girl and that is why I don't feel free to discuss it"*

4.4.4.1.4 Majority of the health professionals are men: Most of the respondent believed that health practitioners are important sources of information but fail to access these sources because they perceived that majority of the orthodox and unorthodox health professional are men. Some of the respondents revealed that:

"*They can only access information from the hospital if it's a female doctor or nurse. Unfortunately, majority of the medical personnel are males. As for me I can't go to the hospital because I can't discuss an issue like this with any doctor because majority of the doctors are men".*

Another respondent reported that: *I cannot access information from a medical doctor and traditional healers on issue regarding dysmenorrhea because they are all male providers.*

4.4.4.2 Financial Reasons

This category depicts narratives related to factors responsible for not accessing sources of information adolescent females feel it's important. A respondent narrates that financial reasons is one of the factors that hindered her for not consulting any important

sources of information to manage the ailment. *"Hmmm! It is only if you are affluent enough that one can go to the hospital and if you are not one has to bear with the condition".* Another respondent reported that: *honestly poverty is a bad disease because we don't have the money to visit any health professional, while we are looking for money to eat.*

4.4.4.3 Lack of Husband Permission

This category portrays narratives related to the factors responsible for adolescent females suffering from dysmenorrhea in Giwa Local Government not accessing sources of information they feel it's important. A respondent revealed that:

> "*I am very much aware that hospital can serve as an important source of dysmenorrhea information but my husband tells me that there is no need to visit the hospital because menstrual period is a normal thing. So I have to follow my husband's command".*

4.5 Discussion of Findings and Implications

The findings of this research are discussed by research questions as follows.

4.5.1 DysmenorrheaInformation Needs of Adolescent Females Suffering from Primary Dysmenorrhea in Giwa Local Government Area

The findings reveal that one of the key information needs of adolescent females suffering from primary dysmenorrhea is the need for information to overcome discomfort associated with the ailment. Respondents indicated the need for information to overcome the discomfort associated with menstruation, particularly the unpleasant sensation they experienced in the abdomen and pelvic. The need for information to overcome discomfort is a major feature common among adolescents. Adolescent's is a period of growing where lots of changes both physical and physiological occur. These changes possess lots of questions, concerns, and at times confusion. Adolescent therefore have lots of questions

that they needed answers to. In regard to dysmenorrhea, for instance, adolescents indicated the need for information to overcome the discomfort associated with the ailment. Studies indicate that pain and discomfort are major causes of fear, anxiety, and feelings of uncertainty, stress, and loss of strength (Jerlock, Gaston-Johansson and Danielson, 2005). It is therefore, not surprising that adolescent females suffering from primary dysmenorrhea have identified discomfort as a major challenge and source of their dysmenorrhea information need.

Closely related to the need for information to overcome the negative consequences of discomfort. Findings of the study indicated a strong need for information about psychological disorder. Psychological disorder has been identified as one of the challenges among adolescent females suffering from dysmenorrhea. Psychological disorder particularly mood swing, weaknesses and feeling unconformable is a common occurrence among females during menstruation. These occurrences affect wellbeing and quality of life. This finding is in harmony with the findings by Schnurr, Lunney, Bovin, and Marx (2009) which revealed that individual with psychological disorder experience interpersonal, occupational, legal, and/or housing problems. Psychological disorder can be severe and disabling condition. Therefore, adolescent females suffering from dysmenorrhea are always in need of information to overcome the difficulties.

Another challenge of adolescent females suffering from dysmenorrhea is inability to perform customary responsibilities. Particularly the challenges to overcome the following tasks: Absenteeism from school, inability to perform routine task, lack of concentration during classes, and social phobia. The finding is significant as it indicates that due to cultural beliefs surrounding menstruation and dysmenorrhea, majority of females in the study area face limitation in managing dysmenorrhea as well as participation in daily live activities. Studies indicate that menstruation and poor sanitary

product access as possible causes of schoolgirl absenteeism (Bharawaj and Patkar, 2004; DFID, 2005, UNICEF, 2008; Grant et al., 2010; Fehr, 2010; Oster and Thornton, 2011). The implication for not understanding the dysmenorrhea information needs of adolescent females will not provide an effective management approach to overcome the challenges.

4.5.2. Sources of Information Adolescents' Females Suffering from Dysmenorrhea Consult to Manage the Ailment

Findings of the study reveal that some respondents suffering from dysmenorrhea in Giwa Local Government consult family members and close friends as sources of information. Respondents prefer to seek help from their families particularly from their mothers and sisters.However, male parents and male siblings are not the most preferred source of dysmenorrhea information. This is mainly, because the respondents feel that problem associated with dysmenorrhea is gender sensitive, and issues to be discussed with females.

The facts that females in the study area prefer to speak to their female counterparts on dysmenorrhea has been explained by the notion of Kirkman, Rosenthal & Feldman (2002), that belief in gender agreement when it comes to sexual health communication. In other words, there was a belief that conversations about sexuality should be based on fathers talking to their sons and mothers talking to their daughters.

Similar to family as preferred sources of information, friends have future prominently as source of dysmenorrhea information, some participants stated that they feel more comfortable to discuss with friends on menstruation and dysmenorrhea. Consistent with existing research (Akinrinola, Ann, Georges, Susheels, & Eliya 2007), reveal that, friends are key source of sexual and reproductive health information for adolescent.

Another source of information that adolescent females consulted apart from family and friends are the health professionals. Finding indicates that minority of adolescent females consult health professionals. In this research, two typology of health professional are discerned: orthodox and traditional practitioners. Respondents who fall into these categories are those who are not shy and secretive about conversing with "strangers" on issues related to sexual health. Consequently, they approach health practitioners for information and/or help. In this sense, some respondent consult orthodox health workers while some find it more convenient to consult traditional health practitioners. However, one respondent reported visiting both.

As reported earlier, minute numbers of respondents consult health practitioners for information on management of primary dysmenorrhea. This finding is not surprising because in Nigeria and in most developing countries, access to orthodox medical care is highly valued but there are no adequate and functional health care systems (Akande & Monehim, 2004; Nnamuchi, 2007; Omoruan, Bamidele, and Phillips, 2009), because majority do not have access to orthodox medical health care. Adolescent females in the study area find it safe and convenient to consult traditional practitioners on issues related to health care generally. In this study only three persons reported visiting traditional health care practitioners for information and/or help about dysmenorrhea. A possible explanation is that some numbers of traditional healers in the study location are males and therefore not "approachable" by females on issues related to sexuality, because of shyness and secretive nature of sexuality.

4.5.3 Sources of Information Adolescent Females Suffering from Primary Dysmenorrhea Are Aware of but Refuse to Access

Findings reveal that majority of the respondents are aware of two types of health professionals, orthodox and unorthodox health practitioners. However, the two types of

health professionals are not consulted despite the fact that respondents reported dysmenorrhea as interfering with their health, well-being and quality of life. If adolescent females do not consult professional help about dysmenorrhea this brings us to the discussion of dysmenorrhea self-care management. Self-care management has to do with actions individuals take for themselves, their children and their families to stay fit and maintain good physical and mental health; social and psychological needs (Akinsola, 2001; US Department of Health, 2006).

4.5.4 Factors Responsible for Adolescent Females Suffering from Dysmenorrhea Not Accessing Sources of Information They Feel Are Important

The fourth research question seeks to understand the factors which hinder adolescent females suffering from dysmenorrhea not accessing sources of information that they feel are important. Factors affecting the openness and effectiveness of dysmenorrhea information source includes: Inhibition, financial reasons and husband permission. Inhibition is a major barrier that restrained adolescent females suffering from dysmenorrhea for not consulting sources of dysmenorrhea information to manage their ailments, often due to shyness and embarrassment. This finding is in line with Kirk-Greene (2012), which reveals that the culture of shyness and pain suppression influence adolescent females' utilization of information, most women do not consult any sources unless they have complication.

Another factor that hindered adolescent females suffering from dysmenorrhea for not consulting professional health provider is financial reason. Within the community investigated, adolescent females suffering from dysmenorrhea revealed poverty as the main factor for not consulting professional health providers because they believe that it is only when you are affluent enough that one can go to seek for help from professional health providers. This finding is not surprising because currently, a high population of

women has barriers to accessing health care in Nigeria. For instance, NPC and ICF macro's (2009) report reveal that 56% of women experienced financial barriers to accessing health care.

Another factor that hindered adolescent females suffering from dysmenorrhea for not consulting professional health provider is lack of husband's permission. A respondent reported that lack of husband permission is one of the major barriers for not consulting health professional. Therefore, she needs to obey her husband. This finding tallies with the findings of some studies which reported that, Nigeria is a multi-ethnic country with diverse cultural practices. Different ethnic factors such as difficulty in getting permission to seek medical treatment are serious barriers to timely health care utilization in some parts of Nigeria. For instances, Adedini, Odimegwu, Imasiku, and Ononokpono, (2014); and Wall (1998) noted that, in Northern Nigeria married women are restricted going out without the husband's permission. As a result of this culture of constraint, many women have limited freedom of movement.

4.5.5 Theoretical Interpretations of the Findings in the Context of Chatman's Theory of Normative Behaviour

Chatman's Theory of Normative Behaviour provides a frame for understanding the social and cultural dynamics of information behavior within the context of a small world. A small world is described as "a community of like-minded individuals who share co-ownership of social reality" (Chatman 1999). Members of small world have common understandings and beliefs. They have similar customs, share mutual opinions, and concerns (Chatman, 1999). Chatman's Theory of Normative Behavior uses four constructs to illuminate why people use or fail to apply information in the context of small world setting. The four constructs are: social norm, worldview, social type, and

information behavior. Below explain the findings of the study using the four constructs of Chatman's theory of normative behavior.

Social norms: Social norm is the first construct of Chatman Theory of Normative Behaviour, it refers to the standards with which members of a social world comply in order to exhibit desirable expressions of public behaviour" (Burnett, Besant and Chatman, 2001). The purpose of social norms, according to Chatman (1999), is to provide a collective sense of direction in communal setting. In particular, Social norm establishes standards and codes of behaviour (Chatman, 2000). Chatman stresses that social norm influences information behavior. In the context of this study, Chatman's construct of social norm provides a frame for explaining the information behaviors of adolescent females suffering from dysmenorrhea. For instance, a key finding of the study is unwillingness of adolescent females suffering from primary dysmenorrhea to seek for information due to shyness. Inhibition in seeking information about dysmenorrhea is rooted in dysmenorrhea belief systems.

Another finding of the study is the notion that dysmenorrhea is not an issue for discussion. Discussion on menstruation and dysmenorrhea is often shrouded in culture of secrecy, silence and cultural inhibition. The main reason why adolescent females suffering from dysmenorrhea do not discuss issues related to dysmenorrhea is rooted in dysmenorrhea belief systems. The dysmenorrhea belief systems in the study setting are about females not to converse, confer, or share information about sexuality in general and dysmenorrhea in particular. In essence, belief systems rooted in social norms influences information behavior.

Worldview:

Worldview is the second construct of Chatman's Theory of Normative Behaviour. It refers to collective beliefs and shared understanding held by small world group (Chatman,

1999). Worldview provides a sense of belonging in communal setting. Communal members having same worldview approach issues uniformly (Burnett, Besant, and Chatman, 2001). In this sense, worldview impacts Behaviour, including information behaviors. The concepts of Chatman's worldview explain dysmenorrhea information behaviour. For instance, evidence from this study indicates that even though adolescent females suffering from dysmenorrhea experience pain and other discomfort, they do not consider it as an infirmity. It is a common understanding among communal members in the study setting that dysmenorrhea is not a health condition. As such, regardless of pain, discomfort, and ill-feeling it is a common worldview that dysmenorrhea is not an issue to worry about. It is therefore not surprising, that adolescent females suffer in silence.

Social types: Social types is the third Chatman's theory of normative behaviour, which refers to the ways in which individuals are perceived and defined within the context of their small world" (Burnett and Jaeger, 2008). Chatman (1999) indicates that, communal members labeled persons by types which assist in anticipating behaviours. Evidence from this study indicates stereotyping as causal to adolescent females suffering from dysmenorrhea not communicating with medical personnel in regard to dysmenorrhea. For instance, adolescent females suffering from dysmenorrhea in the study setting have stereotyped orthodox health care facilities as essentially managed by males, and therefore not approachable due to cultural beliefs which encourages secrecy, shyness, and a culture of silence on issues related to sexuality in general and dysmenorrhea in particular. The behaviours of adolescent females is not surprising because for decades' scholars have established strong correlation between stereotyping and information behavior. For instance, information coming from a member of the same type of class is likely to be accepted without question. In contrast, information coming from a member of another class is unlikely to be accepted even if the information is potentially useful and found to

be critical. In this sense, Chatman (1999) observed that communal members tend to reveal and share information with members of their own type.

Information behaviour: Information behaviour is the fourth Chatman's Theory of Normative Behaviour. It refers to a state in which one may or may not act on information (Burnett, Beasant, and Chatman, 2001). Broadly, information behavior describes the many ways in which communal members interact with information, in particular, the ways in which people seek and utilize information (Bates 2010).

In this sense, the construct of information behaviour provide a frame for understanding how individuals identify the need for information, motivation for information seeking, information searching skills, how people make sense of information, and how they resist, avoid, and use information. For instance, evidence from this study indicates that adolescent females suffering from dysmenorrhea experience discomfort, psychological disorder and inability to perform customary responsibilities, but the mild discomfort does not necessitate information seeking. Similarly, findings also indicate adolescent females suffering from dysmenorrhea experience severe pain but avoided orthodox medical practitioners for information. Also, findings reveled that adolescent females suffering from dysmenorrhea are aware of orthodox medical practitioners as well as traditional health practitioners as sources of information but have considered the source of information as not approachable due to cultural beliefs which encourage secrecy, shyness, and a culture of silence. Therefore, adolescent females suffering from dysmenorrhea prefer to seek help from their families, particularly from their mothers and sisters. In essence, male parents and male siblings are not the most preferred source of dysmenorrhea information. This is mainly because the respondents feel that problem associated with dysmenorrhea is gender sensitive.

References

Adedini, S.A., Odimegwu, C., Imasiku, E.N.S., and Ononokpono, D.N. (2014). Ethnic Differentials in Under-Five Mortality in Nigeria. *Ethn Health.doi:*PubMed Cros Ref.

Akande, T.M. & Monehim, J.O. (2004). Health Management Information System in Private Clinics in Ilorin, Nigeria. *Nig Med Pract*, *46*:102-7

Akinrinola, B., et al. (2007). Sexual Behaviour, Knowledge and Information Sources of very Young Adolescents in Four Sub-Sahara African Countries: New York, United states. The African Population and Health Research Centre (APHRC) Nairobi, Kenya: *African Journal of Reproductive health,11*(3).

Akinsola, H. (2001). Fostering Hope in People Living with AIDS in Africa: TheRole of Primary Health-Care Workers, *Aust.J. Rural health*. *9*:158-165.

Bates, M.J. (2010). Information Behaviour: *Encyclopedia of Library and Information Science/coord.* Vol.3., 2381-2391

Bharawaj, S. & Patkar, A. (2004). Menstrual Hygiene and Management in Developing Countries; Taking Stock. http//www.mum.org/menhydev.htm (accessed 20.11.16)

Burnett, G., Besant, M. & Chatman, E.A. (2001). Small Worlds: Normative Behavior in Virtual Communities and Feminist Bookselling. *Journal of the American Society for Information Science and Technology*, *52*(7), 536-547

Burnett, G.,& Jaeger, P.T. (2008). Small Worlds, Lifeworld's, and Information: *The Ramifications of the Information Behaviour of Social Groups in Public Policy and the Public Sphere.* Information Research. 13(3). USA.

Chatman, E. A. (1999). A Theory of Life in the Round. *Journal of the American Society for Information Science*, *50*, 207–217.

Chatman, E. A. (2000). Framing Social Life in Theory and Research. New Review ofInformation Behavior Research: *Studies of Information Seeking in Context*, 1, 3-17.

DFID (2005). Girls' Education: Towards a Better Future for all UK: Department for International Development. <http//www.ungei.org/resouces/index_1249.html> (accessed 20.11.16)

Fehr, A.E. (2010). Stress, Menstruation and School Attendance: Effects of Water Access among Adolescent Girls in South Gondar, Ethiopia. Summary Report for CARE Ethiopia. water.care2share.wikispaces.net/file/…/CARE_A.Fehr_REPORT.pdf (accessed 15.11.16)

Grant, M.J., Lloyd, C.B., and Mensch, B.S., (2010). Gender, Absenteeism and Menstruation: Evidence from Rural Malawi. Paa2010.princeton.edu/download (accessed 20.11.16)

Jerlock M, Gaston-Johansson F, Danielson E. (2005). Living with Unexplained Chest Pain. *J Clin Nurs.*;14:956–964.

Kirkman, M., Rosenthal, D.A.& Feldman, S.S. (2002). Talking to a tiger. Fathers Reveal their Difficulties in Communication about Sexuality with Adolescents. *New Direction for Child and Adolescent Development*, *97*:57-64.

Kirk-Greene AHM., (2012). Survival and Symbiosis. In Hemba-Hilekaan. Effect of Culture on Management of Pregnant Fulani Women with Ovarian Cyst: a case report. *J Analyt Oncol.1*:10-13

US Department of health (2006). Nigeria Profile of Sexual &Reproductive Health Services Available at Primary Care Level. US Department of Defence HIV Program Nigeria.

Nnamuchi, O. (2007). The Right to Health in Nigeria. "Right to Health in the Middle east". Project Law School, University of Aberdeen. Draft Report December 2007. (Accessed 16.11.16), Available from:http//www.abdn.ac.uk/law/hhr.shtml.

NPC & ICF Macro, (2008). Abuja Nigeria: Nigeria Demographic and Health Survey.

Omoruan AI., Bamidele, AP., and Phillips OF., (2009). Social Health Insurance and Sustainable Healthcare Reform in Nigeria. *Ethno Med*. *3*:105-10

Oster, E., &Thornton, R. (2011). Menstration, Sanitary, Product, and School Attendance: Evidence from a Randomised Evaluation. *Am. Econ. J.*: *Appl. Econ., 3*(1), 91-100

Schnurr, P.P., Lunney, C.A., Bovin, M.J. & Marx, B.P. (2009). Posttraumatic Stress Disorder and Quality of Life: Extension of Findings to Veterans of the Wars in Iraq andAfghanistan. *Clin Psychol Rev., 29*:727–35.

UNICEF (2008). Girls' Education Campaigns. <http//www.unicef.org/education/campaign.html> (accessed 21.11.16)

Wall, L.L. (1998). The Social Context of Maternal Morbidity and Mortality Among Hausa of Northern Nigeria. *Studies in family planning*, *29*:341-59.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This Chapter providesa summary of the study, summary of the major findings, conclusion and recommendations as well as suggestion for further study.

5.1 Summary of the Study

The study exploredthe information needs and preferred information sources as perceived by adolescent females suffering from dysmenorrhea in Giwa Local Government Area of Kaduna State. This research from the first Chapter, introduced the problems from which this research arose. The research problemarises to the following research questions: What are the information needs of adolescent females in Giwa Local Government Area suffering from primary dysmenorrhea? What information sources do adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area consult to manage the ailment? What sources of information do adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area are aware of but refuse to access? What factors are responsible for adolescent females suffering from primary dysmenorrhea not accessing sources of information they feel are important? How Chatman's Theory of Normative Behaviour doesexplain the information behaviour of adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area?

Furthermore, in Chapter three,the researcher discussed the methods used in carrying out this research. Hence, the methodology used for this research is qualitative research method. Finally, Chapter four contains the analysis and findings organized and transcribed using thematic analysis for meanings and answers to be extracted.

5.2 Summary of the Major Findings

Based on the data collected and analyzed for this study, the following are the major findings:

1. This study revealed that adolescent females suffering from primary dysmenorrhea in Giwa Local Government Area needs information to overcome discomfort, psychology disorder and inability to perform customary responsibilities.
2. The study identified family and friends as preferred source of dysmenorrhea information in Giwa Local Government Area. Adolescent females suffering from primary dysmenorrhea felt safe and comfortable to seek help from their mothers and sisters. Male parents and male siblings are not the most preferred sources of dysmenorrhea information.
3. It was discovered that adolescent females suffering from dysmenorrhea in Giwa Local Government Area are aware of orthodox and unorthodox health practitioners as important sources of information but refuse to access them. Nevertheless, the respondents reported dysmenorrhea as interfering with their health, well-being and quality of life.
4. The study revealed inhibition, shyness, availability of opposite sex health workers and financial reasons as the major factors which hindered adolescent females suffering from primary dysmenorrhea not consulting dysmenorrhea sources of information they feel it's important. However, one of the respondents revealed that her husband doesn't permit her to consult health professionals as source of dysmenorrhea information.
5. Finally, the finding conforms with the constructs of Chatman's Theory of Normative Behaviour, in areas like collective understanding of issues related to sexuality and menstruation. Adolescent females discussing issues related to

sexuality will be labeled as “disgraceful or useless”. Also, adolescent females in Giwa Local Government Area perceived orthodox practitioners as “males”. As a result of this, they don’t consult orthodox practitioners for help.

5.3 Contributions to Knowledge

This study is a significant contribution to the existing literature on adolescent females’ everyday life health information behaviour in general. More specifically,

1. The study is highly significant because it is the first study of information behaviour of adolescent females suffering from primary dysmenorrhea in Northern Nigeria and it contributes to knowledge of everyday life health information behaviour of adolescent females. The present study confirms that the choice of sources in everyday life health information is based on credibility, trust and ease of access.
2. The study illustrates the individual information needs of adolescent females suffering from primary dysmenorrhea in Giwa local Government Area of Kaduna State. Distinguishing between individual needs and wider needs is important in the planning and provision of local health services.

5.4 Limitations of the Study

In the course of conducting the fieldwork phase of the research, the researcher encountered some key challenges. The first challenge was that of the reluctance and noncompliance to the ethics and schedules of the work by some of the prospective participants who were not willing to participate in the study. This has, in real sense of it; challenged the expectation of meeting up with the required period of conducting the research by elongating the duration of the study beyond the initial estimation of the researcher. The second challenge was that of financial constraint which hugely imposed some restrictions on offsetting some of the cost implications that come with the field

conduct of the research. In this regard, the distance between the researcher's place of residence and the area of study where the data collection was designated to hold, is far and thus required the need for vehicular movement. The researcher had to fuelthe car used on several occasions and even personally felt compelled to prepare some refreshment and hand-on gift to the participants considering the desired need to create an enabling environment for the respondents to feel free and comfortable while responding to the field questions. The third challenge was also that of Work-Study Leave given to the researcher by her place of employment. This has actually challenged the total commitment requisite of the research work as the researcher was confronted at times with the crisis of priorities as the demand was too high on the part of her duties and obligations with employees and that of the needed time and comforts required accomplishing the task of conducting the research work.

5.5 Conclusion

The studyconcludes that information needs of adolescent females suffering from primary dysmenorrhea should be given due considerations in order to help cope with the challenges associated with the ailment. The study also identifies and describes the reasons why adolescent females suffering from dysmenorrhea do not seek professional healthcare for management of dysmenorrhea. A diverse sample of adolescent females who do not seek any professional treatment was provided an opportunity to describe their choices not to seek healthcare in their own words. The study sought to understand adolescent females' reasons as a foundation for designing strategies to promote health care seeking, thereby leading to improved dysmenorrhea management options.

5.6 Recommendations

In view of the foregoing findings, the study makes the following recommendations that:

1. Health information professionals and other stakeholders should aim to develop services to match the needs of the local populations. Ensuring that access to treatment meets identified needs.
2. In respect to the findings that reveal that adolescent females suffering from primary dysmenorrhea do not consulthealth professionals as source of information to manage the ailment because menstruation is shrouded in culture of secrecy, silence and cultural inhibition. Therefore, health information providers should embark on intensely creating awareness to the public through displaying posters on risk factors of dysmenorrhea all over the community and hospital premises as they have done on other conditions like HIV/AIDS. Leaflets on dysmenorrhea should be provided in local languages to all adolescent females in Giwa Local Government Area.
3. The study identified family and friends as sources of information adolescent females consult to manage the ailment. Adolescent females often tend to relate with one another, this form of association helps them to discuss their problems freely, thus they are able to alleviate the pain associated with their condition. Knowing this, social networking will help in establishing connections among adolescent females. This type of network can be strengthened and empowered by the local authority to mount campaign against the incidence of dysmenorrhea.
4. Appropriate counselling and management should be instituted among adolescent females in Giwa Local Government Area of Kaduna State to help them cope with the challenges of primary dysmenorrhea. Information and support should also be extended to parents, school peer leaders, school libraries, and hostel administrators in order to address the reproductive health needs of adolescent female students.

5. Health information professionals, policy makers and public health officers should include adult males among their target audiences in order to educate them on the consequences and avenues for seeking help in relation to the ailment.

5.7 Suggestions for Further Study

1. Lack of husband permission is one of the factors that contributed to adolescent females suffering from dysmenorrhea for not consulting sources of dysmenorrhea information.,Arising from this finding, future research needs to be conducted to "explore the perception of adult males about dysmenorrhea in Giwa Local Government Area of Kaduna State".
2. Poverty has been identified as one of the factors that hindered adolescent females suffering from dysmenorrhea for not accessing sources of dysmenorrhea information. Arising from this finding, a study needs to be conducted to find out "the role of poverty in accessing health facilities in Giwa Local Government Area of Kaduna State".

BIBLIOGRAPHY

Abdullahi, A.A., Senekal, A., Schalekamp, C.V., Amzat, J., Saliman, T. (2012). Contemporary Discourses in Qualitative Research: Lessons for Health Research in Nigeria. *Journal of Public Health and Epidemiology, 3*(5): 204-209.

Adedini, S.A., Odimegwu, C., Imasiku, E.N.S. & Ononokpono, D.N. (2014). Ethnic Differentials in Under-Five Mortality in Nigeria. *Ethn Health*.doi: PubMedCross Ref

Adegbite, O. A., Omolaso, B., Seriki, S. A., Akpabio, N. (2016). Prevalence of Dysmenorrhea and Menstrual Bleeding in Relation to Packed Cell Volume Among Female Students of Bingham University. *International Invention Journal of Medicine and Medical Sciences,* 3(2), p. 21-31. Available from http://internationalinventjournals.org /journals /IIJMMS

Adler, M. (2013). *Gender Expression in a Small World: Social Tagging of Transgender Themed*Books. Lexington, KY 40506-0224 melissa.adler@uky.edu

Agrawal A.K. (2010). A Study of Dysmenorrhea During Menstruation in Adolescent Girls: *IndianJ Community Med*.;35:59–164. [PMC free article][PubMed] .

Akande, T.M. & Monehim, J.O. (2004). Health Management Information System in Private clinics in Ilorin, Nigeria. *Nig Med Pract*, *46*:102-7

Akinnubi, C. F. (2016). Influence of Dysmenorrhea and Menorrhagia on Academic Performance Among Female Students in Tertiary Institutions in Ondo State Nigeria. doi:10.5430/wjss. v3n2p34

Akinrinola, B., et al. (2007). Sexual Behaviour, Knowledge and Information Sources of Very Young Adolescents in Four Sub-Sahara African Countries: New York, United States. The African Population and Health Research Centre (APHRC) Nairobi, Kenya: *African Journal of Reproductive Health,11*(3).

Akinsola, H. (2001). Fostering Hope in People Living with AIDS in Africa: The Role of Primary Health-Care Workers, *Aust.J. Rural Health*. *9*:158-165.

Banikarim, C., Chacko, M.R. & Kelder, S.H. (2000). Prevalence and Impact of Dysmenorrhoea on Hispanic Female Adolescents: *Archives of Pediatrics and Adolescent Medicine*, *154*, 1226-1229.

Bates, M.J. (2010). Information Behaviour: *Encyclopedia of Library and Information Science/coord.* Vol.3., 2381-2391

Bertaux, D. (1981). From the Life-History Approach to the Transformation of Sociological Practice. *In Bertaux Daniel(Ed), Biography and Society: the Lifehistory Approach in the Social Science.* London: Sage. (pp.29-45).

Bharawaj, S. & Patkar, A. (2004). Menstrual Hygiene and Management in Developing Countries; Taking Stock. http//www.mum.org/menhydev.htm (accessed 20.11.16)

Boyatzis, R.E. (1998). Transforming Qualitative Information: *Thematic Analysis and Code Development*. Sage Publication

Brinkmann, S. (2006). Questioning Constructionism: Toward an Ethics of Finitude. *Journal of Humanistic Psychology, 46*(1), 92-111.

Bryan, M (2013). Qualitative Research: Sampling and Sample Size Considerations. *School of Psychology Review*, 27: 260-222.

Bubien, R.S, Knotts-Dolson, S.M., Plumb, V.J. & Kay, G.N. (1996). Effect of Radiofrequency Catheter Ablation on Health-Related Quality of Life and Activities of Daily Living in Patients with Recurrent Arrhythmias. *Circulation,94*:1585–91

Burman, E. & Parker, I. (Eds). (1993). *Discourse Analytic Research: Repertoires and Readings of Texts in Action*. New York: Routledge.

Burnett, G., & Nocasian, M. (2008). A Romania of the Imagination: Formula As, Virtual Community, and Normative Behavior. *First Monday*, 13, 11 – 13.

Burnett, G., Besant, M. & Chatman, E.A. (2001). Small worlds: Normative Behavior in Virtual Communities and Feminist Bookselling. *Journal of the American Society for Information Science and Technology, 52*(7), 536-547

Burnett, G., Jaeger, P.T. & Thompson, K.M. (2008). Normative Behavior and Information: The social Aspects of Information Access. *Library & Information Science Research, 30*(1), 56-66.

Burnett, G.,& Jaeger, P.T. (2008). Small Worlds, Lifeworld's, and Information: *The Ramifications of the Information Behaviour of Social Groups in Public Policy and the Public Sphere*. Information Research. 13(3). USA.

Burr, V. (1995). *An Introduction to Social Constructionism*. London: Routledge.

Campbell, M.A. & McGrath, P.J. (1999). Non-pharmacologic Strategies Used by Adolescents for the Management of Menstrual Discomfort. *Clin J Pain., 15*, 313–20. http://dx.doi.org/ 10.1097/00002508-199912000-00008

Case, G.O., Andrews, J.E., Johnson, J.D. & Allard, S.L. (2005). Avoiding Versus Seeking: TheRelationship of Information Seeking to Avoidance, Blunting, Coping, Dissonance, and Related Concepts. *J Med Libr Assoc., 93*(3)

Creswell, J. (1998). *Qualitative Inquiry and Research Design: Choosing Among Five Traditions.* Thousand Oaks, CA;Sage.

Chatman, E.A. (1999). A Theory of Life in the Round. *Journal of the American Society for Information Science, 50*, 207–217.

Chatman, E.A. (2000). Framing Social Life in Theory and Research. New Review ofInformation Behavior Research: *Studies of Information Seeking in Context*, 1, 3-17.

Clayton, A., & Thorne, T. (2000). Diary Data Enhancing Rigor: *Analysis Framework and VerificationTools. Journal of Advanced Nursing*. Hull Enland. 32(6), 1514-1521

Cohen D. & Crabtree B (2008). Qualitative Research Guidelines Project: *Robert Wood Johnson Foundation:*Retrieved at http://www.qualres.org/HomeTria-html on 22/06/16

Cohen, L. Manion, L. and Morrison, K. (2007). *Research Methods in Education*. 6th Edition. London: Routledge.

Crotty, M. (1998). TheFoundations of Social Research:*Meaning and Perspective in the Research Process*. London: Sage Publications.

Dawood M.Y. (2008). Overall Approach to the Management of Dysmenorrhea: Department of Obstetrics and Gynecology, Baystate Medical Center, Tufts University School of Medicine, Springfield, Massachusetts, USA (ISSN: 1756-2228); DOI

Dawood, M.Y. (1985). Dysmenorrhoea. *Journal of Reproductive Medicine*, *30*, 154-167.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (1994). *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage.

Denzin, N.K & Lincoln, Y.S. (2003). Introduction: The Discipline and Practice of Qualitative Research. In: N.K.Denzin & Y.S.Lincoln (Eds.), *The Landscape of Qualitative Research. Theories and Issues*, (pp. 1-45). Thousand Oaks: Sage Publications.

DFID (2005). Girls' Education: Towards a Better Future for all UK: Department for International Development. <http//www.ungei.org/resouces/index_1249.html> (accessed 20.11.16)

Doan, R.E. (1997). Narrative Therapy Postmodernism, Social Constructionism and Constructivism: Discussion and Distinctions. *Transactional Analysis Journal, 27*(2), 128-133

Durain, D. (2004). Primary Dysmenorrhea: Assessment and Management Update. *Journal of Midwifery & Women's Health, 49*, 520-528.

Durrheim, K. & Wassenaar, D. (1999). Putting Design into Practice: Writing and Evaluating Research Proposals. In M. Terre Blanche & K. Durrheim, (Eds.), *Research in Practice*, (pp. 55-71).

Elo, S. & Kynga, S.H. (2008). The Qualitative Content Analysis Process: *Journal of Advanced Nursing*, *62*(1), 107–115.

Fagring, A.J., Gaston-Johansson, F. & Danielson, E. (2005). Description of Unexplained Chest Pain and its Influence on Daily Life in Men and Women. *Eur J Cardiovasc Nurs.*, *4*:337–344.

Fehr, A.E. (2010). Stress, menstruation and School Attendance: Effects of Water Access Among Adolescent Girls in South Gondar, Ethiopia. Summary Report for CARE Ethiopia. water.care2share.wikispaces.net/file/…/CARE_A.Fehr_REPORT.pdf (accessed 15.11.16)

Fisher, K.E., Durrance, J.C. & Hinton, M.B. (2004). Information Grounds and the Use of Need- Based Services by Immigrants in Queens, New York: A Context-Based, Outcome Evaluation Approach. *Journal of the American Society for Information Science and Technology : JASIST*, *55*(8), 754.

Freedman, J. & Combs, G. (1996). *Narrative therapy: The social construction of preferred relatives*. New York: Norton.

Frey, L.R., Carl, H., Botan, J. & Gary, L.K. (2000). *Investigating Communication: An Introduction to Research Methods*. 2nd ed. Boston: Allyn and Bacon.

Gagua, T., Besarion, T. & Gagua, D. (2013). Pain and Quality of Life of Adolescents with Primary Dysmenorrhea in Tbilisi, Georgia, 2008. Cross Sectional Study. *Revista Colombiana de Obstetricia y Ginecología*, *64*(2). 154-162

Graneheim, U.H., & Lundman, B. (2004). Qualitative Content Analysis in Nursing Research: Concepts, Procedures and Measures to Achieve Trustworthiness. *Nurse Education Today*, 24(2), 105-112.

Gergen, K.J. (1985). The Social Constructionist Movement in Modern Psychology. *American Psychologist, 40*(3), 266-275.

Gergen K.J. (1999). *An Invitation to Social Constructionism*. London: Sage

Gergen, K.J. (2006). Social Construction as Ethics of Infinitude: Reply to Brinkmann. *Journal of Humanistic Psychology, 46*(2), 119-125.

Gordley, L.B., Lemasters, G., Simpson, S.R. & Yiin, J.H. (2000). Menstrual Disordersand Occupational, Stress, and Racial Factors Among Military Personnel. *Journal of Educational and Environment Medicine*, *42*(9), 871-881

Grant, M.J., Lloyd, C.B.& Mensch, B.S. (2010). Gender, Absenteeism and Menstruation: Evidence from Rural Malawi. Paa2010.princeton.edu/download (accessed 20.11.16)

Guba, E. & Lincoln, Y. (1994). 'Competing Paradigms in Qualitative Research', in Denzin, N. and Lincoln, Y. (editors) *Handbook of Qualitative Research*, Thousand Oaks: Sage Publications, pp.105-117.

Gumanga, S.K. & Kwame-Aryee, R. (2012). Prevalence and Severity of Dysmenorrhea Among some Adolescent Girls in a Secondary School in Accra, Ghana.*Postgrad Med J Ghana*, 1:1-6.

Guylaine, L. & Odette, P. (2005). Primary Dysmenorrhea Consensus Guideline: *Journal of Obstetrics and Gynaecolgy* Canada. 169

Hacker, N.F., Gambone, J.C., Hobel, C.J., Hacker, J. & Moore, S. (2010). *Essentials of Obstetrics and Gynecology* (5th ed.). Philadelphia, PA: Saunders/Elsevier; 256–7.

Heckathorn, Douglas D. (2002). Respondent-Driven Sampling: Deriving Valid Population Estimates from Chain-Referral Samples of Hidden Populations. *Social Problems*. Boston, MA: Blackwell publishing; 49: 11-29.

Henning, D. (2005). Courage Under Fire: Stories of Adolescents WhoSurvived the Destruction of Divorce. Unpublished Master's Dissertation: University of South Africa, Pretoria.

Henry, G.T. (1990). *Practical Sampling*. 21. London: Sage Publications.

Hougton, C., Casey, D., Shaw, D. & Murphy, K. (2013). Rigour in Qualitative Case-Study Research: *Nurse Researcher*. 20(4).

Ifidon, S.E. & Ifidon, E.I. (2007). *Basic Principles of Research Methods*. Benin-City: Good News Express Communications

Iliyasu, Z., Galadanci, H.S., Abubakar, I.S., Ismail, A.O. & Aliyu, M.H. (2012). Menstrual Patterns and Gynecologic Morbidity Among University Students in Kano, Nigeria.*J Pediatr Adolesc Gynecol, 25*:401-406.

Jerlock M., Gaston-Johansson F., &Danielson E.(2005). Living with Unexplained Chest Pain. *J Clin Nurs.*;14:956–964.

Joshi, T., Kural, M., Agrawal, D. P., Noor, N. N., Patil, A., (2014). Primary Dysmenorrhea and its Effect on Quality of Life in Young Girls. *International Journal of Medical Science and Public Health,4*(3), 312-318.

Kamatenesi-Mugisha, M., Oryem-Origa, H. & Olwa-Odyek (2007). Medicinal Plants Used in Some Gynecological Morbidity Ailments in Western Uganda. *African Journal of Ecology, 45*(1), 34-40.

Kirk-Greene, A.H.M. (2012). Survival and Symbiosis. In Hemba-Hilekaan. Effect of Culture on Management of Pregnant Fulani Women with Ovarian Cyst: A Case Report. *J Analyt Oncol.1*:10-13

Kirkman, M., Rosenthal, D.A.& Feldman, S.S. (2002). Talking to a Tiger. Fathers Reveal their Difficulties in Communication About Sexuality with Adolescents. *New Direction for Child and Adolescent Development, 97*:57-64.

Klein, H. & Myers, M., (1999), "A Set of Principals for Conducting and Evaluating Interpretive Field Studies in Information Systems". *MIS Quarterly*, 23(1), 67-94.

Kusch, M. (2010). Social Epistemology: The Routledge Companion to Epistemology, London: Routledge, 874-884

Kuzel, A.J. (1992). Sampling in qualitative inquiry. In B. F. Crabtree & W. L. Miller (Eds.), *Doing qualitative research* (pp. 31-44). Newbury Park, CA: Sage.

Lambert, S.D. & Loiselle, C.G. (2007). Health Information-Seeking Behavior. *Qualitative Health Research, 17*, 8

Landry, C.F. (2014). The Impacts of Time Pressure and Emotion on the Information Behavior of High Stakes Decision Makers: *The Home Buying Experience. Information School*, University of Washington

LeCompte, M.D. & Preissle, J. (1993). *Ethnography and Qualitative Design in Educational Research*(2nd ed.). New York: Academic Press.

Lee, A. S., and Baskerville, R.L. (2003). "Generalizing Generalizability in Information System Research," *Information System Research* (14:3), pp.221-243.

Leininger, M. (1994). Evaluation Criteria and Critique of Qualitative Research Studies: *Critical Issues in Qualitative Research Methods.* Sage. 95-115

Lincoln, Y.S and Guba, E.G.(1985). Naturalistic Inquiry. Baverly Hills, CA: Sage.

Lincoln, Y.S & Guba, E.G. (2002). Competing Paradigms in Qualitative Research" in Denzin and Lincoln (eds.), *Handbook of Qualitative Research*, Sage, Thousand Oaks.

Liong, C.J. (2006). The Association of Primary Dysmenorrhea with the Perception of Pain, Work Stress and Lifestyles of Nurses. (Thesis). University of Hong Kong, Pokfulam, Hong Kong SAR. Retrieved from http://dx.doi.org/ 10. 535 3/th_b4501182

Llewellyn, G., Sullivan, G. & Minichiello, V. (1999). Designing Health Research: Sampling in Qualitative Research. In V. Minichiello, G. Sullivan, K. Greenwood, & R. Axford (Eds.), *Handbook for Research Methods in Health Sciences*(pp. 174-199). Sydney, Australia: Addison-Wesley.

Long, T. & Johnson, M. (2000). Rigour, Reliability and Validity Research:*Clinical Effectiveness in Nursing.* 4(1), 30-37

Lu, I. (2010). Dysmenorrhea and Related Factors in Taiwanese Adolescent Girls. Ph.D., The University of Texas at Austin, 2010, 175 pages; 3417470

MacNealy, M.S. (1999). *Strategies for Empirical Research in Writing*. New York: Longman.

Marjoribanks J, Proctor M, Farquhar C, & Derks RS. (2010). Nonsteroidal Anti-Inflammatory Drugs for Dysmenorrhoea. In *Cochrane Database of Systematic Reviews*. John Wiley & Sons, Ltd; doi:10.1002/14651858.CD001751.pub2

Mason, J. (2002). Qualitative researching, 2nd edition. London: Sage.

Merriam, S.B. (1998). *Qualitative Research and Case Study Applications in Education*. San Francisco: Jossey-Bass Publishers.

Miles, M. & Huberman, M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*(2nded.). Thousand Oaks, CA: Sage.

Morrow, S.L. (2005). Quality and Trustworthiness in Qualitative Research in Counseling Psychology. *Journal of Counselling Psychology: Special Issue: Knowledge in Context, 52*(2), 250-260.

Morse, Janise M. (1994). *DesigningFunded Qualitative Research*. In Norman K. Denzin & Yvonna S. Lincoln (Eds), *Handbook in Qualitative Research*. 2nd ed., 220-35. Thousand Oaks, CA:Sage.

Morse, Janise M. (2000). Determining Sample Size. *Qualitative Health Research*, 5(3), 147-19

Musa, I.A. (2013). Resistance of Polio Immunization Information in Kano, Nigeria. *A Dissertation Presented to School of Library and Information Management*, Emporia State University, Kansas. USA

Nnamuchi, O. (2007). The Right to Health in Nigeria. "*Right to Health in the Middle East". Project Law School, University of Aberdeen.* Draft Report December 2007. (Accessed 16.11.16), Available from:http//www.abdn.ac.uk/law/hhr.shtml.

NPC & ICF Macro, (2008). Abuja Nigeria: Nigeria Demographic and health survey.

Omoruan AI., Bamidele, AP., and Phillips OF., (2009). Social Health Insurance and Sustainable Healthcare Reform in Nigeria. *Ethno Med. 3*:105-10

Oster, E. &Thornton, R. (2011). Menstruation, Sanitary, Product, and School Attendance: Evidence from a Randomized evaluation. *Am. Econ. J.: Appl. Econ., 3*(1), 91-100

Patel, V., Tanksale, V., Sahasrabhojanee, M., Gupte, S. & Nevrekar, P. (2006). TheBurden and Determinants of Dysmenorrhea: a Population-Based Survey of 2262 Women inGoa, India BJOG. *An International Journal of Obstetrics and Gynecology, 113,* 453 463.

Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods*. Thousand Oaks, CA: Sage.

Patton, M.Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Pembe, AB. & Ndolele, NT. (2011). Dysmenorrhea and Coping Strategies Among Secondary School Adolescents in Ilala District, Tanzania. *East Africa V Public Health, 8(3) 232-6.*

Pendleton, V. & Chatman, E.A. (1998). Small World Lives: *Implications for the Public Library. Library Trends, 46*(4), 732-752.

Polit, D.F. & Beck, C.T. (2006). International Differences in Nursing Research: *Journal of Nursing Scholarship.* 41, 44-53

Rapmund, V.J. (1996). Social Support and Depression in Women: *A Constructivist Approach. Unpublished Master's Dissertation*: University of South Africa, Pretoria.

Renne, E.P. (2010). The Politics of Polio in Northern Nigeria: Bloomington, IN: Indiana University Press.

Ritchie, J., Lewis, J. & Elam, G. (2003). Designing and Selecting Samples. In Jane Ritchie & Jane Lewis (Eds.), *Qualitative Research Practice. A guide for Social Science Students and Researchers* (pp.77-108) Thousand Oaks, CA: Sage.

Rorty, R. (1999). *Philosophy and Social Hope*. London: Penguin.

Sandelowski, M. & Barroso, J. (2003). Writing the Proposal for a Reading Qualitative Resaech Methodology Poject: *Qualitative Health Research.* 13(6), 781-820. Sage.

Schnurr, P.P., Lunney, C.A., Bovin, M.J. & Marx, B.P. (2009). Posttraumatic Stress Disorder and Quality of Life: *Extension of Findings to Veterans of the Wars in Iraq and Afghanistan. Clin Psychol Rev., 29*:727–35.

Sey, J. (1999). *Postmodernism: a Critical Practice? Research in Practice: Applied Method for the Social Sciences*. P. 462-475. Cape Town: UCT press.

Slevin, E. & Sines, D. (1999). Enhancing the Truthfulness, Consistency and Transferability of a Qualitative Study: *Utilizing a Manifold of Approaches. Nurse Researcher;* London. 7(2). RCN Publishing Company.

Sliverman, D. (2010). Doing Qualitative Research. 3rd ed. London. Sage

Spink, A. & Cole, C. (2004). A Human Information Behavior Approach to the Philosophy of Information. *Library Trends, 52*(3), 373–380.

Sprenkle, D.H. & Piercy, F.P. (2005). *Research Methods in Family Therapy*. New York: The Guilford Press.

Straus, A. & Corbin, J., (2008). Basics of Qualitative Research: *Techniques to Developing Grounded Theory*. 3rd ed. Los. Angeles, C.A: Sage.

Tashakkori, A. & Teddlie, C. (Eds.). (2003). *Handbook of Mixed Methods in Social &Behavioral Research*. Thousand Oaks, CA: Sage.

Testa, M.A. & Simonson, D.C. (1996). Assessment of Quality-of-Life Outcomes. *N Engl J Med, 334*:835–40

Tobin, G.A., & Begley, C.M. (2004). Methodological Rigour Within a Qualitative Framework. *Journal of Advanced Nursing.* 48(4), 388-396.

Tuckman, B.W. (2011). Conducting Educational Research. New York: Harcourt Brace Jovanovich

UNICEF (2008). Girls' Education Campaigns. <http//www.unicef.org/education/campaign.html> (accessed 21.11.16)

US Department of health (2006). Nigeria Profile of Sexual &Reproductive Health Services Available at Primary Care Level. US Department of Defense HIV Program Nigeria.

Wahyuni, D. (2012). The Research Design Maze: Understanding Paradigms, Cases, Methods and Methodologies; Journal of Applied Management Accounting Research, Vol.10, no. 1 winter. Pp.69-80

Wall, L.L. (1998). The Social Context of Maternal Morbidity and Mortality Among Hausa of Northern Nigeria. *Studies in Family Planning, 29*:341-59.

Walraven, G., Ekpo, G., Coleman, R., Scherf, C., Morison, L. & Harlow, S.D. (2002) Menstrual Disorders in Rural Gambia. *Studies in Family Planning,33*, 261-268.

Wang, L., Wang, X., Wang, W., Chen, C., Ronnennberg, A.G. & Guang, W. (2004). Stress and Dysmenorrhea: a Population Based Prospective Study. *OccupEnviron Med., 61*:1021–6.

Wijesiri, H.S.M.S.K. & Suresh, T.S. (2013). Knowledge and Attitudes Towards Dysmenorrhea Among Adolescent Girls in an Urban School in Sri Lanka.*Nurs Health Sci.*, 15:58-64.

Willig, C. (2001). *Introducing Qualitative Research in Psychology*. Buckingham: Open University Press.

Wilson, T.D. (1999). Models in Information Behavior Research. *Journal of Documentation, 55*(3), 249-270.

Wilson, T. D. (2002). HumanInformation Behavior:*Journal of Documentation, 3*(2), 1-5.

Wong, L.P. (2011). Attitudes towards Dysmenorrhea, Impact and Treatment Seeking Among Adolescent Girls: a Rural School-Based Survey.*Aust J Rural Health*, 19:218 223.

Worrall, A. (2015). Social Digital Libraries: *Their Roles Within and Across Social Worlds, Information Worlds, and Communities,*Florida State University College of Communication and Information. +1 (850) 274-5838.

Yin, R. K. (2014). Case Study Research: Design and Methods. 5th ed. London: Thousand Oaks. CA:Sage publications.

APPENDIX A

PARTICIPANT VERBAL CONSENT

Good day, thank you for acquiescing to my request to participate in this interview. I am Amina Muhammad a master student from department of library and information science, Ahmadu Bello University, Zaria. I am undertaking a research on information behaviour of adolescent females suffering from dysmenorrhea in Giwa Local Government area of Kaduna State.

This interview will be in form of questions and answers. I would like to remind you that there is no right or wrong answers in this interview. I am interested in knowing your views and understanding, so please feel free to share your point of view, regardless of what your answer may be, it is very important that we hear your opinion. I requested you to be audible when answering any questions. A tape recorder will be used to document the interactions due to the importance placed on every piece of detail provided from you. Notwithstanding, jottings will still be done. Please feel free to respond to questions posed and where you need more clarifications call my attention, and note as usual, all answers will be given confidential treatment. Please, do you have any question before we get started?

Thank you.

APPENDIX B

INTERVIEW GUIDE

Section A: Biodata Information

1. Please can you briefly tell me your age and marital status?

Section B: What are the information needs of adolescent females suffering from dysmenorrhea in Giwa Local Government?

1. Share with me your information needs before menstruation
2. Share with me yourinformation needsduring menstruation
3. Share with me yourinformation needsafter menstruation

Section C: What information sources do adolescents' females suffering from dysmenorrhea in Giwa Local Government consult to manage the ailment?

4. Please Tell me the various sources you used to consult in managing problems associated with dysmenorrhea
5. Please can you tell me the reasons why you consulted those sources of information

Section D: What sources of information do adolescent females suffering from dysmenorrhea in Giwa Local Government are aware of but refuse to access?

6. Tell me what other sources of information you feel it's important but you fail to access

Section E: What factors are responsible for adolescent females suffering from dysmenorrhea not accessing sources of information they feel it's important?

7. Please share with me the reasons that hindered you from accessing dysmenorrhea sources of information you feel it's important

Figure 1: Graphical summary of the data analysis process

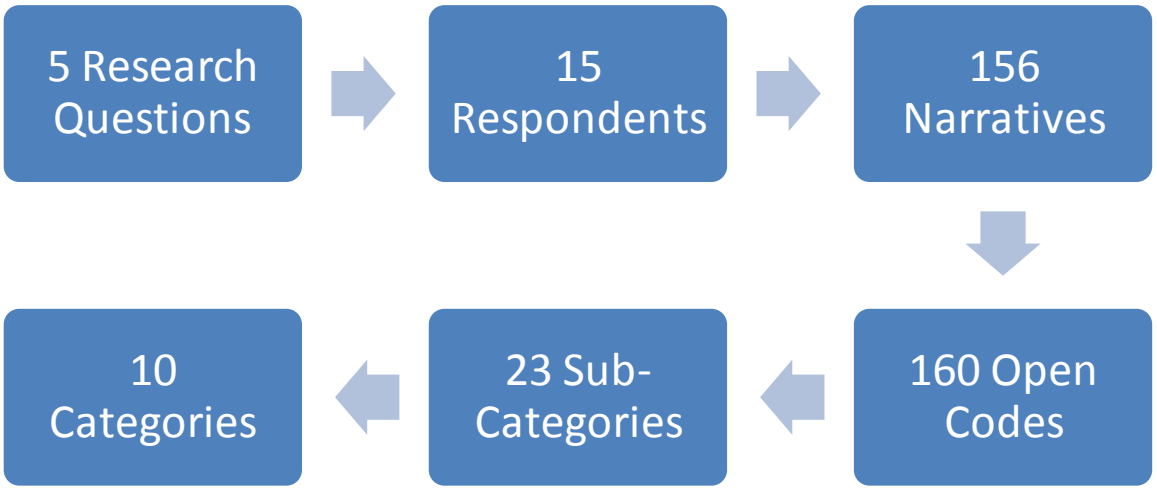


Figure 2:categories and sub-categories

Questions	Categories	Subcategories
What are the challenges of adolescent females suffering from dysmenorrhea in Giwa Local Government?	1. Discomfort	1.1 Pains 1.2 Pelvic disorder 1.3 Abdominal disorder
	2. Psychology disorder	2.1 Feeling uncomfortable 2.2 Emotional disorder
	3. Inability to perform customary responsibilities	3.1 Absent from school 3.2 Can't perform routine tasks 3.3 Lack of concentration during classes 3.4 Social phobia 3.5 Slow down activities
What information sources do adolescent females suffering from dysmenorrhea in Giwa Local Government consult to manage the ailment?	1. Family	1.1 Mothers 1.2 Sisters
	2. Friends	2.1 Female friends
	3. Health professionals	3.1 Orthodox health practitioners 3.2 Traditional health practitioners
What sources of information do adolescent females suffering from dysmenorrhea are aware of but refuse to access?	1. Heath professionals	1.1 Medical practitioner 1.2 Traditional herbalist
What factors are responsible for adolescent females suffering from dysmenorrhea not accessing sources of information they feel it's important?	1. Inhibition	1.1 Shyness 1.2 Embarrassment 1.3 Dysmenorrhea is not an issue to be discussed 1.4 Majority of health professionals are men
	2. Financial reasons	2.1 Financial reason
	3. Lack of husband permission	3.1 Lack of husband command