

**USE OF APHRODISIACS AND PERCEIVED HEALTH RISKS
AMONG WOMEN ATTENDING THE GYNAECOLOGY CLINIC
IN LAGOS STATE UNIVERSITY TEACHING HOSPITAL,
LAGOS, NIGERIA**

BY

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ABSTRACT

From time immemorial, humans have been known to use aphrodisiac substances to arouse sexual instinct or increase sexual desire and increase pleasure and performance. Women experience significantly more sexual dysfunction than men and may find it difficult to ask for professional help. This study will provide information relating to the use of aphrodisiac by women and allow women make informed decision about their sexuality. This study was designed to investigate the use of aphrodisiacs and perceived health risks among women attending the gynaecology clinic in Lagos State University teaching Hospital, Lagos, Nigeria.

The study was a descriptive cross-sectional study carried out among a total of 220 randomly selected women of reproductive age attending the gynaecology clinic at the Lagos State University Teaching Hospital. Data were collected using validated semi-structured, self-administered questionnaire. A 16-point knowledge scale was used to assess the knowledge of aphrodisiac; knowledge score of ≥ 12 was rated good, $\geq 9 < 12$ was rated fair and < 9 was rated poor knowledge. Also, a 25-point perception scale was used to determine perceived health risk of respondents on aphrodisiacs; perception score of ≤ 15 was rated poor, > 15 was rated good perception towards the health risk associated with the use of aphrodisiacs. Data were analyzed using descriptive and inferential statistics at $p \leq 0.05$ as the level of significance.

Respondents mean age was 32.4 ± 7.9 years. Many (59.5%) of the respondents were married, (64.1%) were Christians and (35.0%) were Muslims. For those who were married, 75.5% were monogamous while 24.5% were polygamous. The prevalence use of aphrodisiac substance among the 220 respondents was 16.8%. Of all the respondents, (55.9%) felt sexually aroused after use of aphrodisiac substance. Majority (67.7%) had poor knowledge, (9.6%) had fair knowledge and (22.7%) had good knowledge score on aphrodisiac substance. Out of the 50 participants who had good knowledge, 28.3% of them are between the ages of 20-29. This means the younger generation is more aware about sexual stimulants and this was reflected in the high use recorded among same group. Majority (81.8%) of the respondents had poor perception while only 18.2% had good perception. There was a significant difference between use of aphrodisiac and perception of health risk related to the

use. There was a significant difference between level of knowledge and perception of health risk related to the use of aphrodisiac.

The prevalence on use of aphrodisiacs amongst women was found to be very low and participants' perception of health risks associated with the use of aphrodisiac was recorded in this study to be poor. It is therefore recommended that women undergo thorough medical examination if need be before trying out any form of aphrodisiac to prevent predisposition to health risks.

Keyword: Aphrodisiacs, Sexual dysfunction, Sexual intercourse, women, sexual stimulants

Word count: 442

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DEDICATION

This work is dedicated to God Almighty, who in His infinite mercies has always been my Strength and my Hope.

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CERTIFICATION

This is to certify that this study was carried out by Iyanuoluwa Olajumoke ADELEYE, under my supervision in the department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan. Nigeria

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Throughout all ages, men and women have incessantly pursued every means to increase their sexual capacity or to stimulate their sexual desire. One of the most recurrent methods has been the use of aphrodisiacs (Zanolari, 2003). Aphrodisiacs are substances which enhance sexual performance or aid in the proper functioning of the male and female sex organs (Sandroni, 2001; Shamloul, 2010). Aphrodisiacs are substances that increase sex drive. A true aphrodisiac would be a substance that activates the part of the brain that controls sex drive (Zanolari, 2003). The quest for a true aphrodisiac – potion, pill or food guaranteed to enhance sexual experience, is as old as the human race itself (Sandroni, 2001).

An aphrodisiac is a substance that increases sexual desire. Many foods, drinks, and behaviors have had a reputation for making sex more attainable and/or pleasurable. Men and women have continued to use aphrodisiacs whether or not these drugs have any scientific basis of truly improving sexual satisfaction without regards to their composition, however, from a scientific standpoint, the alleged results may have been due to mere belief by their users that they would be effective i.e. the placebo effect (Garba, Abubakar, Yakasai, & Magashi, 2013).

Herbal medicines are a major source of aphrodisiacs and have been used worldwide for thousands of years by different cultures and civilizations. Traditional herbs represent an extraordinary reservoir of active ingredients which are still present in about 25% of all prescriptions of modern “Western” medicine (Zanolari, 2003). The ways in which these herbs may have been used medicinally varies and includes; oral administration, topical,

application usually to the affected area, fumigation, douching, or as amulets and charms or with incantations or prayers (Romm & Winston, 2010).

Aphrodisiacs are used recreationally for different reasons including; add to the fun, maintain an erection or wet, prolong sex, impress sexual partner, enhance self-esteem, curiosity, increase sex drive, improve sensation (Kim, Kent & Klausner, 2001). Studies indicates that those who recreationally use sildenafil citrate and have sex with men are more commonly engaged in unprotected anal intercourse, which leads to two and six times more common HIV and other sexually transmitted infections (STIs) respectively (Korkes, Costa-Matos, Gasperini, Reginato, Perez, 2008).

Aim in this study is to investigate the prevalence of use of aphrodisiacs, identify the different types of aphrodisiac substances consumed by women and also to identify the various sources of purchase and information on these products

1.2 Statement of Problem

Men, and women, have long awaited the possibility of increasing their sexual capability or arousal, by a variety of means, whereas, open discussions concerning sex and sexual activities are considered taboo and use of aphrodisiac is something that is talked about in low tones especially among women in this society (Garba *et al.*, 2013). The practice of self-medication by an increasing number of patients, the persistent advertisement of herbal aphrodisiacs as well as the invasion of the medicinal market with uncontrolled dietary supplements amplifies the potential health hazards to the community.

The use of substances to enhance sexual performance is rampant among women in our community (Garba *et al.*, 2013) and the major sources of these substances are the traditionalists who never disclose the constituents of such medications. The medical implications of such medications are most times unknown. Over time, the use of these substances either by ingestion or by application has had a perceived possibility of resulting into public health problems.

Among many other aphrodisiacs, research has shown that ‘Flibanserin’, which is an approved medication for treating low sexual desire in women, has side effects including; Sleepiness, Severe low blood pressure and fainting (Jill, 2015). Aphrodisiac users also report a higher number of sex partners and about a double fold rate in STIs, including HIV infection (Kim, Kent & Klausner, 2001).

Also, a study carried out by Abdullahi and Tukur (2013) on the effects of sexual stimulants on women in Kano, showed that 6.6% of respondents had lower abdominal pain, another 6.6% had vulval itching/rashes, 6.1% had copious vaginal discharge, 2.2% had irregular menstrual cycle after the use of any form of aphrodisiac.

Some women are married out at very young ages, when they are struggling to cope with anatomical and physiological changes occurring on their bodies, the culture of male dominance in all domestic matters in such societies makes women with sexual problems afraid of voicing out such problems for fear of husband’s rejection and divorce. They usually result to seeking help from their peers or to self-medication sometimes with serious consequences. Therefore, in a culture that accepts polygamy, women do what they think is right to keep their spouses to themselves so as to remain in monogamous relationship and where that fails, they ensure that they win the husband’s attention sexually by the use of sex boosters.

1.3 Justification of study

It was discovered that women experience significantly more sexual dysfunction than men (Audu & Ahmed, 1998) and most times, female patients may find it difficult to ask for professional help in some cultural settings. Such women may purchase sexual stimulants from non-medical sources following the advice of their friends or relatives, which may subsequently result in complications (Bassion *et al.*, 2004).

This study will enormously contribute toward the sex literature by extending our understanding of the dynamics of women’s decisions to use aphrodisiacs as well as provide

additional information relating to the unavailable literatures on the use of aphrodisiac by women. The study will also inform women on the health risks involved in the use of aphrodisiacs.

This study will;

1. Investigate the prevalence of aphrodisiac use and identify the perceived health risk from respondent.
2. Provide information for better understanding of aphrodisiacs.
3. Provide more knowledge on misconception with use aphrodisiacs.
4. Provide knowledge on the health risks and complications that may arise from the use of aphrodisiacs.
5. Inform the public on where to seek better sexual health.
6. Also, similar studies have been carried out in the Northern part of Nigeria, this study will be carried out in the South Western part of Nigeria to validate myth about Northerners been persistent users of aphrodisiacs.

1.4 Research Questions

1. What is the prevalence of aphrodisiacs use among women attending gynaecology clinic?
2. What is the level of knowledge of women attending gynaecology clinic on aphrodisiacs?
3. What are the factors influencing the use of aphrodisiacs among women attending gynaecology clinic?
4. What is the perception of the respondents on health risk on the use of aphrodisiacs?

5. What are the sources of information available to women attending gynecology clinic on aphrodisiacs?

1.5 Goal of the Study

To investigate the prevalence of use of aphrodisiacs by women as well as to identify their perception about the health risk associated with use of aphrodisiacs.

1.6 Specific Objectives

1. To determine the prevalence of aphrodisiac use among women attending gynaecology clinic.
2. To assess the level of knowledge of women attending gynaecology clinic on aphrodisiacs.
3. To identify factors influencing the use of aphrodisiacs.
4. To assess health risk perception towards the use of aphrodisiacs women attending gynaecology clinic.
5. To identify the source of information available to women on aphrodisiacs

1.7 Research Hypotheses

The following null hypotheses will be tested;

H₀₁; There is no significant difference between the age of respondents and their level of knowledge of aphrodisiacs.

H₀₂; There is no significant difference between marital status of respondents and the use of aphrodisiacs.

H₀₃; There is no significant difference between respondents' level of knowledge on aphrodisiacs and health risk perception on the use of aphrodisiacs.

H₀₄; There is no significant difference between respondents use of aphrodisiacs and their health risk perception.

1.8 Operational definition of terms

1. **Aphrodisiacs**; an aphrodisiac is defined as any food or drug or any substance that arouses the sexual instinct or increase sexual desire and increase pleasure and performance
2. **Sexual dysfunction**: refers to problems during any stage of the sexual response that prevents the individual from experiencing satisfaction from sexual activity.
3. **Reproductive age**: refers to women between the age of 18 and above

CHAPTER TWO

LITERATURE REVIEW

From time immemorial, humans have been known to use medications to enhance sexual activity. This activity is not restricted to only men but women as well (McCall & Meston, 2006). The subjective definitions of aphrodisiacs given by women depends directly on what a woman desire an aphrodisiac to do for her. For example, as woman who doesn't get sexually aroused would need an aphrodisiac to help stimulate her; a woman who loves sex would find ways to explore her sexuality, a woman who has a very sexually active partner whose sexual capability is higher than hers will use aphrodisiacs to meet up to his standard. In our cultural setting, women use aphrodisiacs to satisfy their husbands so he would not seek sexual gratifications from other woman.

The quest for a true aphrodisiac – potion, pill or food guaranteed to enhance sexual experience, is as old as the human race itself (Sandroni, 2001). Aphrodisiacs take their name from Aphrodite, the Greek goddess of love and beauty. According to Greek poet Hesiod, she was born when Uranus was castrated by his son Cronus. Cronus threw his severed genitals into the sea, and from the aphros (sea foam) arose Aphrodite (Shamloul, 2010).

The WHO estimates that in many developed countries, 70% to 80% of the population has used some form of alternative or complementary medicine including aphrodisiac substances (Kigen, Ronoh, Rotich, 2013). It is now known that the Malaysian population does have a tendency to self-prescribe herbal medicine for copious reasons (Aziz & Tey, 2007). One possible reason for frequent herbal use is a perception that Traditional Complementary Medicine is natural and therefore safer than conventional medicines (Ernst, 1998). The

emergent belief that herbs and other plant-derived compounds (phytochemicals) may contribute to sexual health, libido and even overcome sexual problems has spawned a sizable and profitable industry in the country (Rowland & Tai, 2003). Part of this recent growth may stem from the fact that these remedies are difficult to regulate, easy to obtain, and inexpensive when compared with prescription medications (Rowland & Tai, 2003).

Many people do not believe in love potions or aphrodisiacs, but countless numbers of men and women have used them down through the centuries, and there is clear proof that they are still in use today (Chauhan, Sharma, Dixit & Thakur 2014). Open discussions concerning sex and sexual activities are considered taboo and as such, aphrodisiacs usage is something that is talked about in low tones especially among women in this society (Garba *et al.*, 2013).

2.1.1 The Hindu Tradition

A mixture of powdered thorn-apple seeds, black pepper (*Piper nigrum* L., Piperaceae), long pepper (*Piper longum* L., Piperaceae) and honey, applied on the penis before coitus, is reputed to make a woman subject to the man's will. The four principles have a specific function in the aphrodisiac mixture which has a completely rational basis for its action. The thorn-apple seeds contain atropine and scopolamine, which are potent tropane alkaloids inducing an initial excitement followed by sedation and hallucinations. These two constituents are adsorbed through the mucous membranes of both the penis and the vagina, and have a central nervous system action producing behavioral effects in both partners (Hostettmann, 2000). The peppers have a counter-irritant or rubefacient action, increasing the blood flow around the area of application. In the man, this local inflammation helps the development and maintenance of an erection, while, in the woman, the irritation of the clitoris increases the sexual desire (Zanolari, 2003).

2.1.2 The China and Far-east tradition

Chinese herbal medicine frequently uses deer antlers and other parts of animals as aphrodisiacs. Organotherapy is widespread in Far-east tradition and the price of many of

these items can be very high. The ancient Chinese used animal genitals as a method to increase potency. Tiger and deer penises are still considered a delicacy today (Zanolari, 2003). The Far-east tradition devotes a particular attention to substances which generally promote longevity and particularly restore sexual vigor.

2.1.3 The Arab tradition

The Arab civilization knowledge was slowly bought back to West Europe by crusaders returning from the Holy Wars. Among the different medical books that returned, specific texts containing advice in sexual matters, prescription for sexual disorders, and lists of aphrodisiac drugs and recipes, have miraculously survived the religious intolerance of the Dark Ages (Zanolari, 2003). The aphrodisiac mixtures included different drugs, depending on the purpose or the sex of the consumer. For example, drugs that excited the sexual desire of women were: aged olive oil, orchids, garden carrot seed, turnip seed, ash of the leaf of the oleander, dry alum, magpie excrement, powdered willow leaves, and piths of fine dates. In Arab tradition, the use of hot spices applied to the sexual organs as rubefaciants was frequent (Zanolari, 2003).

There are several examples of traditional aphrodisiac medicines available in Malaysia. These include 'tongkat ali' (*Eurycoma longifolia*), 'kacip fatimah' (*Labisia pumila*), and 'ginseng' (*Panax ginseng*) however a thorough knowledge of these products is lacking (Zanolari, 2003).

2.14 The South African Tradition

KwaZulu-Natal in South Africa, is home to roughly 20% of South Africa's population. About half of the province's 9.4 million people live in rural areas, with an equal proportion unemployed (Statistics South Africa 2003). Women use 'Tiger Balm' in quite innovative ways. 'Umphumphuto', a traditional remedy usually used to heal rectal sores resulting from chronic diarrhea, is also used to 'tighten' a vagina (Scorgie, Kunene, Smit, Manzini, Chersich & Preton-Whyte 2009). This draws on local knowledge of its efficacy in closing

up a wound, thus making it a likely substance for also ‘closing’ the vagina. (‘imithi’, singular ‘umuthi’) are commonly used. These substances are obtained by consulting a local traditional healer, detailing the particular relationship problem faced and then receiving the appropriate remedy. Imithi take many different forms, from roots, bark and leaves, to animal parts and ground minerals. The use of bodily fluids to activate the powers of imithi was frequently mentioned by participants in a study carried out by (Scorgie *et al.*, 2009), although it was difficult to establish actual extent of use. Blood, vomit, saliva, sweat, vaginal fluids and urine may all be added to ‘imithi’ to draw out their effects and to ‘personalise’ them. This mixture of traditional medicines and bodily fluids may then be added covertly to food or drinks prepared for male partners or mixed into a woman’s bathing water. Also used by KwaZulu-Natal women is ‘snuff’. A small pinch is inserted into the vagina or smeared around the vulva several hours before sex is anticipated. Inserting snuff into the vagina creates a burning or itching sensation in the vulva. Women also make small incisions around the pubic area, particularly on the clitoris and labia, and then rub herbal medicines into the incisions. While other women used aphrodisiac substances to achieve wetness of the vagina, KwaZulu-Natal women ingested substances believed to have aphrodisiacal effects to diminish vaginal lubrication or enhance sexual pleasure by making a woman hot. Some women reported using extracts of African potato (*Hypoxis hemerocallidea*). The potato is boiled in water, sifted and then ingested daily. Although they described excess lubrication as largely undesirable, implicit in their explanation is the fact that they consider a degree of moisture normal. The study also revealed that women use alum to make the vagina tighter and sometimes ice to reduce the swelling from application of substances used to tighten the vagina. This is done to create an illusion of being a virgin (Zanolari, 2003).

2.1.5 The African Tradition

In northern parts of Nigeria, it is a cultural practice in some places to give young brides traditional sexual stimulants just before their marriage. However, the drugs are also openly marketed at markets, naming and marriage ceremonies. A lot of the drugs are derived from

preparations such as herbs, leaves, honey or soup ingredients including okro, and dried baobab leaves. Some animal parts are also used as stimulants. The preparations are taken orally, inserted into the vagina, used topically, or as a combination (Abdullahi & Tukur, 2013).

2.2 Overview of Female Sexual Dysfunction

Sexual dysfunction refers to persistent or reoccurring problems during any stage of the sexual response that prevents the individual or couple from experiencing satisfaction from sexual activity and causes distress. (Abdullahi & Tukur, 2013). Women today are most likely to seek aphrodisiac herbs for the treatment of sexual debility, such as in the perimenopausal years, rather than simply to increase an otherwise healthy sex drive (Romm & Winston, 2010). More than 43% of American women are affected with the medical condition known as Female sexual dysfunction (FSD) (Billups, 2002).

In 1998, the American Foundation of Urologic Disease (AFUD) Consensus Panel classified FSD into four different categories:

1. Sexual Desire Disorder / Hypoactive Sexual Desire Disorder (HSDD); characterized by a reduced or absent of interest in sexual activity.
2. Female Sexual Arousal Disorder (FSAD); characterized by an inability to attain or maintain sexual excitement
3. Female Orgasmic Disorder (FOD); characterized by the difficulty to attain orgasm despite sufficient arousal
4. Sexual Pain Disorder (SPD); characterized by pain during sexual intercourse (Billups, 2002).

A study of the prevalence and pattern of sexual dysfunction among 212 patients attending General Hospital Benin showed that 36.3% had excitement dysfunction, 35% had female

orgasmic dysfunction, 3.9% had female dyspareunia while 3.9% had vaginismus (Eze, 1994).

(Otubu *et al.*, 1989) carried out a study among women being counseled for sterilization and reported a prevalence of sexual dysfunction to be 23% with lubrication difficulty accounting for 8%, pain at penetration 11.3%, dyspareunia 6.7%, and difficulty with achieving orgasm accounting for 8.7%.

Loss of libido which is characterized by lack of interest in initiating sexual interaction (Shifren *et al.*, 2008) compels most of the females to go in for sex enhancing drugs. Vascular and nerve damage can reduce blood supply to the vagina, mucosa and clitoris. This results in vaginal dryness (low or no lubrication) and reduced sensitivity and sexual arousal.

Female sexual dysfunction (FSD) is a complex and multi-faceted disorder that has a wide spectrum of symptoms and severity. Management of sexual dysfunction involves use of artificial lubricants, adoption of different sexual positions, treatment of infection using antibiotics, couple therapy including communication to improve understanding, and also when it becomes necessary, the use of drugs that enhance sexual function (Bassion, 2004; Fran, 2007). Such drugs include dehydroepiandrosterone sulfate (DHEAS), which is a hormone produced by adrenal glands, converted to estrogens and testosterone that boost sexual arousal in older women (Meston, Hull, Levin & Sispki, 2004). While 38.1% of sexual problems expressed by women were anxiety and inhibition during sexual activity, 16.3% reported on lack of pleasure and 15.4% reported difficulty in achieving orgasm. However, about 68.6% reported overall satisfactory sexual relationship and this was attributed to age and relationship status. Older women and singles also had increased sexual problems (Rosen *et al.*, 1993).

There is currently no precise measure of the prevalence of FSIAD. However, one survey of U.S. women found that 12% of women reported experiencing personally distressing sexual problems (Shifren *et al.*, 2008).

Pharmaceutical treatments for FSD are limited. There are FDA-approved products for treating moderate to severe pain during sexual intercourse related to vulvar and vaginal atrophy associated with menopause; however, there are no drugs approved by FDA to specifically treat FSIAD, HSDD, or FSAD. Other prescription products are used off-label by patients, including sildenafil, testosterone or estrogen hormonal therapies, and antidepressants. However, these products have either not demonstrated effectiveness for FSD or have potential safety issues if taken long-term. Non-drug therapies include lubricants, devices, behavioral or couples' therapy, and lifestyle modifications (FDA, 2015).

2.3 Classification of Aphrodisiacs

In theory, an aphrodisiac is strictly an agent which arouses or increases sexual desire, but in practice anything which increases the capacity for sexual enjoyment will tend to increase the appetite and can be considered as an aphrodisiac (Zanolari, 2003).

Sex does not occur merely between the individual partners directly involved instead, sex occurs within a broader social and cultural context, with implications for prestige, status, and reputation (Buss, 2003). In summary, aphrodisiacs have now become a means to enhancing a person's self-image.

Aphrodisiacs can be classified according to their effects when consumed or administered. They can have psychological effects, thereby increasing sexual desire and pleasure through hallucinogenic properties or other mood stimulating properties (Sandroni, 2001). Aphrodisiacs can be classified according to their mode of action into two categories.

Type 1

The first type of aphrodisiac acts specifically to increase the libido (*i.e.*, sexual desire).

Type 2

The second category of aphrodisiac takes action by increasing the ability to indulge in sexual activity (*i.e.* increasing potency) (Zanolari, 2003).

2.3.1 Natural Aphrodisiacs

There is a general belief in the community that ingestion of high amount of fruits increases a woman's sexual desire. This could probably be due to high amount of ascorbic acid found in fruits (Brody, 2002). *Citrulline* found in watermelon, is said to be converted by the body to Arginine which boosts nitric oxide level-a known blood vessel relaxer. Most such effects are weak and may require use over a period of time and/or consumption of large quantities to achieve the desired result (Epimedium: Wikipedia-the free encyclopedia. Accessed on 28th of June 2018).

2.3.1.1 Food as Aphrodisiac

Of the various foods to which aphrodisiac powers are traditionally attributed, fish, vegetables, and spices have been the most popular throughout recorded history. None of these foods, however, have any identified chemical agents that could cause a direct physiological reaction, and it must be concluded that the reputation of various supposedly erotic foods is based not upon fact but upon folklore (Rodrigues, 2000).

Oysters

Well, oysters are low in fat and high in minerals, and thus a quite healthy food. Phosphorus, iodine and zinc can do a lot of good, especially zinc, which is said to increase sperm and testosterone production as well as the secretion of a vaginal lubricant (Rodrigues, 2000).

Onion

During Pharaonic times, celibate Egyptian priests were prohibited to eat onions because of the potential effects. In France, newlyweds were served onion soup in the morning after

their wedding night to restore their libido. The same source suggests an even more powerful preparation: pounded onion juice mixed with purified honey (Rodrigues, 2000).

Chocolate (Cacao)

Famed for its association with romance and seduction, the Aztecs referred to chocolate as “nourishment of the gods.” According to legend, the emperor Montezuma would drink chocolate to bolster his virility before visiting his harem of wives (Lippi, 2009). Chocolate contains biogenic amines tyramine and phenylethylamine, methylxanthines, and cannabinoid-like fatty acids, which are proposed to give chocolate its aphrodisiac abilities (Bianchi-Demicheli *et al*, 2013) and are linked to increased serotonin levels in the brain (Walcutt, 2009). However, researchers have found no supportive evidence. After controlling for age, (Salonia *et al.*,2006) found no difference in sexual function between chocolate consumers vs. nonconsumers as measured by the Female Sexual Function Indexes (FSFI) (Salonia *et al.*, 2006). Thus, while it is tempting that chocolate may have some positive effects on sexual function, the myth is not supported in the existing medical literature

Warming and stimulating herbs, for example, cinnamon and ginger, are thought to stimulate sexual appetite, and are therefore commonly included in formulas intended to stimulate sexual desire.

2.3.1.2 Animal parts as aphrodisiacs

Chinese herbal medicine frequently uses deer antlers and other parts of animals as aphrodisiacs. Organotherapy is widespread in Far-east tradition and the price of many of these items can be very high. The ancient Chinese used animal genitals as a method to increase potency. Tiger and deer penises are still considered a delicacy today. Organotherapy was already during the Roman times a popular way of trying to treat sexual problems. This form of sexual therapy is based on the belief that the consumption of a healthy animal organ might cure illnesses in the corresponding human organ. Thus, the

Romans ate all kinds of animal genitalia, including penises, wombs and testes, from animals ranging from monkeys to cocks (Rodrigues, 2000).

Bufo Toad

The Bufo genus of toads can be found throughout the world, and their skin and venom contain a psychoactive toxin, bufotenin, which has serotonin-like activity. Oral ingestion and topical application of the venom have long been used as a hallucinogen, street drug, and in the Chinese aphrodisiac, chan'su, and the West Indian aphrodisiac, love stone (Shamloul, 2010). There have been several reported cases of poisoning and at least one death after ingestion of Bufo toad (CDC. 1995). The FDA has banned Bufo toad consumption due to its potential lethality.

Honey

Honey is a popular aphrodisiac used for centuries to bring romance into marriages. The term “honeymoon” is said to have come from the tradition of newlyweds drinking mead, a fermented honey beverage, until the first new moon of their marriage. While there are no randomized control trials to support its aphrodisiac properties, there is one variety of honey famed for its alleged sexual stimulation (West & Krychman, 2015). Honey made from the nectar of *Rhododendron ponticum* is termed “mad honey” and contains grayanotoxin. “Mad honey” is marketed as a sexual stimulant for both men and women, and is produced mainly in the Black Sea region of Turkey. Grayanotoxin binds and activates neural sodium ion channels, leading to continuous vagal stimulation. Low doses of grayanotoxin cause hypotension and bradycardia, while high doses cause syncope, atrioventricular block, and asystole (Jansen *et al.*, 2012). There is a case report in the scientific literature of a married couple both suffering from myocardial infarctions within hours of ingesting the product (Yarlioglues *et al.*, 2011). While standard honey is safe for consumption, there are no data to support its use as an aphrodisiac. “Mad honey” is a potentially lethal toxin and should be avoided.

2.3.1.3 Plants as aphrodisiacs/ Alternative Herbal Remedies

Herbal medicines, also called botanical medicines or phytomedicines, refer to herbs, herbal material, herbal preparations, and finished herbal products that contain parts of plants or other plant materials as active ingredients (WHO, 2008). The plant materials include seeds, berries, roots, leaves, bark or flowers (Oreagba *et al*, 2011). Many drugs used in conventional medicine were originally derived from plant. The components of most sex enhancing drugs include Ginko biloba, Ginseng, and Yohimbine.

Ginko Biloba

Extract of Ginkgo Biloba comes from the world's oldest species of tree, has been used in traditional Chinese medicine to treat a multitude of ailments, including depression and sexual dysfunction (West & Krychman, 2015). Ginko is a traditional Chinese medicine used for years to improve cognitive function and memory thus helping people with sexual dysfunction overcome depression (Clayton & Ramamurthy, 2008). Ginko biloba dilates blood vessels and improves circulation to the penis, vagina and clitoris. However some people experience bleeding disorders (Sahelian, 2004). When used daily, the supplement claims to enhance a woman's sexual response by increasing blood flow and promoting relaxation. While Ginkgo is generally well tolerated, it can cause significant bleeding risks, especially if taken with anticoagulant medication. Ginkgo should be discontinued preoperatively and should not be used by patients with bleeding disorders. Ginkgo can have additive anticoagulant/antiplatelet effects and thus should be used with caution with nonsteroidal antiinflammatory drugs (Haller *et al*, 2008).

Yohimbe

Yohimbine is the major active constituent of the bark of yohimbe, *Corynanthe yohimbe* of the Rubiaceae family, a tree growing in tropical West Africa (Nigeria) and Cameroon. Yohimbe has long been used by the local population for its perceived high sexual potency (Rodrigues, 2000).

Yohimbine is an indole alkaloid extracted mainly from an African plant, which has recently been the focus of new public interest. The bark of the tree is traditionally used in African and West Indian medicine as an aphrodisiac with the ability to increase sexual potency and virility. Some indications are that in certain cases yohimbine can improve sexual performance (Ernst & Pittler, 1998). Despite studies which show that yohimbine is generally well tolerated with few and benign side effects, other reports illustrate its potential risks on certain individuals. Common adverse effects of yohimbine include increased blood pressure, tachycardia, anxiety, irritability and tremor, headache, manic reactions, mild antidiuretic activity (stimulation of antidiuretic hormone release), nausea, increased perspiration, salivation, lacrimation, and papillary dilatation (Rowland & Tai, 2003). Yohimbine stimulates release of norepinephrine from adrenals and this improves libido in women and erectile dysfunction in men (Davis, Moreau, Kroll, Bouchard, Panay & Gass, 2008). The caution is that it could cause hypertension. Headache (being the side effect most recorded) could be as a result of nitric oxide effect. There can be dilatation of blood vessels in the brain resulting in pain.

Ginseng

Ginseng is a popular herb used for athletic performance, cancer prevention (West & Krychman, 2015). One of the most celebrated drugs is the ginseng root (Shamloul, 2010). As for the mystical mandrake, the shape of the ginseng root is similar to the human form and consequently it should be universally beneficial to the body. In Asia, ginseng can be bought in different forms (powder, pills, ointments, tinctures and teas) and is recommended among many other things as an aphrodisiac with the power of rejuvenation. The aptitude of ginseng to increase sexual desire or potency has not been demonstrated yet, but it is considered as an aphrodisiac as well because of its non-specific “tonic” effect on the body (Gillis, 1997). Ginseng is thought to increase levels of testosterone but could cause hypertension (Davis *et al.*, 2008). Korean red ginseng, which is harvested, steamed, and dried from a 6-year-old tree, is widely known for its benefits in erectile dysfunction. The proposed mechanism of

action is through NO release from the smooth muscle of the corpus cavernosum (De Andrade *et al.*, 2007). There have been seven double-blind, placebo-controlled studies comparing ginseng to placebo for treatment of erectile dysfunction—review of these studies showed overall effectiveness of ginseng (Jang, Lee, Shin, Lee & Ernst, 2008). However, the studies differ in their dosage of ginseng and the type of placebo product used. While studies in women are more limited, there has been research to show Korean red ginseng improves sexual arousal in menopausal women (Jang *et al.*, 2008). The proposed mechanism is smooth muscle relaxation on the clitoral cavernosal muscle and vaginal walls [Park, Oh, Chae, Lee, Hong, 2006]. Overall, ginseng is well tolerated and causes minor gastrointestinal side effects. It can, however, interfere with anticoagulant medication and should be discontinued one week before surgery. Ginseng was shown to have estrogenic effects and thus should be avoided in those with hormonesensitive cancers (Park, Lee, *et al.*, 2006). The optimal therapeutic dose has not been established.

Therapeutic drugs (prescribed medicines) and non-therapeutic drugs (those taken for pleasure) can influence libido and the sexual response cycle. The word “sex” and “drugs” in so many ways are connected this is because in some social circles, taking drugs is widely thought to enhance sex. Equally, sex is often popularly perceived to enhance drug effect. The implication is that if you get to do both at the same time, then your experience will be at least twice as good as if you only had done one or the other (Rhodes & Quirk, 1995).

In the drug world, Opiates are associated with a loss of sexual desire while there is usually a consensus that, of all the drugs available, stimulants including ecstasy are the ones most likely to enhance sexual experience (Rhodes & Quirk, 1995).

2.3.1.4 Non therapeutic Drugs

Non therapeutic drugs are taken for their presumed pleasurable effects. Many users report that some of these drugs increase their sex drive, sexual performance, and enjoyment. Most of these effects are due to the drug acting on the brain to remove sexual inhibitions, on the

peripheral nervous system to increase sensory acuity, or on the sympathetic or parasympathetic nervous systems to influence the sexual response cycle. Some of the effects of the drugs on sexual arousal occur simply because the person expects them to work (Argiolas & Melis, 2003).

Some of the cantharides, such as “Spanish fly,” have reputations as aphrodisiacs. Spanish fly is derived from a beetle (*Lytta vesicatoria*) found in an area extending from southern Europe to western Siberia, Asia and in parts of Africa. Spanish flies or cantharides are the common names for a variety of blister beetles, usually black or bronze-green, mostly elongate and cylindrical (18 to 25 mm) (zanolari, 2003). When disturbed, the beetles release an irritating substance called ‘cantharidin’ from the joints between their leg segments. The aphrodisiac reputation of cantharides probably rests upon the ability to cause irritation of the urethra with resultant vascular congestion and inflammation of the erectile tissue in male or female genitalia, a sensation that may be interpreted as enhanced sexuality by some (Till & Majmudar, 1981). If this drug increases libido, one explanation is that it can irritate the urinary bladder, urethra, and digestive tract. Prolonged use of Spanish fly, however, can cause priapism (prolonged abnormal erection) because it dilates blood vessels in the penis and clitoris. This can lead to permanent penile damage and erectile dysfunction. Also, cantharides can cause vomiting and diarrhea and are poisonous at high dosages.

Cocaine, a widely used drug in the United States, is said to increase libido, enhance enjoyment of sex, and lower inhibitions. This drug is often inhaled through the nostrils as a powder or is smoked, and some women apply it to the vaginal mucosa. Chronic users of cocaine (and amphetamines) tend to be more interested in drugs than in sex (Argiolas & Melis, 2003).

Alcohol is one of the substances perceived to enhance sexual responsiveness partly because alcohol lowers sexual inhibition and allows desire to emerge. Advertisements on radio and television showing seductive scenes associated with alcohol consumption and cultural myths have reputed alcohol to be aphrodisiac (Tabli, 2011). Although considered only a

psychoactive drug, alcohol may also have physiological effects - a 1994 study published in the British scientific journal. Nature claimed that intake of alcohol would raise the testosterone level of women. Normally, women produce about one-tenth the amount men do and additional small amounts can dramatically increase the libido. For women who lack sexual interest and desire, the treatment can be life-changing. Excessive consumption of alcohol puts the individual at risk of hypertension, cancers of the respiratory and digestive systems, breast and ovaries. The individual is at risk of injuries as alcohol's aphrodisiac result of diminished coordination and balance, increased reaction time and impaired perception and judgment.

Cannabis (Marijuana) has long been used as a sedative or analgesic. The effects of marijuana vary, depending upon the strength and amount used, the setting in which it is taken, and the experience of the user. Psychological effects tend to be predominant; the user commonly experiences a mild euphoria. Alterations in vision and judgment result in distortions of time and space. The active substance in marijuana and hashish from the hemp plant (*Cannabis sativa*) is tetrahydrocannabinol (THC). This hallucinogenic substance mimics the action of the sympathetic nerves. About one-quarter of marijuana and hashish users report an increase in sexual responsiveness and enjoyment; THC produces this effect by acting on the brain to relax sexual inhibitions and to increase sensory awareness. Cannabis has been used for centuries for sexual enhancement. Either ingested orally or smoked, cannabis products have long been believed to enhance sexual intensity for men and women. Now that cannabis has become legal in some states for medical use, there is a growing market of commercially available products containing cannabis for sexual enhancement. For example, Foria is a topical sexual lubricant that combines coconut oil and cannabis, and is designed as a female sexual enhancer. However, there are no published studies to support claims of cannabis as a sexual stimulant, and thus these products cannot be recommended at this time (West & Krychman, 2015).

2.3.1.5 Selected Combination Products

Alura

Alura, previously sold under the name ‘Viacreme’, is a topical product applied to the vulva. It is marketed as a soft-tissue stimulant, which creates a cooling sensation to enhance satisfaction. The product contains L-arginine and menthol. The L-arginine is converted to Nitric Oxide by Nitric Oxide synthase, which leads to vasodilation of the genital tissues. Menthol may facilitate absorption of L-arginine and cause increased vaginal lubrication (West and Krychman, 2015). There are no published data to confirm the efficacy of this product. The most common side effect is vaginal burning.

ArginMax for Women

ArginMax is a combination supplement containing an array of vitamins marketed toward women (A, B-complex, C, E), zinc, as well as L-arginine, Korean ginseng, Ginkgo, and Damiana leaf. The proposed mechanism of action is through enhancement of the NO pathway. L-arginine is a precursor of NO, which causes central to smooth muscle relaxation, vascular dilatation, and vaginal wall engorgement. One small double-blind, placebo-controlled study of 108 women showed improvement in sexual desire (70.6% in the ArginMax group vs. 41.9% in the placebo group), improved sex life satisfaction (73.5% in the ArginMax group vs. 37.2% in the placebo group), and increase in frequency of intercourse. In this study, the treatment group experienced increased lubrication, clitoral sensitivity, orgasm frequency, and sexual desire (Ito, Trant & Polan, 2001). A follow-up study on ArginMax showed that the supplement had no estrogenic activity and thus its augmentation of vaginal blood flow was not from hormonal stimulation (Polan, Hochberg, Trant and Wuh, 2004). There has also been one small study to show ArginMax for Men improves erectile dysfunction, also through the Nitric Oxide pathway (Ito, Kawahara, Das, Strudwick, 1998).

Vaginal Tightening Products

There are multiple over-the-counter topical products, such as “18 Again” “China Shrink Cream,” and “Liquid Virgin,” designed to tighten the vagina and enhance sexual pleasure for both the user and her partner. These products contain a variety of ingredients. For example, “18 Again” contains Woodfordia, which is advertised as an astringent to contract the walls of the vagina, Centella asiatica for its vasodilatory properties, and Alum, an astringent to tighten the vaginal walls. There are no data to support any of these products and none are recommended (West & Krychman, 2015).

Zestra Feminine Arousal Oil

Zestra feminine arousal oil is a massage oil designed to enhance female arousal and orgasm after application to the clitoris and labia. The product contains a blend of borage seed oil, evening primrose oil, angelica root extract, and coleus forskohlii extract. The product label states that the oil should be applied 5 minutes before intercourse and will cause a “tingling or rushing” sensation. The mechanism of action is through vasodilatation. The first published research on Zestra was a small, placebo-controlled study on women with and without female sexual arousal disorder (FSAD). The study showed that ‘Zestra’ users experienced improved desire, arousal, and orgasm compared with placebo, as measured by multiple questionnaires. The study showed ‘Zestra’ was equally effective in women with normal sexual functioning, FSAD (Ferguson, Steidle, Singh, Alexander, Weihmiller & Crosby, 2003). A follow-up, double-blind, placebo-controlled study of 256 women with acquired mixed desire/interest/arousal/ orgasm disorders showed mixed results. This study showed Zestra produced a greater improvement in desire and arousal, whereas placebo produced greater improvement in lubrication and pain, but those results were not significant. Questionnaires revealed Zestra improved some sexual satisfaction scores but not others. The primary side effect is mild-to-moderate genital burning, experienced by 14.6% of

participants, and was the cause of 5% of study participants to withdraw from the clinical study (Ferguson, Hosmane & Heiman, 2010). Overall, the product is well tolerated, and there were no serious side effects or significant drug interactions reported.

2.3.1.6 Objects as Aphrodisiacs

Mechanical devices may work through vibratory stimulation or by causing clitoral vascular engorgement. Vibrators are handheld electrical devices that produce pulses of variable amplitude and frequency, and enhance sexual arousal and latency to orgasm in both women and men. Clinically, vibrators may be recommended as an adjunct to treatment for female sexual dysfunction e.g., anorgasmia, female sexual arousal disorder, and persistent sexual arousal syndrome (Wylie, 2007). A study carried out by (Herbenick *et al.*, 2009) showed that vibrator use was significantly related to several aspects of sexual function (i.e., desire, arousal, lubrication, orgasm, pain, overall function).

They result from the survey showed that those who use vibrators have experienced at least one side effect. Of the users, 71.5% reported that they had never experienced any of the listed side effects from vibrator use. A total of 16.5% had ever experienced genital numbness, with 0.5% reporting that the numbness lasted for a day or longer. A total of 3.0% reported ever having experienced genital pain resulting from vibrator use, with 0.6% reporting pain lasting for a day or longer. Among those reporting pain, a total of 9.9% of users reported having experienced genital irritation from vibrator use, with 2.6% reporting irritation lasting for a day or longer. Swelling was reported by 8.0% of users. A total of 1.1% of users reported experiencing tears or cuts in relation to vibrator use.

Others aphrodisiac combination products include spark feminine sexual enhancer, such as Max desire, Herbal viva, Nymphomax, etc (Michielle, 20018).

2.4 Prevalence of the Use of Aphrodisiacs

A study carried out by (Abdullahi & Tukur, 2013), among the respondents, 53.9% knew about and used sexual stimulants. Also, study carried out by (Garba *et al.*, 2013) on the use of aphrodisiacs amongst women in Kano, out of the 500 clients interviewed, two hundred and twenty use some medications to enhance their sexual performance (44.0%). Women in monogamous relationship were found to use medication more compared to those in polygamous relationship. This is probably because those in monogamous setting want to keep the relationship monogamous while those in polygamous setting do not feel the urge to prevent polygamy anymore as they are already in it and therefore the practice is less in them (Garba *et al.*, 2013). 40.45% of the respondents said the major reasons for use of these medications were for better sexual satisfaction followed by 19% who desire to gain husband's favors. The herbalist/Traditional houses are the major sources of these medications. Only 2.27% of the respondents go to health workers for medications. This is probably because health workers hardly ask questions concerning sexual activity with patients and the patients most often, feel embarrassed discussing such issues with their health care providers (Garba *et al.*, 2013). Information from the Food and Drugs board Ghana, (FDB, 2011), shows that the total amount of drugs posing as aphrodisiacs that have not received governmental approval is worth over two million dollars.

2.5 Perception towards use of Aphrodisiacs

In a study carried out by Hassali *et al.*, 2012 on the assessment of general public perceptions toward traditional medicines used for aphrodisiac purpose in state of Penang, Malaysia describes participants' responses to the study. About 43.3% participants agreed to increasing libido through the use of aphrodisiac. In addition, 38.2% were of the opinion that traditional aphrodisiac products are safer than their modern conventional therapies. The majority of respondents 49.2% claimed they would consult a healthcare physician prior to using any traditional medicine as an aphrodisiac. About 46.9% respondents supported the claim that traditional medicines were cheaper compared to prescription medicines. About 139 (61%) of

the women interviewed were of the opinion that sexual stimulants are good but should be used with caution or following prescription by a doctor, 64 (28.1%) were of the opinion that the preparations were harmful and should be avoided. About 4 (1.7%), preferred the use of oral agents only.

2.6 Effect of the use of Aphrodisiacs

Consequently, investigations into both sexual stimulation and the effects of specific substances on sexual arousal are limited. Most data collected on the activities of drugs and food has arisen from information published about side effects of drugs designed for other purposes (Zanolari, 2003).

2.7 Complications Developed by the Users of Sexual Aphrodisiacs

When asked in a study, the side effects experienced after the use of any aphrodisiac substance, a total of 37.3% developed complications, which they attributed to the use of the drugs. 0.4% of users complained of Infertility, 2.2% for Coital laceration, 6.1% for Copious vaginal discharge, 4.8% experienced Dryness of the vagina, 0.9% respondents experienced Hyperstimulation, 2.2% Irregular menses, 6.6% had Lower abdominal pains, 3.1% experienced nausea and vomiting, 6.2% Painful intercourse, 0.4% Vaginal occlusion, 6.6% Vulval itching/rashes (Abdulai & tukur, 2013).

THEORETICAL FRAMEWORK

The Health Belief Model (HBM) was used to guide this study.

Modifying Factor

These are the characteristics of an individual that motivates behavior prior to or during the occurrence of that behavior. For this study, they will include age of women who use aphrodisiacs, number of children, religion, ethnicity, level of education, knowledge on aphrodisiacs, and prevalence of the use of aphrodisiacs.

Individual perception

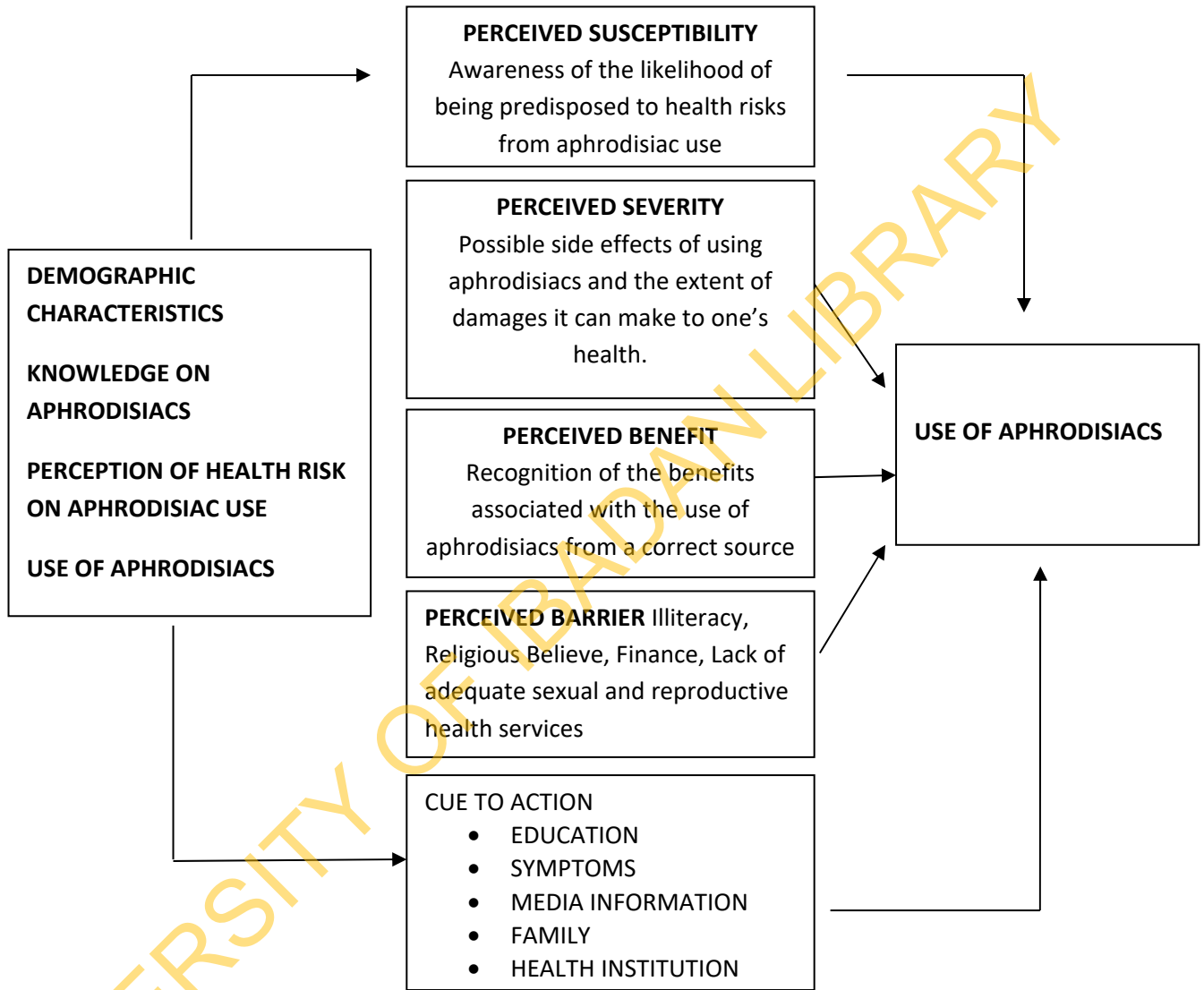
- 1. Perceived Susceptibility:** This construct refers to beliefs about likelihood of getting a condition or belief about the chances of experiencing a risk. Past studies has shown that the use of aphrodisiacs has led to menstrual irregularities, infection, lower abdominal pain etc. therefore, this construct tends to describe women's knowledge on their susceptibility to any risk factor might improve or encourage the need to stop using any aphrodisiac substance or encourage them not to even use at, or to encourage the use of only approved aphrodisiac substances
- 2. Perceived Severity/seriousness:** This construct refers to the beliefs about how serious a condition is. specifically, the long term consequence of using aphrodisiac which can lead to a bad health outcome if the behavior occurs for a very long period of time and thus, the behavior alters the body's natural ability to be sexually stimulated, in addition to aphrodisiac use, infection and menstrual irregularities which can lead to infertility etc. This construct in this study tends to describe

women's knowledge on the severity/seriousness of the perceived risk of aphrodisiac to their health.

- 3. Perceived Benefits:** Belief in efficacy of the advised action to reduce risk or seriousness of impact. Even if a woman perceives personal susceptibility to a serious health condition, whether this perception leads to behavior change will be influenced by the person's belief regarding perceived benefits of the various available actions for reducing the disease threat. This construct of perceived benefit explains that women value the usefulness of aphrodisiacs in increasing their libido so re-educating woman on the right source of purchasing aphrodisiac and right types to use.

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MODIFYING FACTORS INDIVIDUAL PERCEPTION LIKELIHOOD OF ACTION



CHAPTER THREE

METHODOLOGY

3.1 Research Design

The study design that was adopted for this study is the descriptive cross-sectional design using semi-structured self-administered questionnaire.

3.2 Study Population

The study population was drawn from women attending the Gynaecology clinic in Lagos State University Teaching Hospital since the study is on women and aphrodisiacs use, the Gynaecology clinic was a choice because the clinic has a large number of women of reproductive age and it is at this gathering, women with reproductive health complains can be found. Justification for this particular sample is based on the fact that, the Lagos State University Teaching Hospital, Gynaecology clinic is patronized by women from different walks of life and such sample selected from this population will reflect to a greater extent the accurate knowledge and perception of women regarding the use of aphrodisiacs.

3.3 Sample Size Determination

The sample proportion is calculated using Leslie Kish formula

$$n_0 = \frac{Z^2 pq}{e^2}$$

Z = 1.96 [confidence level at 95%]

p = the prevalence of aphrodisiac use among women according to (Garba *et al.*, 2013) was said to be 44%

q = 0.56 [1 - p]

$e = 0.05$ [level of precision]

$$n_0 = \frac{(1.96)^2 \times 0.44 \times 0.56}{0.05^2}$$

$$n_0 = \frac{3.8416 \times 0.2464}{0.0025}$$

$$n_0 = \frac{0.946}{0.0025}$$

$$n_0 = 378.4$$

Sample size is calculated using formula adopted from Glenn

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

$$n = \frac{378.4}{1 + \frac{(378.4 - 1)}{430}}$$

$$n = \frac{378.4}{1 + 377.4/430}$$

$$n = \frac{378.4}{1 + 0.88}$$

$$n = \frac{378.4}{1.88}$$

$$n = 201.3$$

The sample size will therefore be 201

A 10% non-response rate of the sample size will be added in the case of non-response.

Therefore, 20 will be added to the sample size calculated to make the sample size 221.

3.4 Inclusion Criteria

Participant eligible for this study will be;

1. Women aged 18 and above, attending the Gynaecology clinic
2. New and existing patients regardless of their marital status
3. Participants from all ethnicity and religions

3.5 Exclusion Criteria

Participants who are not eligible for this study will be;

1. Patients who are sick
2. Patients who are not registered in the facility clinic.
3. Patients whose age is less than 18 years
4. Individuals who accompany patients to the clinic regardless of their eligibility to participate in the study

3.6 Sampling Procedure/ Technique

A simple random sampling technique was used to select one out of the two tertiary hospitals in Lagos through balloting. There were a lot of clinics and departments in the hospital so therefore, a purposive sampling technique was used to select the study population. Questionnaires was shared to all willing participants.

3.7 Instrument for Data Collection

A quantitative method using a semi-structured questionnaire was adopted for this study. The semi-structured questionnaire was administered to all participants. The design of the questionnaire was based on the research objectives and information obtained from reviewed literature. The questionnaire was particularly provided necessary information based on

patient's knowledge and perception of health risks associated with the use of aphrodisiacs, types of aphrodisiacs and factors affecting usage of aphrodisiac substances.

3.8 Validity of Instrument

The validity of the instrument (i.e questionnaire) was ensured through literature review. The review exercise was used to guide the selection of variables for measurement. To ensure the validity of the instruments, each item on the questionnaire was matched in sections and the questionnaire was structured in line with the objectives of the study. Also, the instrument was subjected to peer review and was further given to my supervisor and other researchers in the department of Health Promotion and Education for scrutiny and corrections were noted and effected.

3.9 Reliability of Instrument

In determining the reliability of the instrument, the questionnaire was pre tested among patients attending the Gynaecology clinic in UCH, Ibadan. The pretest involved administering copies of questionnaire to 10% of the total sample size in another representative population. A Cronbach Alpha co-efficient was used to determine the reliability of the instrument. In this technique, a minimum coefficient score of 0.5 indicates that the instrument is reliable to some extent. The higher the coefficient score, the more reliable the instrument. In this study, a coefficient 0.897 was gotten indicating it was reliable.

3.10 Recruitment of a Research Assistant

In order to facilitate timely collection of data, a female research assistant was recruited. One assistant was recruited and trained for the purpose of this study on how to collect quantitative data and to also highlight the rules, roles and expectations of the assistant. Criteria for recruitment include; literacy and fluency in English language, Yoruba language and Pidgin English for effective communication.

3.11 Data Collection Process

There was frequent visit to the tertiary health facility on the scheduled gynaecology clinic day within the speculated clinic hours. Patients waiting to see the doctor were approached to fill the questionnaire. No particular amount of questionnaire was planned to be distributed per day but the available number of patients per clinic day who were willing to take part in the study were recruited till the expected number of instrument was completed.

3.12 Data Management and Data Analysis

The questionnaires were numbered for accountability, for easy entry and recall. A coding guide was developed along with the data collection tools in order to facilitate the analysis. Statistical Package for Social Sciences (SPSS) version 23 was used to analyze the quantitative method of data collection. A 16-point knowledge scale was used to assess the knowledge of aphrodisiac; knowledge score of ≥ 12 was rated good, $\geq 9 < 12$ was rated fair and < 9 was rated poor knowledge. Also, a 25-point perception scale was used to determine the health risk perception of respondents on aphrodisiacs; perception score of ≤ 15 was rated poor, > 15 was rated good perception towards the health risk associated with the use of aphrodisiacs. Result from this finding was analyzed using descriptive and inferential statistics such as Chi-square at $p < 0.05$ level of significance.

3.13 Ethical Considerations

Ethics approval was obtained from the Health Research and Ethics Committee of the Lagos State University Teaching Hospital with reference number LREC. 06//10/1076 to ensure the study met all the principles and National guidelines in research involving human participants.

- **Informed Consent/Confidentiality:** Valid informed consent was obtained from the study participants after adequate provision of information and confidentiality was ensured throughout data collection process.

- **Voluntariness:** Participants were accorded the right to or not to participate in the study without any consequence. It was made clear to participants that they are under no obligation to participate in the study.
- **Beneficence:** There was no direct benefit from this study for the study participants but the findings are aimed to be of great value in the design of interventions at promoting the health of women.
- **Non-maleficence:** The study did not involve any risk as it does not involve utilization of any invasive material. No harm was caused to respondents who chose to participate in the study. Only the time needed to respond to the questionnaires was required of the participants.
- **Translation of protocol to the local languages:** Participants were from the Yoruba, Igbo Hausa and other major tribes in Nigeria. The research instrument was translated into Yoruba, Igbo and Hausa local language for easy understanding.

3.14 Study Limitation

- Participants for the study were reluctant in divulging information regarding their history on aphrodisiac use
- Some of the participants who were at the clinic were there for really complicated issues that had little or no interest in providing information on aphrodisiacs.

3.15 Expected Study Outcome

- This study will increase participants' knowledge on aphrodisiacs
- It will provide information on health risks relating to the use of aphrodisiacs
- It will also provide appropriate information on where to seek sexual and reproductive health.

CHAPTER FOUR

RESULTS

4.1 Socio-demographic characteristics of respondents

Overall, a total of 220 women attending the Gynaecology Clinic at the Lagos State University Teaching Hospital, Lagos, Nigeria participated in the study. The respondents mean age was 32.4 ± 7.9 years with minimum and maximum ages of 20 and 54, respectively. Majority (59.5%) of the respondents were married, 33.6% single, 6.4% divorced and 0.5% were widowed. Also, 64.1% were Christians and 35.0% Muslim. Many (40.0) had tertiary education while 12.3% had no formal education, 21.8% had secondary education and 16.4% had post-graduate education. 38.2% were employed while 22.7% were unemployed. 60.0% were from the Yoruba ethnic group, 21.4% were Igbos', 10.5% were Hausas' while 8.2% were from the other ethnic group in Nigeria. For those who were married, 75.5% were monogamous while 24.5% were polygamous.

Table 4.1: Socio-demographic characteristics of respondents

		N=220	
Variables	Responses	Frequency	%
<i>Ages in years (as at last birthday)</i>	20-29	92	41.8
	30-39	84	38.2
	40-49	39	17.3
	50 and above	05	2.7
<i>Marital status</i>	Single	74	33.6
	Married	131	59.5
	Divorced/Separated	14	6.4
	Widowed	1	0.5
<i>Religion</i>	Christian	141	64.1
	Muslim	77	35.0
	Traditionalists	2	0.9
<i>Education</i>	No formal education	27	12.3
	Primary	21	9.5
	Secondary	48	21.8
	Tertiary	88	40.0
	Post-graduate	36	16.4
<i>Occupation</i>	Unemployed	50	22.7
	Employed	84	38.2
	Self-employed	79	35.9
	Artisans	7	3.2
<i>Ethnicity</i>	Yoruba	132	60.0
	Igbo	47	21.4
	Hausa	23	10.5
	*Others	18	8.2
<i>Family type (n=151)**</i>	Monogamous	114	75.5
	Polygamous	37	24.5
<i>Number of children (n=136)**</i>	One child	37	27.2
	Two-three children	77	56.7
	Four children and above	22	16.1
<i>Heard of Aphrodisiac</i>	Yes	104	47.3
	No	116	52.7
<i>Know Aphrodisiac</i>	Yes	82	37.3
	No	138	62.7
<i>Ever used Aphrodisiac substance</i>	Yes	37	16.8
	No	183	83.2

Mean age=32.4±7.9;

*Others: Edo, Fulani, Tiv, Urhobo.

**where N≠220

4.2: Prevalence and use of Aphrodisiac substance

The prevalence of use of aphrodisiac substance among the respondents was 16.8%. While 8.8% of those who had used any aphrodisiac used it during the last sexual intercourse, 41.2% did not. In the last twelve months, 35.3% of the respondents had used it four times and more, 26.5% used it two times, and 23.5% used it three times, while 14.7% had used it only once. Majority (55.9%) of the respondents felt sexually aroused after use of aphrodisiac substance. Source of information on the substance included pharmacy (41.2%), herb sellers (38.2%) and online (8.9%). Other sources of information include friends, family and chemist shop. The types of aphrodisiac substance used include herbal medicine, fruits, pharmaceutical drugs and ointment. 64.7% reported no side effect after use while 20.6% reported stomach ache, 11.8% reported allergic reaction, and 2.9% reported nausea. Most (87.9) of the respondent's reason for use of substance was "to increase sexual desire", 51.5% reported "to enhance sexual performance", 42.4% reported "for husband satisfaction" while 9.1% reported "to satisfy curiosity"

On level of satisfaction with the use of aphrodisiac, 62.5% reported they were very satisfied. 6.3% reported "dissatisfied"

Table 4.2: Use of Aphrodisiacs

Variables	Responses	n=34		
		No.	%	
<i>Use any Aphrodisiacs during last sexual intercourse</i>	Yes	20	58.8	
	No	14	41.2	
<i>No of times of use in the last 12 Months</i>	One time	5	14.7	
	Two times	9	26.5	
	Three times	8	23.5	
	Four and above	12	35.3	
<i>Feelings after use of Aphrodisiacs</i>	Sexually aroused	19	55.9	
	Satisfied	7	20.6	
	Extreme wetness	3	8.8	
	Increased libido	1	2.9	
	Intense sexual gratification	2	5.9	
	No changes	2	5.9	
<i>Sources of Aphrodisiac substances</i>	Pharmacy	14	41.2	
	Herb-sellers	13	38.2	
	Friend	1	2.9	
	Family	2	5.9	
	Chemist shop	1	2.9	
	Online	3	8.9	
<i>Type of Aphrodisiac substance used</i>	Herbal medicine: Weed, adodun, ginseng, saffron, spices	12	36.3	
	Fruits; Water melon, banana, tiger nuts, coconut and honey	9	27.3	
	Pharmaceutical drugs; Viagra, Spanish fly, tramadol, cocaine	9	27.3	
	Sweet, candy whites	2	6.1	
	Ointment/oil	1	3.0	
	Stomach pain	7	20.6	
	Nausea	1	2.9	
<i>Side effects experienced after use</i>	Allergic reaction	4	11.8	
	No side effect	22	64.7	
	<i>*Why the use of aphrodisiac substance</i>	To increase sexual desire	29	87.9
		To enhance sexual performance	17	51.5
For husband's satisfaction		14	42.4	
To satisfy my curiosity		3	9.1	

*Multiple responses present

n=34

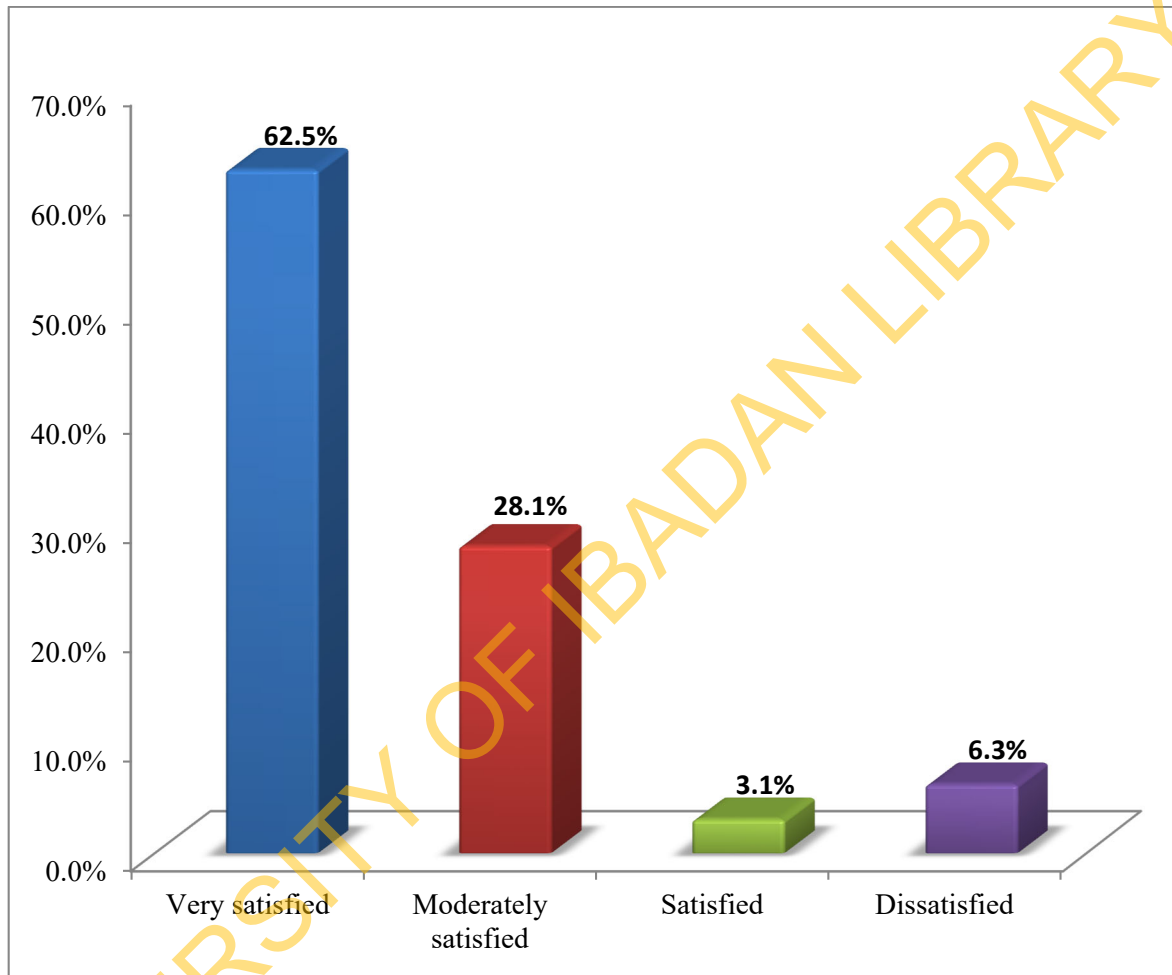


Figure 4.1: *Level of satisfaction with the use of Aphrodisiac*

4.3: Knowledge of Aphrodisiac Substance

The respondents' knowledge on aphrodisiac substance is presented in table 4.3. Majority (58.6%) had poor knowledge, 24.5% had fair knowledge and 16.9% had good knowledge score on aphrodisiac substance. While 30.2% defined aphrodisiac substance as substances used to increase libido, 21.9% reported it as substance use to make sex more pleasurable, 19.8% reported it as substance that enhance sexual performance. Other definitions are presented in the table 4.3. Fruit such as; water melon, banana, tiger nuts, coconut and honey were reported by 79.8% as types of aphrodisiac substance. The risks associated with use of aphrodisiac substance reported include stomach pain, bleeding, nausea, vomiting, low blood pressure, heart attack, organ damage, addiction and allergic reaction

Table 4.3: Knowledge of Aphrodisiac Substance

		N=220	
Variable`	Responses	Frequency	%
<i>Definition of Aphrodisiacs(n=96)</i>	Aphrodisiacs are substances which enhance sexual performance or aid in the proper functioning of the male and female sex organs	17	17.7
	An aphrodisiac is a substance that increases sexual desire.	10	10.4
	Substances used to increase libido	29	30.2
	Any substances used to enhance sexual performance	19	19.8
	Anything used to make sex more pleasurable	21	21.9
<i>*Types of aphrodisiacs (n=93)</i>	Herbal medicine: Weed, adodun, ginseng, saffron, spices	40	42.6
	Fruits: Water melon, banana, tiger nuts, coconut and honey	75	79.8
	Pharmaceutical drugs: Viagra, Spanish fly, tramadol, cocaine	56	59.6
	Animals food; oysters, animals private part	17	18.1
	Sweet, candy whites	6	6.4
	Ointment/Lubricant/vaginal cream	9	9.6
	Scented candles	9	9.6
<i>*Risks associated with the use of Aphrodisiacs (n=90)</i>	Stomach pain	10	16.9
	Bleeding	7	11.9
	Nausea and vomiting	9	15.3
	Infection	4	6.8
	low blood pressure and heart attack	8	13.6
	Organ damage	17	28.8
	Addiction	21	35.6
	allergic reaction	15	25.4
<i>Knowledge Score (KS)</i>	Good (KS \geq 12)	50	22.7
	Fair (KS<12 \geq 9)	21	9.6
	Poor (KS<9)	149	67.7

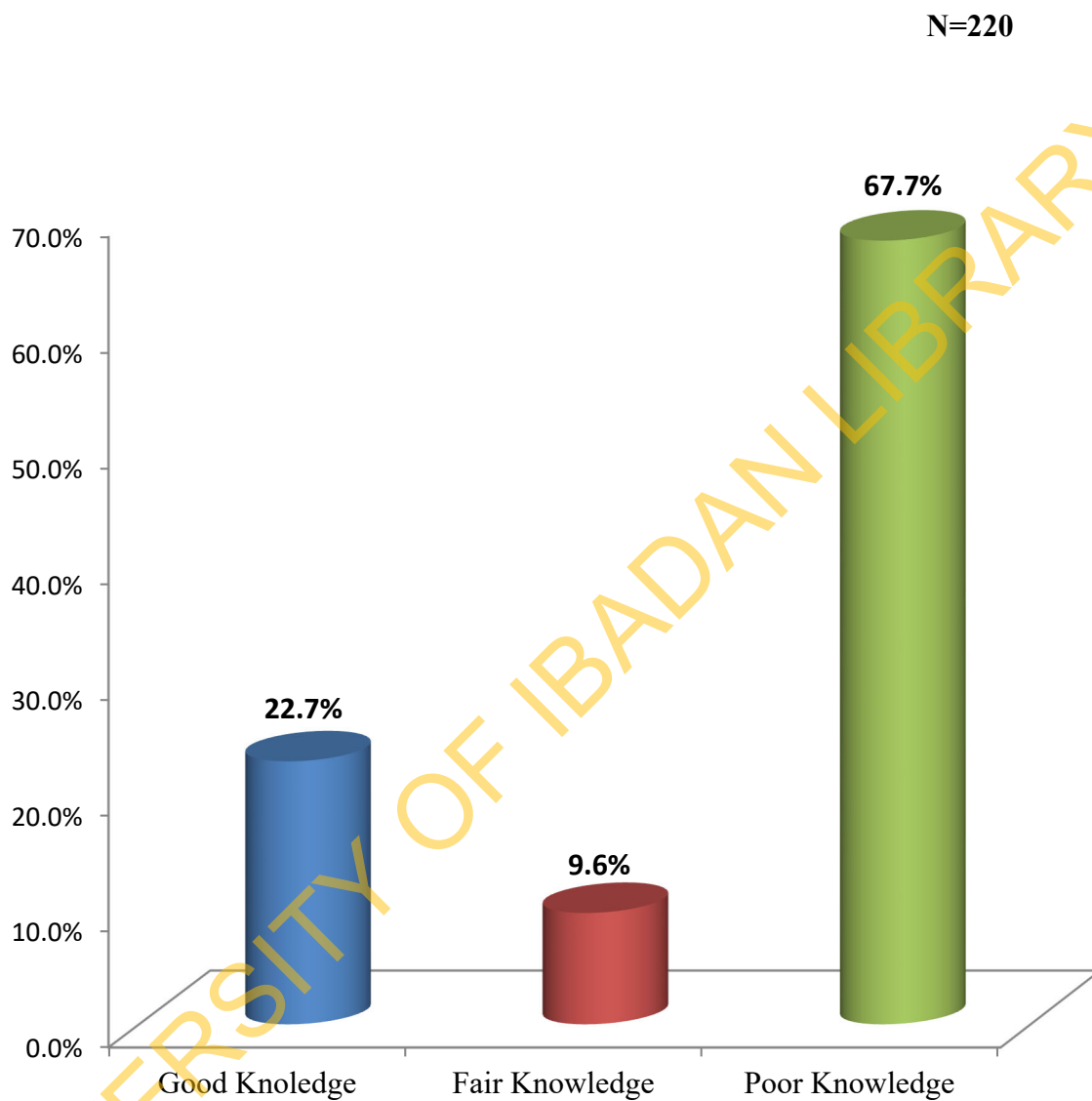


Figure 4.3: Knowledge of Aphrodisiac substance

4.4 Reasons influencing use of Aphrodisiac

The factors influencing usage of aphrodisiac substance were presented in Table 4.4. Among the respondents who had used the substance, 69.4% reported it was to achieve more sexual pleasure while 50.0% reported 'to attain orgasm'. Another 47.2% reported for 'husband's satisfaction' while 27.8% said it was an influence of friends and relatives. On factors influencing non-usage of the substance, 60.4% reported 'they don't need it before any sexual satisfaction', 35.8% reported "fear of side effect" while 30.2% reported that they did know any aphrodisiac substance.

Also, 91.0% reported the factor influencing their usage of the substance was because 'it enhances sexual excitement' while 43.3% reported 'because of age related sexual complications'. 62.7% of the respondents used it because their partners supported it

Table 4.4: Reasons influencing use of Aphrodisiac**N=220**

Reasons	Responses	Frequency	%
<i>* Reasons influencing usage</i> (n=37)	To satisfy curiosity	10	27.8
	To achieve more sexual pleasure	25	69.4
	To attain orgasm	18	50.0
	Influence of friends and relative	10	27.8
	For husbands satisfaction	17	47.2
	Postpartum sexual dysfunction	6	16.7
	Female sexual disorder	7	19.4
<i>*Reasons influencing non-usage</i> (n=53)	Personal reasons	5	9.4
	I don't need it	32	60.4
	I don't have a sexual problem	17	32.1
	Fear of side effect	19	35.8
	I don't know any aphrodisiac substance	16	30.2
	Religious belief	11	20.8
	It can cause in-balance of menstrual cycle	2	3.8
<i>*Other statements on factors influencing use of Aphrodisiacs</i> (n=95)	Influence of friends and relatives	45	67.2
	My partner supports it	42	62.7
	Influence of social media	32	47.8
	My friends use it	44	65.7
	It enhances sexual excitement and satisfaction	61	91.0
	For good response from partner	48	71.6
	Because of age related sexual complications	29	43.3

*Multiple responses present

4.5 Perception of Health Risks Associated with the use of Aphrodisiacs

The respondents' perceptions toward the health risks associated with the use of aphrodisiacs substance is presented in table 4.5. Most (81.8%) of the respondents had poor perception while 18.2% had good perception

Many (58.4%) of the respondents disagreed that aphrodisiac substance are good for them. 57.4% reported that long term use of aphrodisiac can make them have menstrual irregularities. Also, 70.7% perceived that the use of over-the-counter aphrodisiac have huge side effect, 64.9% felt if they use any aphrodisiac substance, they will have hyper stimulation. Majority (71.9%) also felt inserting anything into the vaginal will cause itching, bleeding and rashes. 69.8% reported that washing the vagina with herbs can predispose them to infections while another 62.1% felt drinking herbs for sexual stimulation will affect the liver. Another 62.4% perceived that using aphrodisiacs may make them become addicted to the substance while 67.0% disagreed that natural aphrodisiacs are not effective.

Table 4.5: Perception of health risks associated with the use of Aphrodisiacs

Statements	Responses	
	Agree %	Disagree %
Aphrodisiacs are good for me	41.6	58.4
Long term use of aphrodisiacs can make me have menstrual irregularities	57.4	42.6
Oral aphrodisiacs are very safe for me	39.0	61.0
Herbal medicines with aphrodisiacs are safe for me.	44.4	55.6
The use of over-the-counter aphrodisiacs have huge side effect	70.7	29.3
I don't use it because the component of some stimulants will affect my health	65.3	34.7
I don't use it because I don't have any sexual problem	58.2	41.8
Using aphrodisiacs makes me feel like a woman	38.9	61.1
My sexual libido increases when I use aphrodisiacs	51.0	49.0
Using an aphrodisiac will make me dizzy	36.6	63.4
If I use any, I will have hyper stimulation	64.9	35.1
My menstrual cycle will become irregular if I use it	46.8	53.2
I will have abdominal pain after I use it	51.6	48.4
If I insert anything into my vagina, it will cause itching, bleeding and rashes	71.9	28.1
If I take any oral stimulant suspension, I will vomit	50.0	50.0
Using aphrodisiacs is not a problem for me	48.4	51.6
Aphrodisiacs might cause fertility complications for me	57.0	43.0
I feel I will be promiscuous if I use aphrodisiacs	43.0	57.0
I will be a better partner if I spice up my sexuality with the use of aphrodisiacs	53.8	46.2
Drinking herbs for sexual stimulation will affect my liver	62.1	37.9
Washing the vagina with herbs will predispose me to infection	69.8	30.2
Aphrodisiacs can make me bleed	57.0	43.0
I might become addicted to it	62.4	37.6
Natural aphrodisiacs are not effective	33.0	67.0
I don't need my doctor to advise me on the use of aphrodisiacs	45.4	54.6

Table 4.5.1: Total Perception Score

N=220

Perception Score (PS)	Frequency	%
Good perception (PS>15)	40	18.2
Poor perception (PS≤15)	180	81.8
Total	220	100.0

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4.6 Source of information on aphrodisiacs

The sources of information on aphrodisiac substance as reported by the respondents are presented in table 4.7. Many (55.3%) of the respondents heard about the substance for the first time in more than one year ago. The major source of information on aphrodisiac was the internet (73.3%), friends (76.2%), herbalist and herb sellers (37.6%), family (33.7%), book (22.8%), television and radio (15.8%) and health workers (18.8%). The most preferred source of information was the internet, been a better source of available information on aphrodisiac substance.

Also, 16.7% of the respondents reported they face challenge in getting information on aphrodisiac substance.

Table 4.7: Source of information on aphrodisiacs

		N=220	
Statements	Responses	Frequency	%
<i>The first time of hearing about aphrodisiacs (n=94)</i>	This week	8	8.5
	A month ago	7	7.5
	Three to Eleven months ago	12	12.7
	A year ago	15	16.0
	More than one year ago	52	55.3
<i>From whom (n=102)</i>	Internet	23	22.5
	Friend	54	52.9
	Parents	3	2.9
	Medical practitioner	7	6.9
	Social media	5	4.9
	Hospital	3	2.9
	Television	2	2.0
	Co-workers	3	3.0
	Herb sellers	2	2.0
<i>How helpful the information(n=104)</i>	Very useful	52	50.0
	Useful	29	27.9
	Not useful	23	22.1
<i>*Sources of information available On aphrodisiac (n=101)</i>	Internet	74	73.3
	Friends	77	76.2
	Book	23	22.8
	Hospital	16	15.8
	Posters and leaflets	8	7.9
	Commercial billboard	6	5.9
	Television and radio	16	15.8
	Herbalist and herb seller	38	37.6
	Family and relatives	34	33.7
	Health facility	10	9.9
	Health workers	19	18.8
<i>Most preferred source of available information (n=93)</i>	Internet	49	52.7
	Friends	18	19.3
	Hospital	11	11.8
	Television and radio	3	3.2
	Herb seller	5	5.4
	Health facility	1	1.1
		Health worker	6

*Multiple responses present

Sources of information CONT'D

N=220

Statements	Responses	No.	%
<i>Reasons for the preferred source of available information (n=91)</i>	It is a better source of information	25	27.5
	An experience from someone who had used it	15	16.5
	Easy accessibility	18	19.8
	Accuracy of information gotten	19	20.9
	Readily available information	3	3.3
	My custom and belief	2	2.2
	Privacy and confidentiality	6	6.5
	Wider coverage and scope	3	3.3
<i>Are there challenges associated with getting information on aphrodisiacs (n=96)</i>	Yes	16	16.7
	No	80	83.3
<i>Challenges associated with getting information on aphrodisiacs (n=18)</i>	Lack of knowledge on the importance of the substance	12	66.7
	Fear of being judged by people	3	16.7
	Lack of awareness on the health implications of the substance	3	16.7
<i>How the challenges can be overcome (n=17)</i>	People should be more informed	11	64.7
	A clinical review of all aphrodisiacs	6	35.3

4.7 Statistical Test of Hypotheses

Hypothesis one: There is no significant difference between level of knowledge and perception of health risk related to the use of aphrodisiac.

Fischer exact test statistics was used to test the relationship between the two variables as presented in table 4.8.1 and it was found to be statistically significant ($X^2=78.431$, $p=0.000$, $df=2$).

Hence, the null hypothesis that there is no significant difference between level of knowledge and perception of health risk related to the use of aphrodisiac was rejected

Table 4.7.1: Relationship between knowledge and perception of use of aphrodisiac

Perception	Knowledge			Total	df	X ² *	p-value+
	Poor	Fair	Good				
	N _o (%)	N _o (%)	N _o (%)	N _o (%)			
Poor	143 (79.4)	19 (10.6)	18 (10.0)	180 (100)	2	78.431	0.000
Good	6 (15.0)	2 (5.0)	32 (80.0)	40 (100)			
Total	149 (67.7)	21 (9.6)	50 (22.7)	220 (100)			

+Significant (p<0.05)

*Fischer exact test statistics was used

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Hypothesis Two: There is no significant difference between use of aphrodisiac and perception of health risk related to the use of aphrodisiac.

Chi-square statistics was used to test the relationship between the two variables as presented in table 4.8.2 and it was found to be statistically significant ($X^2=6.072, p=0.014, df=1$).

Hence, the null hypothesis that there is no significant difference between use of aphrodisiac and perception of health risk related to the use of aphrodisiac was rejected.

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Table 4.7.2.: Relationship between use of aphrodisiac and perception of health risk

Perception	Use of Aphrodisiac		Total	df	X ² *	p-value+
	Yes № (%)	No № (%)				
Poor	25 (13.9)	155 (86.1)	180(100.0)	1	6.072	0.014
Good	12 (30.0)	28 (70.0)	40 (100.0)			
Total	37 (16.8)	183 (83.2)	220 (100.0)			

+Significant (p<0.05)

*Chi-square statistics was used

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Hypothesis Three: There is no significant difference between age of respondents and level of knowledge.

Fischer exact test statistics was used to test the relationship between the two variables as presented in table 4.8.3 and it was found to be statistically significant ($X^2=12.31$, $p=0.036$, $df=6$).

Hence, the null hypothesis that there is no significant difference between level of knowledge and ages of respondents was rejected.

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Table 4.7.3: Relationship between ages of respondents and respondents knowledge

Age	Knowledge			Total № (%)	Df	X ² *	p-value+
	Poor № (%)	Fair № (%)	Good № (%)				
20-29	54 (58.7)	12 (13.0)	26 (28.3)	92 (100.0)	6	12.31	0.036
30-39	61 (72.6)	5 (6.0)	18 (21.4)	84 (100.0)			
40-49	31 (81.6)	4 (10.5)	3 (7.9)	38 (100.0)			
≥50	3 (50.0)	0 (0.0)	3 (50.0)	6 (100.0)			
Total	149 (67.7)	21 (9.3)	50 (22.7)	220 (100.0)			

+Significant (p<0.05)

*Fischer exact test statistics was used

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Hypothesis Four: There is no significant difference between marital status of respondents and use of aphrodisiac.

Fischer exact test statistics was used to test the relationship between the two variables as presented in table 4.8.4 and it was found to be statistically not significant ($X^2=2.142$, $p=0.552$, $df=3$).

Hence, the null hypothesis that there is no significant difference between use of aphrodisiac and marital status of respondents was not rejected.

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Table 4.7.4: Difference between use of aphrodisiac and marital status

Marital status	Use of Aphrodisiac		Total №(%)	df	X ² *	p-value+
	Yes № (%)	No № (%)				
Single	12 (16.2)	62 (83.8)	74 (100.0)	3	2.142	0.552
Married	21 (16.0)	110 (84.0)	131 (100.0)			
Divorced	4 (28.6)	10 (71.4)	14 (100.0)			
Widowed	0 (0.0)	1 (100.0)	1 (100.0)			
Total	37 (16.8)	183 (83.2)	220(100.0)			

+Not Significant (p>0.05)

*Fischer exact test statistics was used

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CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

5.1.1. Socio demographic profile of women attending gynaecology clinic at the Lagos State University Teaching Hospital

The data collected showed that women who attended the clinic and participated in the study are between ages 20 and 54 with majority of them were married. Out of the percentage of those who were married, 75% were in a monogamous marriage. Majority of them were Christians and a large number had tertiary education. A larger percentage was self-employed. Majority of them are of the Yoruba ethnicity. Majority of the women attending the clinic have never heard about aphrodisiacs while some had heard about it before, they don't know any type of aphrodisiac substance.

5.1.2 Prevalence and use of Aphrodisiac substance

Various studies have reported that the use of aphrodisiacs is rampant amongst the younger population. Data on the use of aphrodisiacs in women is limited (Shamloul, 2010) but this study revealed the prevalence of the aphrodisiacs use to be very few which is lower than the prevalence in a study carried out in Kano by Garba *et al*, (2013) on the use of aphrodisiacs amongst women in Kano, out of the 500 clients interviewed, 220 use some medications to enhance their sexual performance. The finding that the stimulants were used mostly by young women aged 30 years and below, who are of low parity, may be because such women

are still at their sexual prime and probably willing to experiment Abdullahi & Tukur, (2018). When asked how respondents felt after use, majority of them said they felt more sexually aroused which is similar to a study by Hassalie, *et al*, (2012) while some said they felt nothing. Also, 41% of the aphrodisiac products were said to be gotten from pharmacies while Garba *et al*, (2013) said in his study that only 2.27% of the respondents go to health workers for medications. While 38% of respondents in this study got theirs from herb sellers, Garba *et al*, (2013) recorded a similar finding that the herbalist/Traditional house are the major sources of these medications and 23% in Koffuor *et al*, (2011) got it from online store which is contrary to the 2.3% in this study who got aphrodisiac substances from online stores. Majority of the type of aphrodisiac substance used was recorded to be herbal medicine, fruits and pharmaceutical drugs. Women who have used any form of aphrodisiac product reported no side effect while some other ones reported to have had stomach pain, headache and allergic reactions from the use of these substances. Women were further asked for reasons that prompted the use of aphrodisiacs and many said they used it to increase their sexual desire and to enhance sexual performance which is similar 40.45% response from Garba *et al*, (2013). Very few used it for husband's satisfaction contrary to 19.09 in Garba *et al*, (2013) and few used it just to satisfy their curiosity. Majority of users were very satisfied with the use of aphrodisiacs which is contrary to findings from Garba *et al*, (2013) which recorded that 68% were dissatisfied with the use of aphrodisiacs. Study from Abdullahi & Tukur, (2018) showed a supporting result as regard the miscellaneous reasons for the use of aphrodisiac by 23.2% of respondents which includes satisfaction of curiosity in 9.1% of this study.

5.1.3 Knowledge of Aphrodisiac Substance

This study revealed that women attending the clinic have poor knowledge on aphrodisiacs. Only 22.8% women between ages 20-29 had good knowledge compared to 66.7% women between ages of 30-39 who had poor knowledge. All those who claimed to know about aphrodisiacs gave different definitions as they assumed it works. Majority of them defined

aphrodisiac as a substance used to increase sexual libido similar to Zanolari, (2003). A blend of Water melon, banana, tiger nuts, coconut and honey were reported as a natural aphrodisiac and they were the most popular type of aphrodisiacs confirmed in a study by (Brody, 2002) which stated that there is a general belief in the community that ingestion of high amount of fruits increases a woman`s sexual desire. This could probably be due to high amount of ascorbic acid found in fruits, amino acid, citrulline in watermelon. The risks associated with use of aphrodisiac substance reported include stomach pain, vomiting, organ damage, addiction, allergic reaction, bleeding confirmed by Ginkgo is generally well tolerated, which can cause significant bleeding risks, especially if taken with anticoagulant medication Davis, Moreau, Kroll, Bouchard, Panay & Gass, (2008). Yohimbine and ginseng can cause hypertension as recorded by Davis, Moreau, Kroll, Bouchard, Panay & Gass, (2008), Davis *et al.*, (2008) reported low blood pressure, heart attack, and Haller *et al.*, (2008) says Ginko can have additive anticoagulant/ antiplatelet effects and also cause nausea as in the case of Yohimbine as recorded by (Rowland & Tai, 2003)..

5.1.4 Factors influencing the usage of Aphrodisiac

Amongst those who reported to have used an aphrodisiac substance before, said they used it to achieve more sexual pleasure which is confirmed by 40.45% of the respondents in a study carried out by Garba *et al.*, (2013) which said the major reasons for use of these medications were for better sexual satisfaction while some said they used it under the influence of friends and relatives which is similar to the findings from Garba *et al.*, (2013). It was observed that people tend to spread information about a particular aphrodisiac after successfully using the medicines themselves. Those who reported not to have used any form of aphrodisiac reported they don't have any sexual problem so they don't need it, some also don't use it because of the fear of side effects.

5.1.5 Perception of health risk associated with the use of Aphrodisiacs

In this study, the healthy risk perception was found to be poor. This may be attributed to individual's previous experience on aphrodisiac. One possible reason for frequent herbal use is a perception that traditional medicine is natural and therefore safer than conventional medicines Ernst, (1998). Many of the respondents agreed in this study that herbal medicines with aphrodisiacs are safe for them which is similar with findings from Hassali, (2012) 'use of herbal aphrodisiac in management of female sexual dysfunction on the assessment of general public perceptions toward traditional medicines used for aphrodisiac purpose and Danquah *et al.*, 2011. Majority perceived that the use of over-the-counter aphrodisiacs have huge side effect. In a study carried out by Hassali *et al.*, (2012), 43.3% participants agreed to increasing libido through the use of aphrodisiac same as 51% respondents who said their sexual libido increases when they use aphrodisiacs. 49.2% claimed they would consult a healthcare physician prior to using any traditional medicine with aphrodisiac components compared to 45.4% respondents who said they don't need a doctor's advice on the use of aphrodisiacs in this study. Also, in the study carried out by Hassali *et al.*, (2012), 61% respondents who were interviewed said aphrodisiacs are good but should be used with caution but only 41% of respondents in this study agreed that aphrodisiacs are good. In the same study by Hassali, 28.1% were of the opinion that the preparations were harmful and should be avoided which is similar to results from this study stating that 58.2% don't use it because the component of some stimulants will affect their health. 4% of users in a study carried out by Abdulai & Tukur, (2013) complained of Infertility which is similar to the perception of 57% respondents who said aphrodisiacs can cause fertility complications. 6.1% respondents in the same study experienced Copious vaginal discharge which is similar to 69% who perceived washing the vagina with herbs will predispose someone to infections. 0.9% respondents experienced Hyper stimulation which is similar to 64% respondents who agreed that they will have hyper stimulation if they use any form of aphrodisiac. While 6.6% respondents in the study by (Abdulai & tukur, 2013) experienced Vulval itching/rashes, 71.9% of respondents in this study agreed that if they insert anything into their vagina, it

will cause itching, bleeding and rashes. Majority of respondents in Hassail *et al.*, (2012) claimed they would consult a healthcare physician prior to using any traditional medicine as an aphrodisiac which agrees with the findings from this study that majority will consult a health care professional before using any aphrodisiac substance.

5.1.6 Source of information on aphrodisiacs

The findings in this study revealed that most of the respondents heard about aphrodisiacs less than three years ago from friends. Also, 73.3% of respondents said they got information on aphrodisiacs on internet compared to 23% from Danquah *et al.*, (2011). The respondents chose the internet as their most preferred source of information. This can be explained by the availability and the accessibility to information on many issues especially sexual and reproductive health issue. Many find it difficult talking to someone or making enquires about sexual and reproductive health issues from health facilities but would rather go online to get answers to their questions. This study revealed that majority prefer to get the information from friend and family because they share their experiences and can certify the effect of the substances. This information is most times bias or incorrect. While majority said they do not face any challenge getting information on aphrodisiacs, 16.7% said they face challenges on information on aphrodisiacs and recommended that more reviews should be done on side effects and testimonies and that people should be more sexually health educated.

5.2 Implications of Finding for Health Promotion and Education

The findings of this study have several implications for planning, development and implementation for health promotion and education on the use of aphrodisiacs. The demand of herbal drugs is increasing day by day in developed as well as developing countries because they are safer and well tolerated as compared to pharmaceutical drugs. In as much as these products improve the quality of sex life in both the young and the elderly with some physiological and psychological disorders that affect the general health of that individual so

therefore, care must be taken on the indiscriminate use of these products. These products should be scrutinized for information on the mechanism of their sex enhancement so as to predict their adverse effects. Individuals with these various sexual disorders should contact qualified health care professionals for advice on the use of sex enhancing drugs. If the drug is found to be very useful and safe, the product should be registered with the National Agency for Food and Drug Administration Control.

The need to set up clinics specially designed to address the sexual needs of women with trained personnel specialized on the management of female sexual dysfunction. Such service should be offered with full complement of confidentiality and privacy in view of the sensitive nature of the disorders

5.3 Conclusion

This study showed that there is high level of ignorance about the use of sex enhancing stimulants and also poor knowledge about treatment options for sexual dysfunction by women. Majority of the respondents have little or no knowledge on aphrodisiac and those who do, have little idea on the health risks attached to indiscriminate use of the aphrodisiacs. The study, however, demonstrated that many women use traditional sexual stimulants obtained from local herb sellers and then rebrand it to make it modern and easily acceptable by the society. There is a possibility that if pharmaceutical companies research more on the active ingredients and certify them safe for use with emphasis on warnings and side effects and also make them available and affordable in pharmacies, health centers and hospitals, these women would not have to utilize the services of traditional herb sellers.

5.4 Recommendations

Based on the findings from this study, the following recommendations are made:

1. There is need for public health education on female sexual dysfunction.
2. Women need to undergo thorough medical consultation before using any aphrodisiac. It's important also important to consult a doctor or pharmacist to know

if these supplements are safe for use because some herbal combinations may interact with certain medications.

3. For product companies who want to venture into sales of aphrodisiacs, plants and products should be subjected to animal and human studies to determine their effectiveness and health risks.
4. There is need to set up more sexual dysfunction clinics to address the sexual needs of women. To set up this service, there is need for training of more health personnel to specialize on the management of female sexual dysfunction. Such service should be offered with full complement of confidentiality and privacy in view of the sensitive nature of the disorder.
5. It is recommended that Food and Drug Administration ensures that claims and standards are regulated to protect the public regarding safety and efficacy prior to product marketing.
6. Healthcare providers should expand their role as counselors and recommend proven therapies while explaining the advantages and disadvantages of using untested medications.
7. Consumers should disclose or discuss use for sexual enhancement with healthcare professionals.

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**INFORMED CONSENT FORM FOR USE OF APHRODISIACS AND PERCEIVED
HEALTH RISKS AMONG WOMEN ATTENDING THE GYNAECOLOGY CLINIC
AT THE LAGOS STATE UNIVERSITY TEACHING HOSPITAL, LAGOS,
NIGERIA.**

IRB Research Approval Number: LERC 06/10/1076

This approval elapsed on: 09/01/2019

Title of research: use of aphrodisiacs and perceived health risks among women attending the gynaecology clinic at the lagos State University Teaching Hospital, Lagos, Nigeria.

Name of researcher: This study is being conducted by Adeleye Iyanuoluwa Olajumoke, a postgraduate student in the department of Health Promotion and Education, Faculty of Public Health, College of Medicine University of Ibadan.

Purpose of research: The purpose of this study is to the Investigate the “**use of aphrodisiacs and perceived health risks among women attending the Gynaecology clinic at the Lagos state university teaching hospital, Lagos, Nigeria.**”.

Sample size and procedure for data collection: A total of 221 women who will attend the gynaecology clinic and are willing to participate in the study will be recruited for the study.

Expected duration of the research and participant(s) involvement: The process of this study will last for about three weeks. Respondents are expected to provide answers to the questions in the questionnaire. The questionnaire will take less than 15 minutes to be completed.

Risk(s): There are no physical risks in participating in this study. Although, some of the questions in the questionnaire are sensitive which some respondents might find uncomfortable to answer, nevertheless, genuine response will be required from respondents.

Cost of participating or joining the research: Participation will cost you nothing. It will however only take a little of your time.

Benefit: At the end of the research, findings will be useful in identifying knowledge gaps and to bridge the gap for lack of sufficient information on prevalence and health risks of aphrodisiac use by women.

Confidentiality: All information collected in this study will be treated with utmost confidentiality. Names and other personal information of respondents will not be written on the questions.

Voluntariness: Your participation in this research is entirely voluntary.

Consequences of participants' decision to withdraw from the research and procedure for orderly termination of participant: You can choose to withdraw from the research at any time without any penalty. Please also note that some of the information that has been obtained about you before you chose to withdraw might be used in reports and publications.

Statement of Person Obtaining Informed Consent

I have fully explained the nature and scope of the research to _____ and have provided sufficient information to him/her which is needed by him/her to make informed decision.

Date _____

Signature _____

Name _____

Statement of Person Giving Consent

I have read the description of the research and the research has been explained to me in a language I understand or have been translated into a language I understand. I understand that my participation is voluntary. I know enough about the purpose, methods, risk, and benefits of the research study to judge that I want to take part in it. I understand that I may freely stop being part of this study at any time. Finally, I have received a copy of this consent form and additional information sheet to keep for myself.

Date _____

Signature _____

Name _____

QUESTIONNAIRE

Dear Ma,

I am a student of Population and Reproductive Health currently doing her Master's in Public Health at the University of Ibadan. I am conducting a research on the **“Use of Aphrodisiacs and Perceived Health Risks among Women attending the Gynaecology Clinic at the Lagos State University Teaching Hospital, Lagos, Nigeria.**

I would be grateful if you could spare some time to answer the questions. You are assured of anonymity and that information provided will be treated with the utmost confidentiality.

Thank you.

Please tick (✓) the appropriate answer and double tick where required

SECTION 1: SOCIO DEMOGRAPHIC CHARACTERISTICS

1. Age (*in years*) _____
2. Marital status (i) Single [] (ii) Married [] (iii) Divorced/Separated [] (iv) Widowed []
3. Religion (i) Christian [] (ii) Muslim [] (iii) Traditional [] (iv) Others _____
4. Education (i) No Formal Education [] (ii) Primary [] (iii) Secondary [] (iv) Tertiary [] (v) Post Graduate []
5. Occupation (i) Unemployed [] (ii) Employed [] (iii) Self employed [] (iv) Artisan (v) Others _____
6. Ethnicity (i) Yoruba [] (ii) Igbo [] (iii) Hausa [] (iv) Others _____
7. Family type (*if married*) (i) Monogamous [] (ii) Polygamous []
8. Number of children _____
9. Have you heard of aphrodisiacs before? (a) Yes [] (b) No []
10. Do you know Aphrodisiacs? (i) Yes [] (ii) No []
11. Have you ever used an Aphrodisiac substance? (i) Yes [] (ii) No []. If NO, move to section 3

SECTION 2: USE OF APHRODISIACS

12. Did you use any aphrodisiacs during your last sexual intercourse? (i) Yes (ii) No
13. How many times have you used it in the last 12 months?

14. Describe how you felt after use

15. Where did you get the aphrodisiac substance from? _____

16. What type/s did you use? (*please specify*) _____
17. What side effect/s have you experienced since you started using it? (*please specify*)-

Please tick (✓) where appropriate.

18. Why did you use it?
- I. To increase sexual desire []
 - II. To enhance sexual performance []
 - III. For husband's satisfaction []
 - IV. To satisfy my curiosity []
 - V. Others _____
19. Level of satisfaction with the substance
- I. Very satisfied []
 - II. Moderately satisfied []
 - III. Satisfied []
 - IV. Dissatisfied []
 - V. Very dissatisfied []

SECTION 3: KNOWLEDGE ON APHRODISIACS

	Statements	Response	scores
20.	What are Aphrodisiacs?		
21.	List 4 types of aphrodisiacs you know	1. 2. 3. 4.	
22.	What are the risks associated with the use of Aphrodisiacs? (Mention 2)		

23. **Total Score obtained** _____

24. **Code** _____

SECTION 4: FACTORS INFLUENCING USAGE OF APHRODISIACS

	Statements	Response
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25.	If you have used an aphrodisiac substance before, mention factors influencing usage	1. 2. 3
26.	If you haven't used an aphrodisiac substance before, what factors influence non usage	1. 2. 3.

Statements on factors influencing use of Aphrodisiacs		Yes	No
27.	Influence of friends and relatives		
28.	My partner supports it		
29.	It's a normal cultural practice		
30.	Influence of social media		
31.	My friends use it		
32.	Aphrodisiac is as a tool for sexual excitement and satisfaction		
33.	For good response from partner		
34.	Because of age related sexual complications		

SECTION 5: PERCEPTION OF HEALTH RISK ASSOCIATED WITH THE USE OF APHRODISIACS. Tick (✓) where appropriate.

	Statement	Agree	Disagree
35.	Aphrodisiacs are good for me		
36.	Long term use of aphrodisiacs can make me have menstrual irregularities.		
37.	Oral aphrodisiacs are very safe for me.		
38.	Herbal medicines with aphrodisiacs are safe for me.		
39.	The use of over-the-counter aphrodisiacs have huge side effect		
40.	I don't use it because the component of some stimulants will affect my health		
41.	I don't use it because I don't have any sexual problem		
42.	Using aphrodisiacs makes me feel like a woman		
43.	My sexual libido increases when I use aphrodisiacs		
44.	Using an aphrodisiac will make me dizzy		
45.	If I use any, I will have hyper stimulation		
46.	My menstrual cycle will become irregular if I use it		
47.	I will have abdominal pain after I use it		
48.	If I insert anything into my vagina, it will cause itching, bleeding and rashes		

49.	If I take any oral stimulant suspension, I will vomit		
50.	Using aphrodisiacs is not a problem for me		
51.	Aphrodisiacs might cause fertility complications for me		
52.	I feel I will be promiscuous if I use aphrodisiacs		
53.	I will be a better partner if I spice up my sexuality with the use of aphrodisiacs		
54.	Drinking herbs for sexual stimulation will affect my liver		
55.	Washing the vagina with herbs will predispose me to infection		
56.	Aphrodisiacs can make me bleed		
57.	I might become addicted to it		
58.	Natural aphrodisiacs are not effective		
59.	I don't need my doctor to advise me on the use of aphrodisiacs		

60. Score obtained _____

61. Code _____

SECTION 6: SOURCE OF INFORMATION ON APHRODISIACS

	Statements	Response
62.	When was the first time you heard about aphrodisiacs?	
63.	From whom did you hear about it?	
64.	How helpful was the information?	1. Very useful 2. Useful 3. Not useful
65.	What are the sources of information on aphrodisiacs available to you?	<input type="checkbox"/> Internet <input type="checkbox"/> Friends <input type="checkbox"/> Family and relatives <input type="checkbox"/> Books <input type="checkbox"/> Health center <input type="checkbox"/> Hospital <input type="checkbox"/> Health worker <input type="checkbox"/> Posters and leaflets <input type="checkbox"/> Commercial bill boards

		<input type="checkbox"/> Television and radio <input type="checkbox"/> Herbalist <input type="checkbox"/> Herb sellers Others
66.	Which of these sources of information is the most preferred?	
67.	Why is the above the preferred source of information on aphrodisiac?	
68.	Are there challenges associated with getting information on aphrodisiacs?	(a) Yes (b) No
69.	If yes to number, 68 above , what are the challenges?	
70.	How can the challenges be overcome?	

Udi nkwenye a maka iji ogwu na-agwo oria na ahuike n'etiti umu nwanyi na-aga n'ulo ogwu na ahu maka ihe gbasara ahu ike omumu umu nwanyi na ulo akwukwo lagos state university hospital. Lagos Nigeria

IRB nomba nyocha ochucho: LREC. 06/10/1076

Ikikere Nyocha ga agwu na: 09/01/2019

Aha nyocha: eji aphrodisiacs na ihe ize ndu ahu ike n'etiti ndi inyom na-aga n'ulo ogwu gnyecology lagos state university teaching hospital.

Aha onye nyocha: Adeleye Iyanuoluwa Olajumoke onye n'eme nyocha a bu nwa akwukwo postgraduate na ulo oru ahu ike na nkuzi, Health Promotion and Education University of Ibadan.

Udi nhazi na usoro maka nchiokota data: onu ogugu nke umu nwayi abuo na iri abuo na abuo ga-aga ulo ogwu gynaecology ma di njikere itinye aka na omumu ahu ga-anakota maka omumu ihe.

Oge a ga-atu anya nyocha na ndi na etinye aka nay a: usoro nke omumu a ga-adiru ihe di ka izu ato. A na-atu anya ba ndi-aza ajuju ga-aza aziza nke ajuju ndi din a ajuju ahu. Ajuju a ga-ewe ihe dikariri iri na ise iji wuchaa ya.

Ihe ise ndu: enweghi ihe ozo ozo n'inwe ihe omumu a. o bu ezie na ufodu n'ime ajuju ndi din a ajuju a bu ihe nlezianya nke ufodu ndi na-azaghachi nwere ike ichota iru ala iza, ma, a ga-acho nzaghachi dim ma n'aka ndi nabatara.

Ego nke ikere oke ma o bu itinye aka na nnyocha: oke ga-efu gi ihe o bula. O ga- agbanyeghi obere oge gi

Uru: na njedebe nke nyocha ahu, ncoputa ga-aba uru n'ichoputa odiiche nke ihe omuma na ime ka odiiche ahu ghara idi n'ih i enweghi nkowa zuru ezu banyere njedebe na ihe ize ndu ahuike nke umu nwanyi.

Nzuzo: ozi niile anakotara na omumu a ga-emeso ya na nzuzo. A gaghi ede aha na ozi ndi ozo nke ndi na-aza ajuju na ajuju

Nkwuputa nke onye na-enweta nkwenye mara

Enwetara m nkowa na odidi nke nyocha ahu na _____ - ma nyere ya ihe zure ezu iji gwa ya ihe o choro iji mee mkpebi ndi a ma ama.

Ubochi _____ mbinye aka _____
aha _____

Nkwuputa nke onye na-enye nkwenye

Agula m nkowa nke nyocha ahu ma kowaara m nyocha ahu ma kowaara m nyocha ahu n'asusu m ghotara. M ghotara na oke bu afo ofufo. Amaara m nke oma banyere nzube uzo, ihe ize ndu na uru nke nnyocha omumu iji kpee ikpe na achoro m ikere oke n'ime ya. M gbotara na enwere m ike ikusi ibu akuku nke omumu ije a n'oge o bula. N'ikeazu, enwetara m out udi nkwenye a na mpeme akukwo ozi iji dobe onwe m.

Ubochi _____ mbinye aka _____
aha _____

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Samfurin izini don amfani da likitoci da kuma sanadin lafiyar mata tsakanin mata masu zuwa asibitin gynecology a jami'ar a lagos

IRB lambar bincike amincewa; LREC. 06/10/1076

Wannan yardarm za ta ci gaba: 09/01/2019

Taken na bincike: amfani da likitoci da kuma lafiyar lafiyar mata tsakanin mata masu zuwa asibitin gynaecology lagos jihar jami'ar koyarwa asibitin.

Sunan mai bincike: wannan nazari ana gudanar da ita Adeleye Iyanuoluwa Olajumoke, wani dalibi na digiri a cikin sashen kiwon lafiya da ilimi, yancin lafiyar jama'a, kolejin magani, jami'ar Ibadan

Manufar bincike: manufar wannan bincike shine bincika 'amani da likitoci da kuma lafiyar lafiyar mata tsakanin mata masu zuwa asibitin gynaecology lagos jihar jami'ar koyarwa asibitin'

Sanfurin samfurin da hanya don tattara bayanai: a dukan matan da za su halarci makarantar kimanin dari biyi da ashirin da biyu zasu halarci nazarin.

Hadarin: babu wani halayen jiki na shiga wannan binciken. Ko day aka, wasu tambayoyin da ke cikin tambayoyin suna da damuwa wanda wasu masu amsawa zasu iya da wuya su amsa, duk da haka za a bukaci amsa mai kyau daga masu amsawa.

Kudin shiga ko shiga cikin bincike: hadin kai ba zai biya ku kome ba. Amma duk da haka, kawai ka dauki kadan daga lokacinka.

Amfana: a karshen bincike, binciken zai zama da amfani a gano ilimin iimin ilimin da kuma haduwa da rata saboda rashin cikakken bayani game da lalata da kuma hadarin kiwon lafiya game da amfani da aphrodisiac da mata.

Sirri: duk bayanin da aka tattara a cikin wannan binciken za a bi das hi tara da cikakkiyar. Sunaya da wasu bayan sirri na masu amsa ba za a rubuta a kan tambayoyhin ba.

Karfin zuciya: hadinka a cikin wannan bincike ne gaba daya da son rai.

Sakamakon yanke shawara na dan takara don janye daga binciken da hanya don yanke shawarar dan takara: za ka iya zabar su janye daga binciken a kowane lokaci ba tara da wani hukunci ba. Don allah a lure cewa wasu daga cikin bayanin da aka samu game da ku kafin ku zabi ya janye iya amfani dashi a cikin rahoto da wallafe-wallafe.

Sanarwa na mutum samun izinin sanarwar

Na yi cikakken bayani game da yanayin da yaduwar binciken da aka yi a _____ kuma mun bas hi cikakken bayani game da abin da yake bukatar shi don yanke shawara

Kwanan wata _____ se hannu _____
sunan _____

Sanarwa na mutum yana bada izini

Na karanta bayani binciken kuma an yi nazarin bincike a cikin harshe na fahimata ko an fassara shi cikin harshe na fahima. Na fahimci cewa nawa ne na son rai. Na san komai game da manufar, hanyoyi, hadarin da kuma amfani da binciken don yanke hukuci cewa ina so in shiga cikin wannan. Na fahimci cewa zan iya dakatar da zama wani bangare na wannan binciken a kowana lokaci. A karshe, na karbi kwafin wannan tsari da Karin takardar bayani don ci gaba da kaina.

Kwanan wata _____ se hannu _____
sunan _____

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CODING GUIDE

Dear ma,

I am a student of Population and Reproductive Health currently doing her Master's in Public Health at the University of Ibadan. I am conducting a research on the "Use of Aphrodisiacs and Perceived Health Risks among Women attending the Gynaecology Clinic at the Lagos State University Teaching Hospital, Lagos, Nigeria.

I would be grateful if you could spare some time to answer the questions. You are assured of anonymity and that information provided will be treated with the utmost confidentiality.

Thank you.

Please tick (√) the appropriate answer and double tick where required

SECTION 1: SOCIO DEMOGRAPHIC CHARACTERISTICS

1. Age (*in years*) _____
2. Marital status (i) Single [] (ii) Married [] (iii) Divorced/Separated [] (iv) Widowed []
3. Religion (i) Christian [] (ii) Muslim [] (iii) Traditional [] (iv) Others _____
4. Education (i) No Formal Education [] (ii) Primary [] (iii) Secondary [] (iv) Tertiary [] (v) Post Graduate []
5. Occupation (i) Unemployed [] (ii) Employed [] (iii) Self employed [] (iv) Artisan (v) Others _____
6. Ethnicity (i) Yoruba [] (ii) Igbo [] (iii) Hausa [] (iv) Others _____
7. Family type (*if married*) (i) Monogamous [] (ii) Polygamous []
8. Number of children _____
9. Have you heard of aphrodisiacs before? (a) Yes (b) No
10. Do you know aphrodisiacs? (i) Yes (ii) No
11. Have you ever used an Aphrodisiac substance? (i) Yes [] (ii) No []. If NO, move to section 3

SECTION 2: USE OF APHRODISIACS

12. Did you use any aphrodisiacs during your last sexual intercourse? (i) Yes (ii) No
13. How many times have you used it in the last 12 months? _____
14. Describe how you felt after use _____ **Sexually Aroused, Satisfied, Extreme wetness, Climax, Increased libido, Intense sexual gratification**
15. Where did you get the aphrodisiac substance from? **Hospital, Pharmacy, Herbseller, Friend, Traditionalist, Herbalist, Family, Chemist, Online, Social media**
16. What type/s did you use? (*please specify*) **(any of the types of aphrodisiacs listed in section number 21)** _____
17. What side effect/s have you experienced since you started using it? (*please specify*) **any of the side effects listed in number 22** _____

Please tick (√) where appropriate.

18. Why did you use it?
 - I. To increase sexual desire []
 - II. To enhance sexual performance []
 - III. For husband's satisfaction []
 - IV. To satisfy my curiosity []
 - V. Others _____
19. Level of satisfaction with the substance _____

- I. Very satisfied []
 II. Moderately satisfied []
 III. Satisfied []
 IV. Dissatisfied []
 V. Very dissatisfied []

SECTION 3: KNOWLEDGE ON APHRODISIACS

	Statements	Response	Scores
20.	What are Aphrodisiacs?	<p>An aphrodisiac is defined as any food or drug that arouses the sexual instinct or increase sexual desire and increase pleasure and performance</p> <p>Aphrodisiacs are substances which enhance sexual performance or aid in the proper functioning of the male and female sex organs</p> <p>An aphrodisiac is a substance that increases sexual desire.</p> <p>Substances used to increase libido.</p> <p>Anything used to make sex more pleasurable</p>	4
21.	List 4 types of aphrodisiacs you know	<p>Herbal medicine- weed, adodun, ginseng, appus, saffron, gornon tula, kayamata, baby oku, chicken spices, spices,</p> <p>fruits- water melon, banana, dates, tiger nuts, coconut, pepper, chocolate, alcohol (hot), honey,</p> <p>Animal/food- oysters, animal private part, kunu,</p> <p>Sweet, candy whites</p> <p>Pharmaceutical drugs; Viagra, Spanish fly, tramadol, cocaine</p> <p>Perfumes</p> <p>Scented candles</p> <p>Ointment/oil</p> <p>Creams, vagina creams, vagina tablets, lubricants,</p> <p>Dildo, vibrators,</p> <p>Injections</p>	8
22.	What are the risks associated with the use of Aphrodisiacs? (Mention 2)	<p>Stomach pain, Bleeding, Nausea, Vomiting, Infections, Low Blood Pressure, Heart Attack, Organ damage, Hypotension, Addiction, Allergic reaction</p> <p>Any one who says 'I don't know' = 0</p> <p>Any one who says 'no side effect' = 0</p>	4

23. Total Score obtained 16

24. Code _____ Stated below _____

SECTION 4: FACTORS INFLUENCING USAGE OF APHRODISIACS

	Statements	Response
25.	If you have used an aphrodisiac substance before, mention factors influencing usage	1.To satisfy curiosity 2. To achieve more sexual pleasure 3 To attain orgasm 4. Influence of friends and relative 5. For husbands satisfaction 6. Postpartum sexual dysfunction 7. Female sexual disorder
26.	If you haven't used an aphrodisiac substance before, what factors influence non usage	1. Personal reasons 2. I don't need it 3.I don't have a sexual problem 4. Fear of side effect 5. Religious believe 6. I don't know any aphrodisiac substance

	Statements on factors influencing use of Aphrodisiacs	Yes	No
27.	Influence of friends and relatives	*	
28.	My partner supports it	*	
29.	It's a normal cultural practice	*	
30.	Influence of social media	*	
31.	My friends use it	*	
32.	Aphrodisiac is as a tool for sexual excitement and satisfaction	*	
33.	For good response from partner	*	
34.	Because of age related sexual complications	*	

SECTION 5: PERCEPTION OF HEALTH RISK ASSOCIATED WITH THE USE OF APHRODISIACS. Tick (✓) where appropriate.

	Statement	Agree	Disagree
35.	Aphrodisiacs are good for me	1	0
36.	Long term use of aphrodisiacs can make me have menstrual irregularities.	1	0
37.	Oral aphrodisiacs are very safe for me.	1	0
38.	Herbal medicines with aphrodisiacs are safe for me.	1	0
39.	The use of over-the-counter aphrodisiacs have huge side effect	1	0
40.	I don't use it because the component of some stimulants will affect my health	1	0
41.	I don't use it because I don't have any sexual problem	1	0
42.	Using aphrodisiacs makes me feel like a woman	0	1
43.	My sexual libido increases when I use aphrodisiacs	1	0
44.	Using an aphrodisiac will make me dizzy	1	0

45.	If I use any, I will have hyper stimulation	1	0
46.	My menstrual cycle will become irregular if I use it	1	0
47.	I will have abdominal pain after I use it	1	0
48.	If I insert anything into my vagina, it will cause itching, bleeding and rashes	1	0
49.	If I take any oral stimulant suspension, I will vomit	1	0
50.	Using aphrodisiacs is not a problem for me	1	0
51.	Aphrodisiacs might cause fertility complications for me	1	0
52.	I feel I will be promiscuous if I use aphrodisiacs	1	0
53.	I will be a better partner if I spice up my sexuality with the use of aphrodisiacs	0	1
54.	Drinking herbs for sexual stimulation will affect my liver	1	0
55.	Washing the vagina with herbs will predispose me to infection	1	0
56.	Aphrodisiacs can make me bleed	1	0
57.	I might become addicted to it	1	0
58.	Natural aphrodisiacs are not effective	0	1
59.	I don't need my doctor to advise me on the use of aphrodisiacs	0	1

60. Score obtained _____ 25 _____

61. Code _____ Stated below _____

SECTION 6: SOURCE OF INFORMATION ON APHRODISIACS

	Statements	Response
62.	When was the first time you heard about aphrodisiacs?	Number of days, weeks, months, years
63.	How helpful was the information?	1. Very useful 2. Useful 3. Not useful
64.	What are the sources of information on aphrodisiacs available to you?	[] Internet [] Friends [] Family and relatives [] Books [] Health center [] Hospitals [] Health worker [] Posters and leaflets [] Commercial bill boards [] Television and radio [] Herbalist [] Herb sellers Others
65.	Which of these sources of information is the most preferred?	
66.	Why is the above the preferred source of information on aphrodisiac?	
67.	Are there challenges associated with getting information on aphrodisiacs?	(a) Yes (b) No

68.	If yes to number, 67 above, what are the challenges?	
69.	How can the challenges be overcome?	

A 16-point knowledge scale to assess the knowledge of aphrodisiac;

Good knowledge ≥ 12 points

Fair knowledge $\geq 9 < 12$ points

Poor knowledge. < 9 points

A 25-point perception scale to determine the health risk perception of respondents on aphrodisiacs;

Poor perception ≤ 15 points

Good perception > 15 points

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