SCHOOL OF PUBLIC HEALTH

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA

SEXUAL ENHANCING PRACTICES AMONG MEN IN THE LEDZOKUKU KROWOR MUNICIPAL AREA

BY

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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE MASTER OF PUBLIC HEALTH DEGREE.

JULY, 2013

DECLARATION

I, Nana Kwadwo Asante, declare that except for other people's investigations which have been duly acknowledged, this work is the result of my own original research and that this dissertation, either in whole or part has not been presented elsewhere for another degree.

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Date 24/09/2014

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Date 24/09/2014

DEDICATION

I dedicate this work to my late father, Mr Frederick Asante.

ACKNOWLEDGEMENTS

My sincere thanks go to the Almighty God for enabling me finish this course. My greatest thanks go to Rev. Dr. Mercy Ackumey my academic supervisor for the directions, comments and suggestions which contributed greatly to make this study complete.

I am also grateful to all the lecturers of the School of Public Health, especially Dr Philip Baba Adongo and Dr. Bosomprah for strengthening my knowledge base in research methods. I could not be more grateful.

To my sister, who is the District Director of Health service (Dodowa), Dr. Afua Asante Twumasi for the encouragement and support she gave me in deciding to enrol in the programme and also during my research.

My sincere thanks also go Edem Kwame Mensah Klobodu for also helping to strengthen my knowledge base in statistical analysis.

To my research assistants, I say a big thank you for all the troubles they went through during data collection.

Last but not the least, my thanks also go to my mother for her prayers, support and assistance she gave me throughout the programme.

ABSTRACT

Sexual enhancing processes are methods whereby drugs or certain practices are used to improve sexual function and behaviour. Some of the processes include using drugs to enhance erectile function or prevent premature ejaculation, as well as using aphrodisiacs to increase sexual arousal and desire.

The objective of this study was to ascertain the sexual enhancing practices among men in Ledzokuku Krowor Municipal Area (LEKMA). This study ascertained the level of use of sexual enhancers, reasons for use, types used, sources of sexual enhancers and the local perceptions governing their use in LEKMA.

A mixed method using both quantitative and qualitative methods was used. A descriptive cross-sectional survey was conducted among 380 conveniently selected sexually active men aged twenty to thirty-nine years at the Ledzokuku Krowor Municipal Area. For the qualitative method, two Focus Group Discussions (FGDs) were done. Data was collected using an interview-administered structured questionnaire for the quantitative study and an interview guide for the focus group discussions.

From the study the level of use was 41.8%. The most common sexual enhancers the respondents used were Viagra, dragon spray, AK-47, ginseng, recharger, anafranil, Jamaican stone, alcoholic beverages (e.g. 'atemuda', 'alomo', herb afrik, 'joy dadi', mandingo and 'okramankoti') and other herbal concoctions (e.g. mahogany or neem

concoctions). Others also used some foods and physical exercises to enhance sexual performance. Main reasons for using sexual enhancers were; premature ejaculation (OR=3.015 95% CI 1.059-8.586), satisfying partners (OR=2.181 95% CI 1.052-4.078), performance anxiety (OR=1.820 95% CI 1.002-3.080), achieving hard erection (OR=0.883 95% CI 0.216-3.598) and curiosity (OR=0.723 95% CI 0.308-1.698).

Socio-demographic variables like age, religion, marital status occupation had the tendency to influence a man to either use sexual enhancers or not.

From the study, the main sources of sexual enhancers were friends (peers), drug peddlers and pharmacy shops.

The study also found out some local perceptions governing the use of sexual enhancers; one of such perceptions was that sexual enhancers makes sexual intercourse very pleasurable hence both man and woman become sexually satisfied.

A larger survey or nationwide research should be conducted to ascertain the level of use of sexual enhancers, reasons for use, types used, sources and local perceptions governing their use so as to form the basis for the formulation of policies to address the indiscriminate use of sexual enhancers by the youth.

CONTENTS

LIST OFACRONYMS

ED	Erectile Dysfunction
EDM	Erectile Dysfunction Medicines
PE	Premature Ejaculation
SED	Sexual Enhancement Drugs
SD	Sexual Dysfunction
FDA	Food and Drugs Authority of Ghana
FDA	Food and Drugs Administration of the USA
LEKMA	Ledzokuku Krowor Municipal Assembly
USA	United States of America
MDMA	3,4-Methylenedioxy-N-methamphetamine
HIV	Human Immunodeficiency Virus
FGD	Focus Group Discussion
SES	Sexual Enhancing Services
PDE5Is	Phosphodiesterase-5-Inhibitors
UK	United Kingdom
EMEA	European Medicines Agency
MSM	Men having Sex with Men
TCA	Tricyclic Antidepressants
SSRIs	Selective Serotonin Reuptake Inhibitors

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DEFINITIONS OF TERMS

1. **Sexual dysfunction-** Sexual dysfunction is an inability to sexual intercourse including premature ejaculation, retrograde, retarded or inhibited ejaculation, arousal difficulties (reduced libido), compulsive sexual behaviour, orgasmic disorders and failing detumescence. (Patel, Kumar, Prasad, & Hemalatha, 2011)

2. **Erectile dysfunction-** Erectile dysfunction has been defined as the persistent inability to attain and maintain an erection sufficient to permit satisfactory sexual Performance (Hatzimouratidis et al., 2010).

3. **Premature ejaculation-** Ejaculation with minimal stimulation and earlier than desired, before or soon after penetration, which causes bother or distress, and over which the sufferer has little or no voluntary control (McMahon et al., 2004).

4. **Aphrodisiacs-** They are substances that enhance sex drive and/or sexual pleasure or can arouse sexual desire or libido (Yakubu, Akanji, & Oladiji, 2005).

5. **"One night stand"-** a brief sexual encounter lasting only for a single night (WordNet, 2013).

6. **"Of-label indication"-** an indication for which a drug has not been registered to be used for.

CHAPTER ONE

INTRODUCTION

1.1 Background

Sexual enhancing processes are methods whereby drugs or certain practices are used to improve sexual function and behaviour. Some of the processes include using drugs to enhance erectile function or prevent premature ejaculation, as well as using aphrodisiacs to increase sexual arousal and desire (Evans et al., 2012).

Though both men and women use sexual enhancing drugs or substances, studies have shown that men are more likely than women to use sexual enhancing drugs or substances to boost their sexual performance (Foxman, Aral, & Holmes, 2006, Strote, Lee, & Wechsler, 2002, Pickard et al., 2000, McCabe et al., 2005, Danquah, 2011).

There are several reasons why some men use or desire to use sexual enhancing drugs or practices. These include, curiosity, the desire to experiment, the influence of peer pressure, erectile dysfunction, premature ejaculation, low sex drive, condom-related erectile dysfunction, performance anxiety, orgasmic disorders, the desire to have enjoyable sexual intercourse with one's partner and to demonstrate sexual prowess to prove one's masculinity (Wright, 2009, Morales, 2007, Bechara et al., 2010, James Meschino, 2007, Korkes et al., 2008). Men who indulge in sex marathons or have multiple sexual partners are more likely to use sexual enhancing drugs or practices (Semple et al., 2009, Yinka, 2012). Studies suggest that men who use illicit substances

like alcohol, marijuana, cocaine are also likely to use sexual enhancing drugs and practices in order to offset the erectile dysfunction associated with their use (Chu et al., 2003, Santtila et al., 2007, Sumnall et al., 2007, Harte & Meston, 2011, McCambridge et al., 2006, Bellis et al., 2008). Men are increasingly using sexual enhancing drugs (SEDs), and this is because of the prolific advertising of products by both the print and electronic media. Sex has permeated all aspects of human life from fashion, food and drink to automobiles, electronics and even names.

There are many different types of enhancers on the market, and many of them are designed to help a man achieve an erection and maintain it long enough to satisfy himself and sexual partner (Shaw, 2010). There are three main oral medications approved by the Food and Drugs Administration (FDA) of the United States of America and the European Medicines Agency (EMEA) for the treatment of erectile dysfunction and they include Viagra (sildenafil), Cialis (tadalafil) and Levitra (vardenafil) (Hatzimouratidis et al., 2010). These drugs mentioned above belong to a group of sexual enhancing drugs called Phosphodiesterase-5-inhibitors (PDE5Is). Mounting evidence indicates that these drugs have become increasingly used as a sexual enhancement aid among men without any medical indication (Harte & Meston, 2012). Apart from the ones named above, there are other herbal supplements and alcoholic bitters that are used by men as aphrodisiacs to increase their sexual desire (Wright, 2009). Local anaesthetic creams are applied on male sexual organs to prevent premature ejaculation (Berkovitch, Keresteci, & Koren, 1995). Some men also take oral antidepressants since the side effects of these drugs is delayed ejaculation (Hatzimouratidis et al., 2010). Herbal aphrodisiacs come in all forms - liquid,

jelly and powder and are taken orally or rubbed on sex organs (Gottlieb, 1993). Alcoholic aphrodisiacs commonly used in Ghana include mandingo, atemuda, local ginseng, opeimu, alomo gin bitters, herb afrik and ogidigidi. Apart from the use of these sexual enhancing drugs (SEDs) or aphrodisiacs, many men also resort to seeking help at churches or prayer centres, herbal centers and shrines (Marshall & Katz, 2002, Kamatenesi-Mugisha & al, 2005, Low et al, 2007, Ho et al, 2011). Routine physical exercises such as jogging, aerobics and pelvic floor exercise are also used to enhance sexual performance (Young & Penhollow, 2004, Esposito et al., 2004).

There are several sources where men get the sexual enhancing drugs. These are, prescriptions, friends, co-workers, relatives, sexual partners, over the counter at pharmacy outlets and chemical stores, internet and drug peddlers (Wright, 2009, Evans-Brown et al, 2012). Many unregistered sex enhancing drugs abound in many cities in Ghana and are peddled in market places, lorry stations and car parks, supermarkets, night clubs, and on the streets thus making them easily available (Danquah et al., 2011, FDA, 2012).

Most of the sexual enhancers used by men in Ghana are not registered by the Food and Drugs Authority of Ghana; hence their safety, efficacy and drug-drug interactions are not known (FDA, 2012). These unregistered sexual enhancing drugs or substances are highly patronized by men aged eighteen to seventy years (Yinka, 2012). Some of the unregistered SEDs have also been found to be adulterated with other substances that may cause harm to men who use them (Chan, 2009, Lim et al., 2009). The Food and Drugs Authority (FDA) on Thursday August 5 2012 therefore destroyed large quantities of over

fifty types of unregistered SEDs at the Saba landfill site at Weija in Accra (FDA, 2012). The drugs were seized during a swoop on traders dealing in illegal drugs and SEDs at Okaishie, Kaneshie, Tudu and Accra Central Business Centre. Some of the SEDs destroyed by the FDA include Black Warrior, AK-47, Black superman and African king. (FDA, 2012). According to the Food and Drugs Authority (FDA) of Ghana, indiscriminate use of aphrodisiacs or sexual enhancing drugs on the Ghanaian market purported to have been manufactured in the USA and China, are killing Ghanaians (FDA, 2012).

1.2 Problem Statement

There are very few studies that examine sexual enhancing practices and health implications. According to the FDA, Ghanaian men are increasingly patronizing sexual enhancement drugs or substances which are unnecessary and have serious health implications such as the risk of premature death (FDA, 2012). Increasing use and abuse of aphrodisiacs and other sex enhancing drugs can lead to early sexual dysfunction and potency. The problem is further compounded when increased sexual libido results in increased sexual activity, inability to negotiate safe sex, inability to repel unwanted sexual advances, risky sexual behaviours and unprotected sex with multiple sexual partners (Sumnall et al., 2007). More often than not, sexual activity accompanied by sexual enhancing drugs or substances use is not just incidental, but often sexually motivated. Interventions addressing men's sexual health are often developed, managed and implemented without considering the abuse and indiscriminate use of sexual enhancing drugs or substances. However, young people often see alcohol, sexual

enhancing drugs and sex all as part of the same social experience and addressing these issues requires an equally joined up approach (Bellis et al., 2008). These days, even under -aged boys are beginning to use these drugs and or aphrodisiacs without any knowledge of their detrimental effects (AFP, 2009). Therefore, the unknown safety, efficacy and drug-drug interaction of the SEDs as well as their detrimental effects (priapism, impotence, cardiovascular events like heart attack) and indiscriminate use by the youth in Ghana is of an immense Public Health concern.

1.3 Justification

For years now, men's sexual health has received very little attention. The few studies about men's sexual health have focused on reproductive health, particularly family planning choices and men's involvement in family planning (Nadelson, 1992). To the best of my knowledge, there is no national programme in Ghana that addresses the sexual health needs of men. Most programmes such as free maternal care, sexual and reproductive health programmes focus on women and children in Ghana. Unaddressed male sexual needs or concerns have economic, psychological and medico-social consequences for the man, spouse and family and these are of public health importance. Attention therefore, needs to be given to men's sexual needs and concerns due to the myriads of problems it poses.

According to the WHO, male sexual health is a quality of life issue and hence needs to be addressed through the formulation of policies and programs. Formulation of policies and programs on male sexual health will have to be guided by local evidence-based research.

Such a study will go a long way to inform future policy on sexual health of men in Ghana. This study therefore aims at establishing the use of these drugs (or aphrodisiacs) as well as use of the church, herbalists and fetish services in a socially and commercially active community in Ledzokuku Krowor Municipal Area, Ghana. Furthermore this study will help to clarify the extent of use and abuse of aphrodisiacs. This information is essential for public health education and programming. Specifically, this study will also help in knowing the level of use of sexual enhancers, help to identify the main reasons why men in Ledzokuku Krowor Municipal area use sexual enhancers to boost their sexual performance, where they get the sexual enhancing drugs or substances from and ascertain local perceptions governing the use of sexual enhancers for sexual performance. Finally findings of this study may indicate further research questions for future research.

1.4 Conceptual Framework

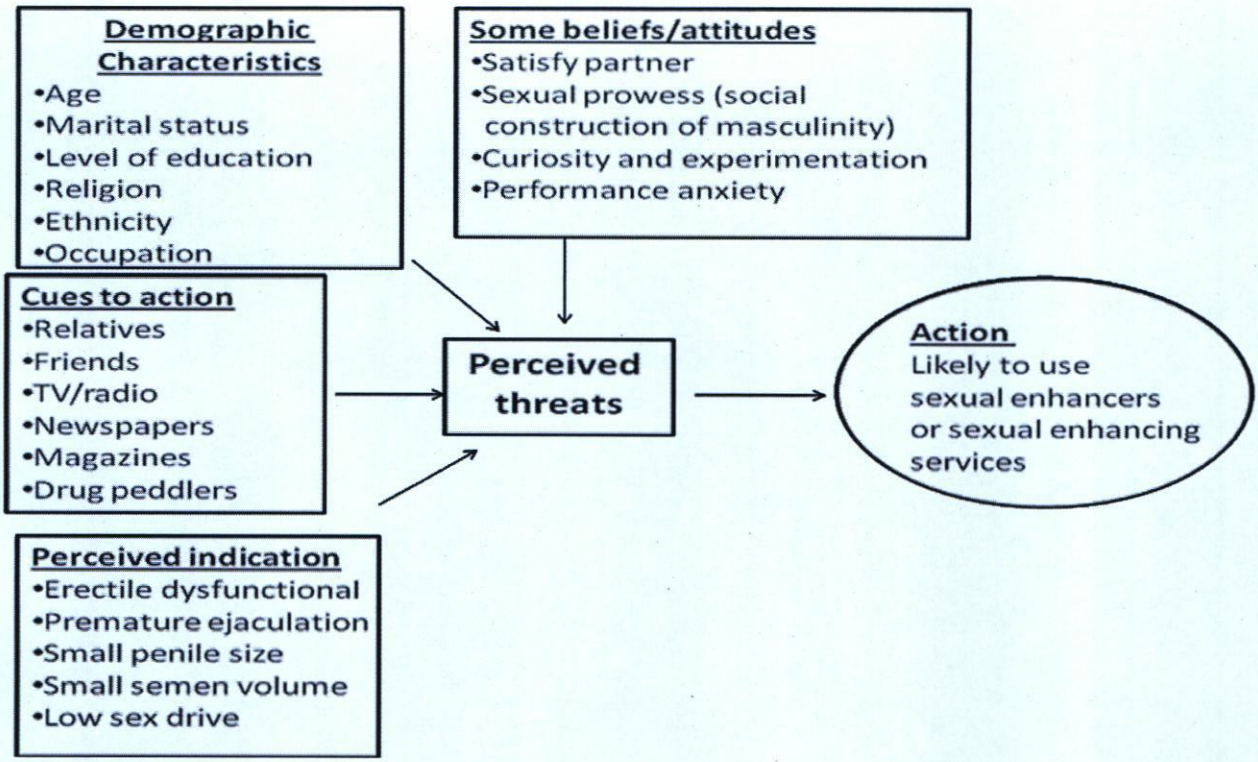

Figure 1- conceptual framework

1.4.1. Definition of concepts

1.4.1.1 Perceived indication

Perceived indication refers to the local perceptions, physical symptoms and psychological reasons which influence the use of sexual enhancers. These symptoms are erectile dysfunction, premature ejaculation, small penis size, discharging small volumes of semen during sex and the dissatisfaction of the partner after sexual intercourse.

1.4.1.2 Demographic Characteristics

Demographic characteristics such as age, level of education, marital status, ethnicity, occupation and religion play a role in influencing some men to using sexual enhancing products and services. For example, polygyny is still practiced by some ethnic and religious groups and these factors may influence the use of sexual enhancers. The use of sexual enhancers may increase with age; this is so because as men grow, there is decline in the levels of male sex hormone (testosterone) and the functioning nerve endings in the glans penis which are some of the contributing factors to the decline in male libido and intensity of orgasm (orgasmic disorder) and also some experience difficulty to achieve or maintain an erection sufficient for a satisfactory sexual intercourse hence many of them may turn to sexual enhancing substances or drugs . Some religions such as Islam frowns on talking or discussing openly about sexual issues, hence Muslims who use sexual enhancers will find it difficult to admit that they use them.

1.4.1.3 Sources of Information

Information channels such as the print and electronic media, family, friends and itinerant drug peddlers have contributed to prolific advertisement, availability and consequently use of sexual enhancers.

1.4.1.4 Some Attitudes and Beliefs

Many men believe that using sexual enhancing products or services enhances their sexual performance thus contributing to the stability of their relationships and marriages. Sexual intercourse is therefore considered an essential ingredient in many relationships. Local concepts of masculinity and manhood include sexual performance. Others therefore use sexual enhancers out of curiosity and to demonstrate their 'masculinity' and 'manhood'.

1.5 Research Questions

1. What is the prevalence or level of use of sexual enhancers in the Ledzokuku Krowor Municipal area?
2. Why do men in Ledzokuku Krowor Municipal area use sexual enhancers?
3. What are some of the local perceptions directing or surrounding the use of sexual enhancers in Ledzokuku Krowor Municipal area?
4. Which sexual enhancers do men in Ledzokuku Krowor Municipal area use to enhance their sexual performance?
5. Who are the providers of products and services used to enhance sexual performance?

1.6 Objectives

1.6.1 General objective

- To investigate the sexual enhancing practices among men in the Ledzokuku Krowor Municipal Area.

1.6.2 Specific Objectives

1. To determine the level of use of sexual enhancers in the Ledzokuku Krowor Municipal area.
2. To ascertain why men in Ledzokuku Krowor Municipal area use sexual enhancers to boost their sexual performance.
3. To examine local perceptions governing the use of sexual enhancers for sexual performance.
4. To identify what men in Ledzokuku Krowor Municipal area use to boost their sexual performance.
5. To identify providers of products and services used to boost sexual performance

CHAPTER TWO

LITERATURE REVIEW

2.1 Sexual enhancing practices

In times past, declining sexual functioning in men was viewed as a normal and an acceptable part the whole aging process. However, the advancement of technology in sexual health has provided new standards for the male aging body. This technology has both physical and cultural implications, as male sexual dysfunction is often conflated with the loss of manhood. Sexual enhancing drugs or substances can therefore be construed as tools for the repair and construction of masculinity, contributing to the medicalization of the male body (Rosso, 2011) . Research also suggests that even men with normal erectile functioning do sometimes use these sexual enhancing drugs or substances (Harte & Meston, 2012). In this section therefore, literature on the level of use of sexual enhancers by young men, the reasons why men use sexual enhancers, the types of enhancers used and the sources or providers of the sexual enhancers will be reviewed.

2.2 Level of use of Sexual Enhancers

Increasingly, many sexually active young men are patronizing sexual enhancers and sexual enrichment aids worldwide. Worrying findings from several studies have shown that many young men aged between 16 to 39 years use these sexual enhancers or sexual

enrichment aids indiscriminately to enhance or boost their sexual performance (Foxman et al., 2006, Bellis et al., 2008, Danquah et al., 2011) .

2.3 Reasons for use of sexual enhancers

In recent years, recreational use of sexual enhancers such as Viagra, Levitra and Cialis (SEDs) has become popular as sexual enhancement drugs among some men without erectile dysfunction. Several studies have been done worldwide (United States, Europe, Brazil, Nigeria, and Ghana) to ascertain the reasons why men will desire to use SEDs. Some of the reasons ascertained include curiosity, performance anxiety, increasing age, premature ejaculation and erectile dysfunction. Of all the reasons given, the most frequently reported reasons are premature ejaculation and erectile dysfunction (Papaharitou et al., 2006). Most men see a very hard and erect penis as a symbol of manliness and this is due to the social or cultural construction of masculinity (Potts, 2000, Del Rosso, 2011, Courtenay, 2000). Most men due to social construction of masculinity always feel that as men, they must always at all times be able to prove that they are men during sex hence take all sorts of sexual enhancing drugs or substances just to prove their masculine sexual prowess (Yinka, 2012).

Normally, as men grow or age, they experience some level of sexual dysfunction such as low sex drive and low intensity of orgasm. Some of the contributing factors to the low sex drive and intensity of orgasm as men age include; decline in the levels of male sex hormone (testosterone) and the functioning of nerve endings in the glans penis. This situation most of the time leads to depression, frustration and low self-esteem in some

men and as a result many of them turn to the use of sexual enhancing drugs or substances (Meschino, 2007). Again, for some men, increasing age makes them dissatisfied with their sexual functionality and also have low sexual belief (sex is signified a priority) hence one will seek help if he has any reason to believe that he is under-performing (Papaharitou et al., 2006).

Sex has permeated all aspects of human life from fashion, food and drink to automobiles, electronics and even names. Recently, there has been a lot of hype given about sexual enhancing drugs or substances through advertisements on television, radio, magazines, news papers, internet, acquaintances and friends. Young men naturally experience an increased interest in sexual behaviour, but they usually lack much experience. Thus, any sexual enhancing drug or substance that holds the potential to ease or facilitate sexual matters holds a unique allure hence some men use or try them though almost all of them do not really need it (Apodaca & Moser, 2011). That is to say, these young men patronize these sexual enhancers without any medical aetiology indicating their use. Again studies have revealed that the recreational, abusive and indiscriminate use of sexual enhancing drugs or substances by the youth is not due to any medical aetiology but rather curiosity and experimentation. And to make matters worse, these sexual enhancers are easily available and accessible as they are peddled all around by drug peddlers hence can be obtained without prescription (Wright, 2009, Morales, 2007, Bechara et al., 2010, Korkes et al., 2008, Harte & Meston, 2012, Freitas et al., 2008, FDA, 2012). Responses from nightclub attendees in England shortly after Viagra became available indicated that it enhanced sexual desires and feelings of 'warmth'; all participants made it known that

they would use the drug again. Some young men will also desire to use aphrodisiacs because they have the ability to increase sex drive and the intensity of orgasm (Smith & Romanelli, 2005, Wright, 2009).

As mentioned earlier, studies have shown that the most frequently reported reasons for using sexual enhancing drugs or substances and sexual enrichment aids are premature ejaculation (mostly men below 40 years) and erectile dysfunction (mostly men 40 years and above). And also, single men are more likely to use sexual enhancers because they are most of the time predisposed to premature ejaculation (PE); fear of disappointing a potential partner due to inadequate performance constitute a major problem for men with PE who are reluctant to initiate a relationship (Papaharitou et al., 2006, Bechara et al., 2010, Korkes et al.,2008, Freitas et al., 2008, Wright, 2009). Most men who are experiencing erectile dysfunction (especially married men or men in stable relationships) also resort to the use of aphrodisiacs or sexual enhancing medications. Sometimes partners of men with erectile dysfunction (ED) complain and may give them pressure to seek help hence this leads to the use of sexual enhancers (Dunn, Croft, & Hackett, 1999).

It is interesting to note that findings from some studies also revealed that some men also experience erectile dysfunction when they use condoms (condom related erectile dysfunction). They experience the erectile dysfunction due to loss of sensitivity, loss of spontaneity, loss of erection when placing the condom and loss of rigidity during sexual intercourse (Bechara et al., 2010, Korkes et al., 2008, Musacchio, Hartrich, & Garofalo, 2006, Sanders et al., 2009). As a result of condom related erectile dysfunction, some

young men also resort to the use of sexual enhancing drugs or substances to offset erection loss when using condoms.

Trends in recent decades have resulted in recreational drug use and binge drinking becoming routine features of young men's nightlife. Many young men use or patronize these substances as part of deliberate sexual strategies to enhance sexual arousal, prolong sex or facilitate a sexual encounter (Bellis et al., 2008). Recreational drugs or substances such as marijuana, cocaine, alcohol, ecstasy, methamphetamines and alkylnitrates (poppers) have been found to cause temporary erectile dysfunction. As a result, some young men end up experiencing erectile dysfunction when they patronize these recreational drugs or substances. When this happens, most of them end up using sexual enhancing drugs or substances in order to offset or counteract the recreational substances related erectile dysfunction and their deleterious effects (Smith & Romanelli, 2005, Rosen et al., 2006).

Sexual enhancing drugs and erectile dysfunction medications have been ascertained to reduce performance anxiety which is a major contributor or precursor to premature ejaculation (Jannini, McMahon, Chen, Aversa, & Perelman, 2011). Performance thoughts, in which men think of sex as an achievement in life, can go a long way in interfering or negatively affecting their sexual performance. These thoughts most of the time tends to keep them in their 'heads' rather than in their 'bodies' hence they become so focused on the outcome of their sexual performance that they end up experiencing one form of sexual dysfunction or the other (erectile dysfunction or premature ejaculation).

Most damaging type of anxious thoughts is 'performance anxiety'. These are thoughts that can cause a man to worry about his sexual abilities so much so that they end up using sexual enhancing drugs or substances and practices. Performance anxiety has been implicated in the origins of sexual dysfunction hence most men who experience performance anxiety tend to use sexual enhancing drugs or substances to avoid or alley fears of sexual failures (van den Hout & Barlow, 2000, Bechara et al., 2010). Sexual performance anxiety is usually as a result of the man's lack of self confidence or lack of a feeling of self efficacy to perform well sexually or to be able to satisfy his partner sexually or be able to measure up against the competition (Perelman & Rowland, 2006). Some men most of the time believe that their erection should always be rigid hence sexual performance anxiety may set in as a result of lack of confidence in one's ability to acquire and maintain these standards of erectile ability without the use of sexual enhancers (Harte & Meston, 2012).

Sexual performance anxiety may further worsen or aggravate one's sexual responsiveness and lead to increasing anxiety or deepening loss of confidence after a series of sexual failures. It has also been found to worsen an already existing ED or PE (Mulhall et al., 2011, Hatzimouratidis et al., 2010). Studies have shown that young recreational erectile dysfunction medication (EDM) users demonstrates significantly less confidence in their ability to gain and maintain erections compared to nonusers, and the frequency of EDM use is significantly negatively correlated with erectile confidence and men who use EDMs for recreational reasons may begin to lose confidence in their abilities to gain and maintain their erections without the help of these drugs or substances (due to standards

set for themselves through use of EDMs), which in turn could eventually lead to psychogenic-based ED symptoms (Harte & Meston, 2012, Santtila et al., 2007, F. Korkes et al., 2008).

Another major reason why heterosexual men use erectile dysfunction medications or sexual enhancers is for insertive anal sex. This is because they will need a very hard penis before they will be able to penetrate the anus of their sexual partners (Morales, 2007). Some unpublished or anecdotal reports have suggested that erectile dysfunction medications use by men who have sex with men (MSM) increases sensation for the receptive partner in anal intercourse (Rosen et al., 2006).

The popularity of PDE-5 inhibitors (e.g. Viagra, Cialis and Levitra) among men who have multiple sexual partners could be due, in part, to the drugs' purported capacity to allow multiple sexual partners within short time periods (Rosen et al., 2006). Men with multiple sexual partners and polygamous men also patronize aphrodisiacs a lot in order to be able to satisfy and maintain all of them (AFP, 2009). Men who engaged in marathon sex (especially men with multiple sexual partners) used significantly more illicit drugs and are more likely to use sildenafil (Viagra) and amyl nitrates, and scored higher on a sexual compulsivity scale compared to men who did not engage in marathon sex. In multivariate analyses, use of sildenafil was significantly correlated with participation in sexual marathons (Semple et al., 2009).

In summary, surveys in many countries found that sexual enhancing drugs or substances were used because of curiosity, peer pressure, to increase sexual confidence, erectile dysfunction, premature ejaculation, sexual pleasure and for better sexual performance. Some of these reasons may have included reversing temporary erectile dysfunction caused by condom use, prescribed drugs, alcohol or other recreational drugs (Benotsch et al., 2006, Musacchio et al., 2006). Some men also use it to increase penis or erection size (Wright, 2009). In another recent study, two of the most common reasons why they obtained the SEDs without prescription were that they were too embarrassed to speak with a clinician or thought that buying them on the internet would be the cheapest way acquire them (Jackson, Arver, Banks, & Stecher, 2010). It is likely that many of these reasons apply to people using them in Ghana and for that matter particular instance, Ledzokuku Krowor Municipal Area (LEKMA).

2.4. Types of sexual enhancing drugs, aphrodisiacs and practices used by men

Up until 1998, penis pumps (appendix 8), surgery and prosthetic implants (appendix 8) were the only available remedies for erectile dysfunction. All these remedies were all invasive. The only approved remedies were penile suppository and medication that had to be injected into the penis (e.g. caverject; appendix 8) (Evans-Brown et al., 2012).

In March 1998, Pfizer, a pharmaceutical company launched an oral medication called Viagra (sildenafil) for erectile dysfunction. Many men patronized it due to its non-invasive nature. After its launch, about one million prescriptions of Viagra were written by clinicians in the United States in less than two months and over one hundred and seventy-seven million Viagra prescriptions were written worldwide in over 120 countries

(Rajfer, 2008). Later, two other oral medications, tadalafil and vardernafil were launched for erectile dysfunction. Viagra, tadalafil and vardenafil all work by the same mechanism and belong to the same group of drugs called phosphodiesterase-5-inhibitors (PDE5Is). The PDE5Is are not aphrodisiacs hence one needs stimulation when taken. The tadalafil is sometimes called 'weekend drug' since its effect last for about thirty-six hours (three days) compared to the four hours of Viagra and vadernafil (Evans-Brown et al., 2012). Some unregistered and untested drugs, such as melanotan II and bremelanotide, sold on the illicit market have effects on sexual function and behaviour. They come in the form of nasal sprays and injections. There is limited data on the effects of these drugs in humans. Though there is evidence to show that they cause spontaneous erections and increase libido, there is limited clinical and research data on their effects in humans (Molinoff et al., 2003).

There are several drugs and aphrodisiacs (both registered and unregistered) that are being used to enhance sexual function and behaviour. They include drugs to enhance erectile function as well as aphrodisiacs that increase sexual arousal and desire (libido). The components of most sex enhancing drugs include ginko biloba, arginine, ginseng, and yohimbe. Ginko biloba dilates blood vessels and improves circulation to the penis bringing about an erection. Arginine increases pelvic circulation hence enhancing the release of nitric oxide necessary for hard erection. Yohimbe stimulates release of norepinephrine from adrenals and this also brings about erection in men. Ginseng is thought to increase levels of testosterone hence may increase sexual desire (Danquah et al., 2011). Nevertheless, it has brought to light that most of these types of drugs are

commonly adulterated and in some instances this practice has led to severe, life–threatening illness and death (Chan, 2009, Lim et al., 2009).

The registered EDMs that they used are sildenafil, tadalafil and vadernafil. Most of the EDMs used in Africa and for that matter Ghana are made in China and India. Examples of registered Chinese and Indian EDMs available on the Ghanaian market include Male recharger, penegra, mars for men, comit and VigRx. And also, examples of unregistered Chinese EDMs on the Ghanaian illicit market are listed in appendix 5.

The only licensed oral medication for PE is dapoxetine, which belongs to a class of drugs called 'Selective Serotonin Reuptake Inhibitors' (SSRIs). SSRIs are used to treat mood disorders but can also be used 'off-label' to treat PE. The other SSRIs used 'off-label' to treat PE include; paroxetine, fluoxetine, citalopram, sertraline, fluoxamine, duloxetine and escitalopram (Mohee & Eardley, 2011, Al-Shaiji, 2012). Another class of drugs used to treat PE 'off-label' are called 'Tricyclic antidepressants' (TCAs). The main TCAs used to treat PE are clomipramine (Anafranil) and imipramine. Anafranil is mostly used by men to prevent PE (Mohee & Eardley, 2011, T. F. Al-Shaiji, 2012). Other classes of drugs used to treat PE include; Alpha-adrenergic receptor blocking agents (e.g. alfusozin and terazosin) and Monoamine oxidase inhibitors (e.g. isocarboxazid and phenelzine). These drugs were initially used but their side effects limited their use (Mohee & Eardley, 2011, Al-Shaiji, 2012). Some men also use tramadol capsules 'off-label' to manage PE. Tramadol belongs to the class of drugs called 'centrally acting opiods'(Mohee & Eardley, 2011, Al-Shaiji, 2012). Others also use topical agents with which they rub or spray on the

penis so as to prevent premature ejaculation. Examples these creams or sprays are listed in appendix 6 (Mohee & Eardley, 2011, Al-Shaiji, 2012). The common ones used in Ghana are Stud spray, procomil spray, dragon spray and 'man and woman' cream.

Some men also resort to aphrodisiacs.

An aphrodisiac is a type of food or drink that has the effect of making those who eat or drink it more aroused in a sexual way. Aphrodisiacs can be categorized according to their mode of action into three groups: substances that increase libido (i.e., sexual desire, arousal), substances that increase sexual potency (i.e., effectiveness of erection) and substances that increase sexual pleasure. This word is derived from 'Aphrodite' the Greek goddess of love and these substances are derived from plants, animals or minerals and since time immemorial they have been the passion of man. There are two main types of aphrodisiacs, psychophysiological stimuli (visual, tactile, olfactory and aural) preparations and internal preparations (food, alcoholic drinks and love portion). Some well-known aphrodisiacs are *Tribulu terrestris, Withania somnifera, Eurycoma longifolia, Avena sativa, Ginko biloba,* and *Psoralea coryifolia*. Ethnobotanical surveys have indicated a large number of plants as aphrodisiacs (Malviya et al., 2011). Typical aphrodisiac enhances aspects of the sensory experience such as sight, touch, smell, taste and hearing – which in turn increases sexual drive, improves performance and results in greater sexual satisfaction. But uncontrolled use could lead to unprecedented organ damage or worse. Out of the numerous aphrodisiac medicinal plants available in Ghana, the most frequently used ones are *Sphenocentrum jollyanum, Cyperus esculentus* and *Elaeis guineensis* (Diame, 2010). Today, there are thousands of foods presumed to have

aphrodisiac potency. These include chocolate, pork, salmon, chillies, oatmeal, wine, drumstick, mackerel and fresh tuna (Asha et al., 2009).

Practices such as physical activities or exercises like jogging, sports and aerobics are very important in enhancing sexual performance or sexual pleasure (Young & Penhollow, 2004). Some men also believe that their sexual problems may have been caused by witches or wizards, evil spirits or the devil hence seek help from their spiritual leaders or may resort to prayers, pilgrimage or rituals to remedy the problem (Marshall & Katz, 2002).

2.5 People who use sexual enhancers

Generally, SEDs are used by men with erectile dysfunction, ejaculatory disorders, orgasmic disorders and low sex drive. Studies examining the trends of Viagra prescriptions in the US between 1998 and 2002, established that the fastest growing group of users who patronize SEDs like viagra were men aged between eighteen and forty-five years, hence this implies that Viagra may be used more for nonclinical indications like curiosity. And also, shortly after viagra was licensed in the UK, surveys found that it was mostly used recreationally by men who have sex with men and by night clubbers (Crosby & DiClemente, 2004, Measham, Aldridge, & Parker, 2001, Winstock, Griffiths, Stewart, 2001).

2.6 Sources of SEDs

A large internet survey of men done in the United Kingdom, Germany and Italy ascertained that just over 50% had obtained the SEDs from internet sites, similarly just over 50% had obtained them from friends, partners or other acquaintances (Evans-Brown et al., 2012). It was found from the same survey that more than six million men obtained the SEDs from the illicit market (Schnetzler et al, 2010). Many unregistered sex enhancing drugs found in Ghana are peddled in market places, lorry stations and car parks, supermarkets, night clubs, and on the streets in busy communities in Ghana (e.g. Okaishie, Kaneshie, Tudu and Accra Central Business Centre) (FDA of Ghana, 2012). Some men also get SEDs from pharmacy shops. Others also resort herbal clinics or from herbalist for herbal aphrodisiacs (Malviya et al., 2011, Singh & Sarabjeet, 2012).

CHAPTER THREE

METHODS

3.1 TYPE OF STUDY

A mixed method using both quantitative and qualitative techniques was used. A descriptive cross-sectional survey was conducted among 380 sexually active men aged twenty to thirty-nine years at the Ledzokuku Krowor Municipal Area. For the qualitative method, two Focus Group Discussions (FGDs) were done; and also for the quantitative method, a one-on-one interview was done with the study population. The use of mixed methods in research has been noted to provide an avenue to reinforce the strengths of each other and at the same time reduce the limitations of each respective method (Creswell, 2003, Bernard & Bernard, 2012). The qualitative aspect of the research was conducted first and information obtained from it was used to revise the existing structured questionnaire for the quantitative part in the form of an interviewer administered survey.

3.2 STUDY LOCATION

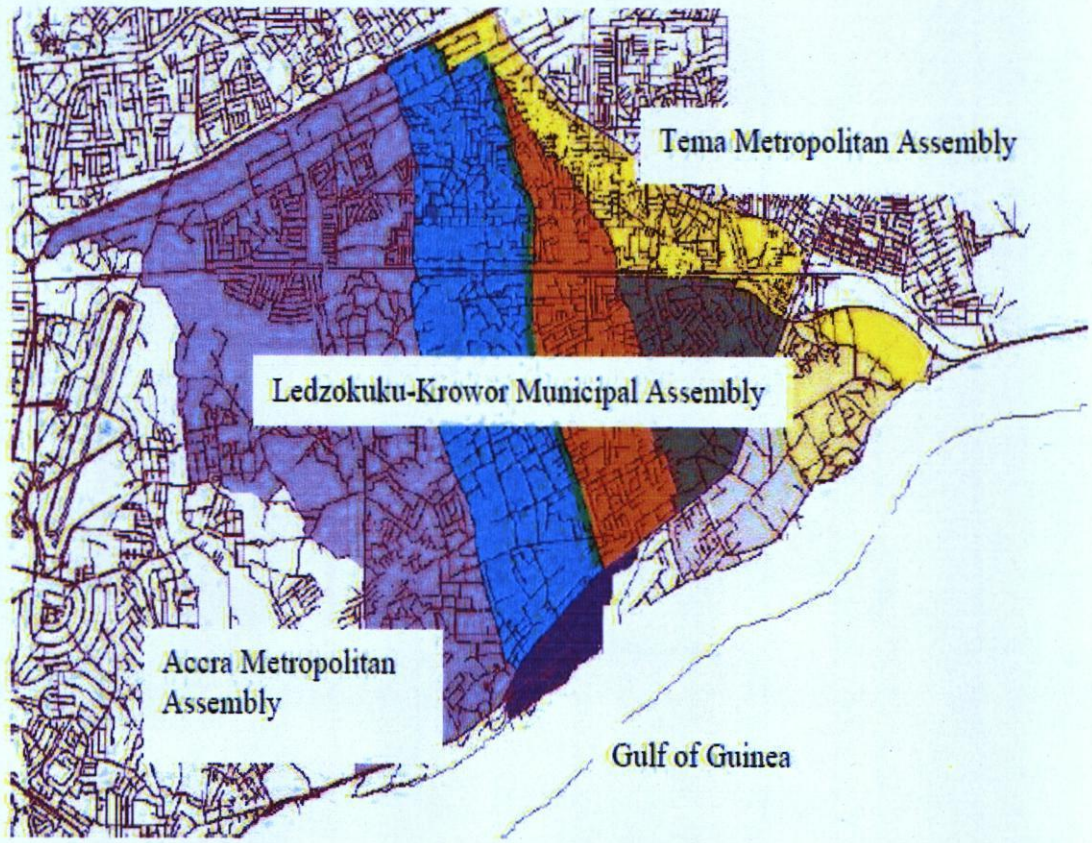

Figure 2 Map of Ledzokuku Krowor Municipal Area

In order to promote efficiency in the administrative machinery and also meet the ever pressing demands for amenities and essential services, the Teshie and Nungua Sub Metros were however merged and updated to a Municipal Status. Thus in 2007, the Local Government Legislative Instrument of 1989 (LI 1500) was revoked with the publication of LI 1865 (2007) which established the Ledzokuku - Krowor Municipal Assembly with

the following electoral areas; Akro Made Kpo, Nii Ashitey Akomfra, Tsui Bleoo, Sangorjor, Nii Laweh, Nii Odai ,Amlalo, Klowe Koo and Blekese.

The total land area of LEKMA is estimated at 50 square kilometres. The Southern boundary of the Municipality is the Gulf of Guinea from the Kpeshie Lagoon to the Mukwe Lagoon near Regional Maritime Academy. The boundary continues along the Maritime Road to join the Accra-Tema road to Nungua Police Station Barrier. It turns right to the Ashaiman road and continues to Lashibi Junction, branches left on the Spintex Road and moves all the way through the Coca Cola Roundabout to the Kwame Nkumah Motorway. From there it continues left along the motorway and branches south along the Tetteh Quarshie Interchange, near the Accra Shopping Mall and moves south towards the starting point at the Kpeshie Lagoon.

The municipality is made up of 82 communities with an estimated population of 320,000 as at 2010 of which 51% of the population is females and the rest 49% are males giving a sex ratio of 1:1.04 males to females. The general population density is calculated as 5,231 persons per square kilometer. The population of the Municipality has a youthful nature with 50.7% the population under the age of 24 years. Therefore the need to target the youth in any development programme in the Municipality can therefore not be overemphasized. It is also realized that approximately 43% of the population between 16 and 45 years constitute the active labor force. According to the 2000 population and housing census of Ghana, the LEKMA is multi-ethnic. The majority are the Ga-Adangbe 44.3%) followed by the Akans (34.8%) and Ewes (12.4%). The varied ethnic composition found in the different communities underscores the need for city managers to appreciate the unique cultural differences that may emanate in the localities to inform

pragmatic interventions for effective governance of these communities. The 2000 Population and Housing Census reveals that an overwhelming majority of 89.89% of the people in the Municipality are Christians while only 4.4% and 1.1% are Moslems and traditionalists respectively. The predominance of Christianity in the area is due to the strong presence of orthodox denominations such as the Catholics, Presbyterians, Methodists and Anglicans as well as Pentecostal Churches. These religious institutions therefore cannot be left out in resource and community mobilization for development.

According to the 2000 census, 41% of the inhabitants of the Municipality were born outside the Municipality but have now settled there for various reasons while the remaining 59% were born in the Municipality. Malaria is the highest ranked communicable disease. Suspected chicken pox cases were ranked highest as compared to yellow fever which was ranked fifth among the top five non communicable diseases. Condom use as per the planned target for 2009 is 85% with high patronage from both sexes. By the end of 2009, 47 or 2% out of 2,610 pregnant women tested responded positive for HIV/AIDS. The Municipality fell below the target for ante natal care coverage with 23.7%. Vaginal discharge is the key sexually transmitted disease recorded occupying 59% of cases. The next in line is HIV/AIDS infections with 29% of the cases. The least recorded case relates to Genital Ulcer Discharge.

3.3 VARIABLES

The following are the variables that were investigated under the study:

3.3.1 Dependent variable - Use of sexual enhancers.

3.3.2 Independent variables - marital status, religion, socio-economic factors, age, educational level, cost of sexual enhancing drugs (SEDs), accessibility of SEDs, source of information (family and friends, print and electronic media, magazines and adverts), perceived indication (erectile dysfunction, premature ejaculation, small penile size, nature of semen and low sex drive), beliefs and attitudes such as performance anxiety, proving male sexual prowess, satisfying partners and curiosity.

3.4 STUDY POPULATION

Men aged twenty to thirty-nine years were used as the sample frame or source population from which the sample size was computed.

3.5 SAMPLING

3.5.1 Sample size estimation

The minimum sample size was determined by using the statistical formula of Fisher (Kotrlik & Higgins, 2001).

$[Z_{(1-\alpha)}^2 - p\ (1-p)] / d^2$

With the following considerations:

- $Z_{(1-\alpha)}$ =1.96 (that is, at 95% confidence level).
- P(1-p) using the worst scenario of 50% prevalence = 0.5(1-0.5)=0.25.
- d for 5% margin of error = 0.05.
- Total population of the target population N=36,527 (all men aged 20-39 years in LEKMA).
- Uncorrected sample size n =$[(1.96^2)*0.25)]/0.05^2$=384.2 ≈ 384.
- Modified sample size of finite study population. The formula is

  S = n / [1 + (n / population)] (Kotrlik & Higgins, 2001).

  =384/ [1+ (384/36527).

  =380

Therefore Sample size will be 380 sexually active men (20- 39 years).

3.5.2. Quantitative sampling technique

The inference population is LEKMA. Men aged twenty to thirty-nine years were used as the sample frame or source population. From this sample frame, the sample size of 380 men was selected by using a convenience sampling technique. The main inclusion criteria used was any man who was aged twenty to thirty-nine years, sexually active, resides in LEKMA, agrees to participate in the study and signs a consent form. The first 380 men with all the afore mentioned criteria, who were encountered (conveniently), were enrolled into the study. To encounter these men, I and my research assistants visited places like

pubs, drinking spots, night clubs, barbering shops, lorry parks, taxi ranks, garages and football fields in the study location.

3.5.2.1 Limitations of convenience sampling

- Convenience sample can lead to the under-representation or over-representation of particular groups within the sample. These types of bias are quite typical in convenience sampling.
- Since the sample is not chosen at random, the inherent bias in convenience sampling means that the sample is unlikely to be representative of the population being studied. This undermines the ability to make generalizations from the sample to the population being studied.

3.5.3 Qualitative sampling technique

Qualitative research rarely aims to generalize findings to entire populations under study but often seek to gain insight into specific issues. Several approaches have been suggested for selecting samples for qualitative studies which include convenience sampling, purposeful and theoretical sampling. Onwuegbuzie and Leech (2007) put forward that if qualitative study aims at gaining understanding into phenomena or event, purposive sampling of respondents increases the depth of insight into the designated issue.

On the basis that the qualitative part of this study sought to understand the reasons why men use sexual enhancers or practices and also to examine the local perceptions governing the use of sexual enhancers, the respondents were purposively selected for the focus group discussions.

3.6 DATA COLLECTION TOOLS AND TECHNIQUES

3.6.1 Data collection tools

A structured questionnaire and a focus group discussion interview guide were used.

3.6.2.1 Data collection technique (Quantitative)

A structured questionnaire was used to interview the respondents. The purpose of the study was first explained to the participants. They were also assured of confidentiality, anonymity of responses and the right to decline participation at any point of the study. The questionnaire was used to obtain the following information: socio-demographics of the participants- age, level of educational, marital status and occupation. The frequency and factors influencing the use of sexual enhancing products or services and SEDs used were also documented. Information was also obtained on the sources and adverse effects of the SEDs used, relationship status at time of use, substances used together with SEDs and the reasons why they are used.

Each participant was interviewed by trained research assistants. The questionnaire was in English. However, questions were translated verbally in the preferred local language of

the respondents - Twi, Ewe , Ga – for easy understanding. . Respondents who preferred English were interviewed in English. All responses were recorded in English.

3.6.2.2 Data collection technique (Qualitative)

One FGD each was conducted in two randomly selected areas in LEKMA. Each focus group was made up of eight purposively selected persons satisfying the inclusion criteria. These criteria were 1. Respondent's age had to fall within twenty to thirty-nine years; 2. Respondent was sexually active; 3. Respondent resides in LEKMA 4. Respondent voluntarily agrees to participate in the study and signs a consent form. FGDs were conducted to examine the reasons why men use SEDs or sexual enhancing practices, ascertain the local terminologies of sexual dysfunction, types of sexual enhancers, sources of sexual enhancers, how sexual weakness is managed in the locality as well as ascertain the local perceptions governing the use of SEDs. FGDs were conducted and recorded electronically in the local languages.

3.7 QUALITY CONTROL

For the sake of uniformity in this study, a male sexual enhancer was defined as products or practices used by men to enhance their sexual performance; and, to often the same extent, concurrently enhance their partner's experience as well.

They were also made to understand that the term 'sexual-enhancement drugs' (SEDs) include the PDE-5 inhibitors, such as Viagra, in addition to other non-pharmaceutical products, such as herbal supplements.

Research assistants with good social skills were used. In order to ensure the quality of the field data collected, standardization of methods and procedures in the conduct of this study was the main focus of training session organized for all research assistants recruited for the study.

Data was checked on the field to ensure that all the information had been properly collected and recorded. Before and during data processing, however, the information was checked again for completeness and internal consistency.

3.8 DATA ENTRY (Qualitative study)

All data were audio taped using a digital audio recorder. Audio taped data was transcribed into Microsoft Word for Windows. Portions of the audio tape that were not clear were reviewed by the interviewer (myself) and the research assistants to determine if consensus could be reached about what was said. In the event that it was not possible to reach consensus, data were eliminated from the research record. Where there were discrepancies in interpretation through translation, the principal investigator (myself) and research assistants discussed the translation and came to a consensus on the best translation. In select cases, the original word or phrase in Twi or pidgin was left in the

transcript. Field notes were also taken using pen and paper and were transcribed into the research record. Transcripts were reviewed for obvious errors and corrected.

3.9 ANALYSIS

3.9.1 Analysis (Quantitative)

The data or responses to the questions was entered into and analyzed using SPSS version 18 (Statistics, 2009). Frequencies were used to summarize all variables to examine demographic characteristics, level of SEDs use, reasons for use, the forms of sexual enhancing practices patronized, the types SEDs used and the providers the SEDs and SESs. Respondents who had used a drug or other substance aimed at enhancing sexual performance at least twice in the past year or less were regarded as users; those who had never used it at all or had used it once in the last one year or over were considered to be non-users.

Bivariate analysis such as chi-square tests was used to examine the relationship between socio demographic factors and SEDs use.

Multiple regression models were used to estimate odds ratios (ORs) of association, taking into account potential confounding by other variables. Significant variables were also identified from univariate analyses. A binomial test of proportion was also done to ascertain whether the number of sexual enhancer users was significant.

3.9.2 Analysis (Qualitative)

Narratives from focus group discussions were recorded in English and transcribed using Microsoft Office Word 2010 (www.microsoft.com). A coding scheme was devised using recurrent themes that relate to both dependent and independent variables.

3.10 ETHICAL CONSIDERATIONS

Approval was sought from the Ethical Review Board of the Ghana Health Service. Permission was also sought from the Ledzokuku Krowor Municipal Assembly. Prior to the start of all interviews, participants were informed about: the study aims, their rights to withdraw from the study and the intended use of findings. Respondents were also asked to sign consent forms. They were also assured of utmost confidentiality of the information given in the interview.

3.11 PRETEST/ PILOT STUDY

The questionnaires and FGD guide were pre-tested at La Dade-Kotopon Municipal Area (LaDMA) since they have similar characteristics to LEKMA. This allowed for corrections, modifications and fine tuning before the start of the actual survey. Three research assistants were trained to conduct the interviews.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents data from the field and focuses on the socio-demographic characteristics of respondents, the level of use of sexual enhancing drugs among men aged 20 to 39 years in Ledzokuku Krowor Municipal Area (LEKMA), the reasons why men use sexual enhancing drugs or substances, the practices employed by men for achieving and maintaining erections sufficient for a satisfactory sexual performance, the practices employed by men for preventing premature ejaculation, the practices employed by men to increase libido and local perceptions or practices governing the use of sexual enhancing drugs or substances in LEKMA.

4.2 Demographic Characteristics of Respondents

The respondents were men aged 20 to 39 years. The mean age was 29.5 years with a standard deviation of 5.5. Approximately sixty percent of respondents were aged 20-29 years.

The majority of respondents were Christians (72.6%) and a very small proportion were atheists (0.8%) (table 1).

Respondents that had tertiary education were 30.5% and they happened to be the highest. Those with primary education level were 1.1% which also happened to be the least represented.

About 31.8% of the respondents were single, 35.5% were in a relationship and 1.1% was widowed (table 1).

With respect to the ethnic distribution of the respondents, surprisingly the Akan constituted 31.1% of respondents and were the most dominant ethnic group among respondents. LEKMA is a predominantly Ga. This might have been due to the sampling technique employed.

Very few respondents were unemployed (7.1%), however about 29% of respondents were students. It is however comprehensible that the students were most represented; this is because of the age frame used for the study.

Table 1: Background characteristics of respondents

Demographic Characteristics	Frequency (N=380)	Percent (%)
User Status		
User	161	42.4
Non User	219	57.6
Age		
20-24	101	26.6
25-29	125	32.9
30-34	84	22.1
35-39	70	18.4
Religion		
Christian	276	72.6
Moslem	90	23.7
Traditionalist	7	1.8
Atheist	3	0.8
Other	4	1.1
Ethnicity		
Akan	118	31.1
Mole-Dagbani	36	9.5
Ga/Dangme	88	23.2
Ewe	84	22.1
Other	54	14.2
Education		
Primary	4	1.1
Middle/JHS	38	10
Secondary/SHS	100	26.3
Tertiary	116	30.5
Vocational/Technical	94	24.7
None	28	7.4
Marital Status		
Single	121	31.8
Married	102	26.8
Widowed	4	1.1
Separated/Divorced	18	4.7
In a relationship	135	35.5

Occupation		
Unemployed	27	7.1
Student	109	28.7
Professional	76	20
Skilled Labour	89	23.4
Semi-Skilled	76	20
Other	3	0.8

Source: Survey data, 2013.

4.3 Level of use of sexual enhancing drugs or substances

From the survey results, the level of use of sexual enhancing drugs or substances among the respondents is 41.8% which is very significant with a p-value of 0.002 using a binomial test of proportion (table 2). The binomial test of proportion was done to test if there is any significant difference between respondents who use and those who do not use sexual enhancers.

Table 2: Level of use of sexual enhancing medications among men aged 20 to 39 years in LEKMA (Binomial test of proportion)

Prevalence of use	Frequency(%)	p-value*
Yes	159(41.8)	0.002
No	221(58.2)	

Source: survey data, 2013 ***p≤0.05**

4.4 Factors influencing the use of sexual enhancing drugs or substances

4.4.1 The role of socio-demographic characteristics

Respondents that used sexual enhancers the least were between 20 to 24 years (7.6%); respondents aged 25 to 29 years used sexual enhancers the most compared to the other respondents (14.5%) (table 3). In general, the chi square analysis showed an association between age – particularly those aged 20 to 24 year and 30 to 34 years, (p=0.013) - and use of sexual enhancers (table 3).

There were differences in use among sexual enhancers between Muslims (7.4%) and Christians (33.7%). In general, chi square analysis showed that religion also had the tendency to influence use of sexual enhancers (p=0.039). The specific category which made religion in general a significant influencing variable was Christianity (Table 3)

Of the respondents with tertiary education 13.2% used sexual enhancing drugs or substances and that was the highest representation. The least represented was those with Primary education of which only 0.3% used sexual enhancers.

With respect to marital status, those who were the highest users of sexual enhancers were those who said they were in a relationship (16%). Those who were widowed had the lowest percentage of use, 1.1%. Again, In general, chi square analysis showed that marital status had the tendency to influence use of sexual enhancers (p= 0.001). The specific categories which made marital status in general a significant influencing variable were single men, widowed men and separated or divorced men (table 3)

Skilled respondents like, mechanics and artisans were the highest users of sexual enhancers (13.5 %) followed by professionals (10.0%). Also, in general, chi square analysis showed that occupation had the tendency to influence use of sexual enhancers (p=0.0001). The specific categories which made occupation in general a significant influencing variable were students and skilled labour men (table 3)

Age, religion, marital status, education and occupation were significantly related to use of sexual enhancers.

Table 3: Chi-square analysis of socio demographic factors associated with sexual enhancers use among men aged 20 to 39 years in LEKMA.

Demographic characteristics	N(%)	Use sexual enhancers(%)	p-value
Total	380(100.0)	41.8	
Age			($\chi 2$=10.842, P=0.013)
20-24	101(26.6)	29(7.6)	0.002**
25-29	125(32.9)	55(14.5)	0.55
30-34	84(22.1)	43(11.3)	0.049*
35-39	70(18.4)	32(8.4)	0.467
Religion			($\chi 2$=10.065, P=0.039)
Christianity	276(72.6)	128(33.7)	0.004**
Moslem	90(23.7)	28(7.4)	0.018*
Traditionalist	7(1.8)	2(0.5)	0.473
Atheist	3(0.8)	1(0.3)	0.764
Ethnicity			($\chi 2$=5.936, P=0.204)
Akan	118(31.1)	49(12.9)	0.933
Mole-Dagbani	36(9.5)	15(3.9)	0.982
Ga/ Dangbe	88(23.2)	41(10.8)	0.303
Ewe	84(22.1)	39(10.3)	0.334
Other	54(14.2)	15(3.9)	0.024*
Education			($\chi 2$=3.419, P=0.636)
Primary	4(1.1)	1(0.3)	0.492
Middle/JSS	38(10.0)	18(4.7)	0.467
Secondary	100(26.3)	39(10.3)	0.502
Tertiary	116(30.5)	50(13.2)	0.741
Vocational	94(24.7)	36(9.5)	0.422
None	28(7.4)	15(3.9)	0.191
Marital Status			($\chi 2$=19.811, P=0.001)
Single	121(31.8)	38(10)	0.005**

Married	102(26.8)	40(10.5)	0.53
Widowed	4(1.1)	4(1.1)	0.018*
Separated/Div-orced	18(4.7)	13(3.4)	0.007**
Relationship	135(35.5)	64(16.8)	0.103
Occupation			(χ2=25.596, P=0.000)
Unemployed	27(7.1)	10(2.6)	0.599
Student	109(28.8)	27(7.1)	0.000**
Professional	76(20.1)	38(10)	0.107
Skilled Labour	89(23.5)	51(13.5)	0.001**
Semi-Skilled	76(20.1)	32(8.4)	0.959
Other	2(0.5)	0(0.0)	0.229

Source: survey data, 2013. **P-value≥0.05; *Significant; **Very significant**

4.4.2 *Factors that influence use of sexual enhancers*

Analysis of the survey data, showed that the main reasons influencing the use of sexual enhancers by young males are; delaying ejaculation (OR=3.02), satisfying sexual partner (OR=2.18) and performance anxiety (OR=1.82) (table 4).

Narratives from FGDs further gave more weight to the fact that sexual enhancers were used to prevent premature ejaculation, satisfy partner's sexual drive, to heighten sexual performance and to achieve and maintain firm penile erections. The following narratives from FGD participants are typical:

"These days, the ladies desire long periods of sexual intercourse. If you are not able to do that and satisfy them as well they will leave you. So we have to look for 'lawyer' (sexual enhancing drugs) *to help us otherwise they will leave and go for another guy".*

(26-year-old male respondent)

"You (referring to other FGD participants) *are all talking about satisfying the girls but it is not only that. There are some men who cannot have an erection at all; 'ni koti ewu'* (meaning complete erectile dysfunction in twi)*; they also use these drugs. But some too can have the erection alright but 'the inside no hard'* (weak erection). *So they also take the drugs so that their penis will be very hard. It is true"*

(34-year-old male respondent)

Performance anxiety or fear of sexual failure was also one of the reasons mentioned in the FDGs.

That is to say, performance anxiety or fear of sexual failure pushes most of the young males in LEKMA to resort to sexual enhancers for which they eventually become addicted to. This was captured in the following FDG narrative:

"I know a boy who is addicted to these drugs. If he doesn't take them before sex, he feels afraid that he will not be able to perform sexually. He has become addicted and it is a problem. I'm sure it will make him impotent early. He said the last time he didn't take the drug, he didn't perform at all".

(24-year-old male respondent)

Survey data indicated that some of the respondents after listening to, watching or reading about sexual enhancers' adverts in the media moved on to try them out of curiosity. This was also illustrated in the following comments by a participant, to which all agreed;

"Others too after watching or listening to adverts on television or radio they want to try it so they go and buy these medicines. There are others too when they are having sex they 'come' (ejaculate) too quickly so they take drugs or use dragon spray to delay it".

(28-year-old male respondent)

Another reason that emanated from the FDGs was that, young males with multiple sexual partners use sexual enhancers a lot. This was captured in the following narrative:

"Some men too have more than one girlfriend) so if they don't take drugs they can't satisfy their sexual needs. These girls are killing us slowly".

(26-year-old male respondent)

Table 4: Results of Multiple Logistic Regressions of factors influencing the use of sexual enhancers

Variable	Coefficient (Beta)	SE of Beta	P-value	Odds ratio	95 % CI
Delay Ejaculation	1.104	0.534	0.015	3.02	1.059-8.586
Satisfy Partner Performance	0.78	0.587	0.042	2.18	1.052-4.078
Anxiety	0.599	0.600	0.039	1.82	1.002-3.080
Hard Erection	-0.125	0.717	0.862	0.88	0.216-3.598
Curiosity	-0.325	0.436	0.456	0.72	0.308-1.698
Constant	-4.653	1.894	0.014		

Source: survey data, 2013. OR=Odds Ratio; CI= Confidence Interval; SE=Standard Error; p=probability.

4.5. Pattern of use of sexual enhancing medication or practice among men aged 20 to 39 years in LEKMA

4.5.1 *Sources of sexual enhancers*

Respondents obtained sexual enhancers from more than one source. For the majority of respondents, friends (37.3%) influenced their use and choice of sexual enhancers. However, sexual enhancers were also obtained from drug peddlers (25.8%), and chemists or pharmacy shops (24.4%). Narratives from the FGDs, also confirmed that the main sources of sexual enhancers are friends and drug peddlers. Furthermore, friends either offered their personal sexual enhancers at no cost or would provide information about where it could be purchased. Even though respondents mentioned that sexual enhancers were commonly purchased from drug peddlers, mostly women, they disapproved of this source. The following narratives are characteristic:

"Most of the time, women drug peddlers carry it (roots, parts of tree stems, herbs and fruits for sexual weakness) on their heads and go round selling them in the neighbourhood. Some drug peddlers who have these drugs packed in 'Ghana must go' (a local name for a specific brand of packing bag) *bags and go round selling them in the area".*

(28-year-old male respondent)

''Sometimes when you have any sexual problem and you tell your friend about it, if he has a drug that can help you, by all means he will give you some. But if he doesn't, he

will recommend some for you to go and buy. It's as simple as that". As friends, we share our experiences when we meet so if I have a problem they can help me".

(30-year-old male respondent)

4.5.2 *Source of information about sexual enhancers*

The main source of information about sexual enhancers was friends (67.7%). (table 5). Respondents' narratives confirmed this. The following narrative is characteristic;

"In the same way you have come here asking us about sexual weakness, is the same way we get to know about these drugs. We ask ourselves, that is our friends. We tell each other about our experiences and escapades and the drugs we use. So in short we get information from friends".

(32-year-old male respondent)

4.5.3 *Types of sexual enhancers commonly used*

Each respondents was asked to mention at least one sexual enhancer commonly used. The ones commonly mentioned were; dragon (15.9%), Viagra (13.9%), AK-47 (10.2%), ginseng (11.6%) and 'atadwe' (local name in Akan for *Cyperus esculentus*) (11.6%) (table 5). Pictures of some sexual enhancers sold by drug peddlers in LEKMA were also taken in the course of the survey (figure 4).

Table 5: Sources, types and sources of information of sexual enhancers

Source of sexual enhancers	**Frequency (%)**
Herbal Clinic	10(3.6)
Friend	104(37.3)
Chemist	68(24.4)
Relative	2(0.7)
Herbalist	1(0.4)
Drug Peddler	72(25.8)
Other	22(7.9)
Information about sex enhancers	**Responses n (%)**
Radio	14(6.3)
Friend	151(67.7)
Television	5(2.2)
Relatives	7(3.1)
Magazines	3(1.3)
Newspapers	1(0.4)
Chemist	25(11.2)
Others	17(7.6)
Sexual Enhancers Commonly Used	**Responses n(%)**
Viagra	84(13.9)
AK 47	62(10.2)
Maca	7(1.2)
Comit	28(4.6)
Cialis	12(2.0)
Ginseng	70(11.6)
Mars	56(9.3)
Dragon	96(15.9)
Atadwe	70(11.6)
Recharger	43(7.1)
US Lange	15(2.5)
Craziness	30(5.0)
Yohimbe	8(1.3)
Other	24(4.0)

Source: survey data, 2013

4.6. Practices employed by men for achieving hard erection in LEKMA

Respondents took a combination of various drugs (31.9%), various alcoholic beverages (24.3%), and various local herbal preparations, to achieve and sustain hard erections. Tiger nuts and jogging as an exercise were also done with the same intention (table 6). Respondents commonly took a combination of drugs commonly used to achieve and maintain hard erections such as Viagra (25.2%), dragon capsules (24.4%), AK-47 (19.8%) and recharger (9.9%). Alcoholic beverages used are 'atemuda' (11.2%), herb afrique (37.6%), 'alomo' (25.2%) and kasapreko gin bitters (4.7%). Other alcoholic beverages mentioned were 'joy daddy' bitters and 'okraman koti'. Approximately 40 % of respondents used sexual enhancers 1 to 3 times a week (Table 6).

Narratives from FGDs supported the use of sexual enhancers and revealed the use of other sexual enhancers that were not captured in the quantitative study. Respondents mentioned the use of medicines from China, Nigeria and Togo and other sexual enhancers:

"Drug peddlers sell Chinese medicines like; craziness, dragon, orang-utan, African king,. They also sell Viagra, ginseng, 'atadwe' (tiger nuts), *mars and US Lange. There are two types of Viagra; there is the original one which is sold in the pharmacy shops which is very expensive and there are the fake cheap ones that the drug peddlers sell. There is a herbal one also called 'herbal viagra'''.*

(27-year-old male respondent)

"They also use comit, penegra, diaphragm and recharger. The recharger is very good. It delays and also makes it hard". Others are kamagra, myagra and venigra, all from india. There is also this cream called 'cece' cream from Nigeria which when rubbed on the penis, it makes it fit.

(37-year-old male respondent)

"The local bitters too help. For example, alomo, mandingo, herb afrique, 'waste and power', atemuda, joy daddy bitters, gidi power and shonpion. Others are, 'mighty power', 'adom kooko bitters' and 'angel natural capsules'; they also call it 'obidiponbidi'. Some men also use herbs and roots like 'okramankoti'.

(26-year-old male respondent)

Some respondents also chew plant parts to achieve hard erections. An example of such plants is 'okramankoti which literally means, 'penis of a dog'. This probably was named so because of the lecherous nature of dogs:

"There is a plant called 'kortidindin' (Akan term for hard penis)*, if you chew it often your penis gets strong and very hard"*

(32-year-old male respondent)

"They also have this concoction from Togo; it is very powerful. They mix goat penis with pepper, salt and other herbs. Some people also grind the plant called 'okramankoti' and mix it with either milk or coconut juice and drink every three days; i hear it really works.

Some men also grind 'Nyame dua (mahogany)*' roots and then mix it with milk which they take about one hour before sex. "As for me I chew neem tree or sometimes I boil the leaves and drink it".*

(30-year-old male respondent)

Table 6: Pattern of practices for achieving hard erection by men aged 20 to 39 years in LEKMA

Class of Sexual Enhancers/Practices used for hard erection	N=263	Percent
Medication	84	31.9
Alcoholic Beverage	64	24.3
Herbal Preparation	42	16
Exercise	21	8
Food	50	19
Other	2	0.8
Total	263	100
Medication Used for Hard Erection	**N=131**	
Viagra	33	25.2
Ak 47	26	19.8
Comit	4	3.1
Cialis	2	1.5
Mars	4	3.1
Dragon	32	24.4
Recharger	13	9.9
US Lange	6	4.6
Craziness	7	5.3
Other	4	3.1
Total	131	
Alcoholic Beverage Used for Hard Erection	**N=107**	
Atemuda	12	11.2
Herb Afrique	36	33.6
Alomo	27	25.2
Mandingo	27	25.2
Okraman koti	5	4.7
Total	107	100
Herbal Preparation Used for Hard Erection	**N=43**	
Yohimbe	1	2.3
Ginseng	34	79.1
Maca	1	2.3

Horny Goat Weed	1	2.3
Other	6	14
Total	43	100
Foods Used for Hard Erection	**N=56**	
Atadwe	40	71.4
Carrots	15	26.8
Other	1	1.8
Total	56	100
Exercises engaged in for hard erection	**N=34**	
Jogging	19	55.9
Other	15	44.1
Total	34	100
Number of Times Drugs/Practices are Used for Hard Erection		
Daily	6(3.7)	3.7
1-3 Times	33(20.5)	20.5
More than 3 times	8(5.0)	5
Once per week	31(19.3)	19.3
Once every 2 weeks	14(8.7)	8.7
Once per month	7(4.3)	4.3
Other	12(7.5)	7.5
No response	50(31.1)	31.1

Source: survey data, 2013

4.7. Practices employed by men for treating premature ejaculation in LEKMA

From the survey, main class of sexual enhancers patronized by the respondents with the aim preventing premature ejaculation are; medication, alcoholic beverages, herbal preparation, food and exercises. Out of 192 responses, the most reported class of enhancers used was medication (56.3%) followed by alcoholic beverages (26.0%). With respect to the drugs commonly used to delay ejaculation, out of 156 responses, the main ones were dragon spray (41.0%) and anafranil (25.6%), AK-47 (19.8%) which is a tricyclic antidepressant. Among the 'others' (drugs for preventing premature ejaculation), one main substance that respondents mentioned as being used a lot for delaying ejaculation is a small black stone called 'Jamaican stone'. The main alcoholic beverages reported to be used out of 95 responses were herb afrique (29.5%), 'alomo' (26.3%) and mandingo (23.2%). Herbal preparation, food, and type of exercises commonly reported for preventing premature ejaculation was once again; ginseng, tiger nuts and jogging respectively. With respect to the number of times they used the sexual enhancers, out of 161 responses, 52.1% used them 1 to 3 times weekly. These are all presented in Table 7. Some comments from the FGDs, further put more emphasis on the fact that the most frequently used medication or substance to prevent premature ejaculation are dragon spray and Anafranil. This is captured in the following statements by some participants:

"Dragon spray, climax spray and procomil spray; they are all sprayed on the tip of the penis one hour before sex. I've tried all of them but the one that is used a lot is the dragon spray because it is cheaper and very effective than the rest".

(23-year-old male respondent)

"Anafranil is very good for delaying ejaculation. When you take it, it takes a long time before you 'come' (ejaculate or orgasm). It makes you satisfy your 'chick' (girlfriend) so that she will believe you. Also she will never leave you for another guy. Men use it a lot".

(25-year-old male respondent)

In was interesting to note, that some other participants in another FGD were of different opinions and gave some other ways by which premature ejaculation is managed. This is illustrated by the following comments by some participants:

"I hear there is this small stone (Jamaican stone) that they rub on the head of the 'dick' (penis) that helps prevent you from coming quickly (premature ejaculation). They sell it at Nima (a suburb of Accra)*; before they sell it to you, they ask a lot of questions".*

(25-year-old male respondent)

"Sometimes when you are 'fucking'(having sex) and you are about to come (ejaculate), you have to remove your mind from the act and think about something else; for example thinking about your empty bank account. So if you don't control yourself when you are about to come then you will come too quickly (premature ejaculation)*. Another way they manage this premature ejaculation is to hold or squeeze the tip of the 'dick'* (penis) *very hard or press the space between your 'balls' (scrotum) and anus so that you don't come quickly. I read this one from a book and it works for some men"*

(30-year-old male respondent)

"If you chew about 2 to 4 tablets of paracetamol one hour before sex, you will go very long journey (delayed ejaculation). When you also drink very chilled water, you will keep long".

(36-year-old male respondent)

It is worth noting that one participant was of a different opinion from all other participants. He attributed sexual weakness to spiritual courses hence suggested people with sexual weakness should seek help from their spiritual leaders or places of worship. And even though he had a different opinion from the other participants, they agreed with him:

"As for me, I think that if you have a sexual problem like this, the best thing to do is to fast and pray about it. If you are a Christian go to church for prayers; if you are a Muslim go to the 'mallam' to help you and or you can go to the shrine for help if you don't want to go to church or the 'mallam'. I'm saying this because sometimes it can be spiritual."

(33-year-old male respondent)

Table 7: Pattern of practices for preventing premature ejaculation by men aged 20 to 39 years in LEKMA

Sexual Enhancer/Practice that prevent premature ejaculation	Frequency	Percent
Medication	108	56.3
Alcoholic Beverage	50	26
Herbal Preparation	21	10.9
Exercise	5	2.6
Other	8	4.2
Total	192	100
Medication Used		
Viagra	8	5.1
Recharger	9	5.8
Ak 47	15	9.6
Mars	1	0.6
Anafranil	40	25.6
US Lange	4	2.6
Commit	1	0.6
Dragon	64	41
Craziness	5	3.2
Other	9	5.8
Total	156	100
Alcoholic Beverage Used		
Atemuda	8	8.4
Herb Afrique	28	29.5
Alomo	25	26.3
Mandingo	22	23.2
Kasapreko GIN	3	3.2
Other	9	9.5
Total	95	100
Herbal/Root Preparation Used		
Ginseng	15	65.2
Horny goat weed	1	4.3

Others	7	30.4
Total	23	100
Food Used		
Atadwe	5	62.5
Carrots	2	25
Other	1	12.5
Total	8	100
Exercise Used		
Jogging	5	62.5
Brisk Walking	1	12.5
Other	2	25
Total	8	100
Number of Times Medication/Practice is used to prevent premature ejaculation		
Daily	3	1.9
1-3 Times	40	24.8
More than 3 times	5	3.1
Once per week	44	27.3
Once every 2 weeks	20	12.4
Once per month	4	2.5
Other	18	11.2
No response	27	16.8
Total	161	100

Source: survey data 2013

4.8. Practices employed by men for increasing sexual desire in LEKMA

With respect to practices employed by men in LEKMA to increase sexual desire, only a few young men were involved. The main class of sexual enhancers used for increasing sexual desire was the alcoholic beverages (Table 8)

The FDGs also through more light on this:

"All the alcoholic beverages like the joy daddy bitters and mandingo and all the ones mentioned earlier makes you feel for sex".

(28-year-old male respondent)

Apart from the use of alcoholic beverages to boost sexual desire, interesting narratives emanated from the FGDs. The narratives indicated that most of the young males were using illicit substances and unconventional ways or methods to increase their sexual desire; like smoking marijuana and mixing orthodox drug (for other etiological indications) with alcohol.

"Some excite themselves sexually by smoking wee (marijuana). But the 'wee' also gives hard erection and delays ejaculation".

(20-year-old male respondent)

"You can also mix 'akpetishie' (a locally brewed gin) *with paracetamol or APC and drink before sex. It gives nice sexual feelings".*

(39-year-old male respondent)

Table 8: Practices for achieving sexual desire by men aged 20 to 39 years in LEKMA

Sexual Enhancer/Practice that excites you	Frequency	Percent
Medication	2	9.5
Herbal Preparation	5	23.8
Food	1	4.8
Alcohol	10	47.6
Exercise	3	14.3
Total	21	100
Medication that excites you		
AK 47	1	33.3
Recharger	1	33.3
Other	1	33.3
Total	3	100
Alcoholic Beverage that excites you		
Atemuda	4	16
Alomo	6	24
Herb Afrique	6	24
Mandingo	7	28
Other	2	8
Total	25	100
Herbal/Root preparation that excites you		
Ginseng	3	42.9
Maca	1	14.3
Horny Goat Weed	1	14.3
Other	2	28.6
Total	7	100
Food that excites you		
Atadwe	3	42.9
Carrots	3	42.9
Others	1	14.3
Total	7	100
Exercise that excites you		
Jogging	3	50

Brisk Walking	1	16.7
Others	2	33.3
Total	6	100

Source: survey data, 2013.

4.9 Local perceptions governing the use of sexual enhancers among men in LEKMA

4.9.1 *Knowledge about sexual dysfunction*

With respect to respondents' knowledge of sexual dysfunction, they were allowed to mention more than one type of sexual dysfunction if they knew of more than one (multiple responses).

And out a total of 691 responses, 360 (52.1%) was premature ejaculation, 206 (29.8%) was erectile dysfunction, 85 (12.3%) was low libido, 13 (1.9%) was orgasmic disorder and 27 (3.9%) was others (infertility). Respondents commonly linked sexual dysfunction to premature ejaculation.

Responses from the FGDs, further confirmed their understanding of what sexual dysfunction is. The narratives revealed that participants understood what sexual dysfunction is, in different ways. Some understood it to be erectile dysfunction, premature ejaculation, low libido or infertility.

"Sexual weakness is about earlier ejaculation; the man doesn't keep long and he comes. That is men who come too quickly in bed. It is a big problem".

(30-year-old male respondent)

"Sometimes too those that do not have hard penis too can be a form of sexual weakness; that is to say weakness of the penis is sexual weakness".

(32-year-old male respondent)

4.9.2 *Local terminologies for sexual dysfunction*

Just as a prognosis or diagnosis of any ailment in the clinical setting gives the physician the required information to prescribe the exact medication for treatment, in the same vein the local terminologies of illnesses or health conditions by local people provide them with the knowledge on how to manage the condition. Understanding and documenting local terminologies given to illnesses or health conditions is an essential aspect of any socio-cultural assessment of disease particularly from the local perspective of the community. Therefore understanding local terminologies given to sexual dysfunction in LEKMA provides an indication of the kinds of treatment that people are likely to seek. This is very crucial for health policy planning or programming. Local terminologies given to 'sexual dysfunction' vary by the local language of respondents hence several terminologies for 'sexual weaknesses were given in English, Ga, Ewe and Twi. This ensued from the FGDs. Though they all have different literal meanings, they all mean

sexual weakness or impotence. The literal meanings for some of them have been provided (table 9).

Table 9: Local terminologies for sexual weakness

No	Local terminology	Literal meaning	Dialect
1	*O doloo gbo*	Your penis is dead	Ga
2	*O doloo tsu ni*	Your penis doesn't work	Ga
3	*Ogbeei gbo*	Your penis is dead	Ga
4	*Amlalo helemo o tu*	Your weapon has been taken from you	Ga
5	*Wo koti ewu'*	Your penis is dead	Akan
6	*Aban agye wo tuo*	The authorities has seized your weapon	Akan
7	*Wo ntumi nko kwanso*	You can't go on a journey	Akan
8	*Odo bena da*	You always weed on Tuesdays	Akan
9	*Wonye bema*	You are not a man	Akan

10	*Wo ye bena kra*	-	Akan
11	*Wo ho nsuo asa*	Your sperm/semen is finished	Akan
12	*Gbordzorgbordzor le ntsu me*	The man is weak	Ewe
13	*Ava tutu tor*	Impotence	Ewe
14	*Efe ava tu*	Your penis can't erect at all	Ewe
15	*Megale ntsu me o*	You are no more a man	Ewe
16	*You get puncture*	-	English
17	*You get burst tyres*	-	English
18	*You can't play good music in bed*	-	English
19	*You can't go for long journey*	-	English

Source: Data from FDGs of study, 2013

4.9.3 *Outcome of using sexual enhancers*

Out of 388 responses, the main two positive consequences of using the sexual enhancers include; partner satisfaction (29.4%) and more sexual rounds (29.1%). This is presented in Table 9.

The FDGs threw more light on the fact that the main benefits of using the sexual enhancers are partner satisfaction, more sexual rounds, delayed ejaculation and hard erections. This was made clear through the following comments, to which all participants attested to:

"Oh, as we said earlier, it gives very hard erections".

(26-year-old male respondent)

"It also delays you, so that you can go more rounds and satisfy your partner".

(30-year-old male respondent)

One participant from the first FGD was of a different opinion; he thought the sexual enhancers improve the nature and quality of semen thus:

"I think the main benefit is that, it boost sperm count and makes your semen thick and plenty. That makes sex very nice".

(28-year-old male respondent)

4.9.4 *Side effects of sexual enhancers*

With respect to side effects experienced after using the sexual enhancers, the main ones reported were headaches (27.6%), extremely delayed ejaculation (29.2%), fatigue (21.6%) and others (21.1%; especially frequent uncontrollable yawning after taking Anafranil (table 10).

The FDGs added more weight to the side effects of sexual enhancers reported in the questionnaires. This was illustrated in the following comments:

"Most of the time you get headaches when you take these medicines".

(33-year-old male respondent)

"The anafranil also makes you weak and you will yawn a lot. Sometimes even when you are talking to someone you will yawn several times and the person will ask you if you are tired or feel sleepy".

(27-year-old male respondent)

"I think if you use these things (sexual enhancing drugs) it makes you very tired and you may become weak (impotent) early in life; like before 50 years and that is bad. It can even affect your internal organs like the kidneys and prostate".

(26-year-old male respondent)

Table 10: Consequences of using sexual enhancing drugs or substances

Positive	Frequency	Percent
Increases libido	42	10.8
Pleasurable sex	40	10.3
Satisfies sexual partner	114	29.4
Achieves hard erection	69	17.8
Able to go more rounds	113	29.1
Improves semen volume/nature	10	2.6
Total	388	100
Negative		
Headaches	51	27.6
Priapism	1	0.1
Prolonged Ejaculation	54	29.2
Fatigue	40	21.6
Other	39	21.1
Total	18	100

Source: survey data, 2013.

4.9.5 *Sexual deviant behaviours that excites men*

Again, out of 70 responses, 90.0% reported deriving sexual pleasure from dominating their partners (forcing, struggling, beating or raping) just before sexual intercourse. And just 10% said they derived sexual pleasure from being dominated rather by their partners.

Responses from the questionnaire and discussions that ensued during the FGDs seem to point to the fact that most men derived sexual pleasure from dominating their partners just before sexual intercourse. Some of the statements that emanated from the discussions to which all participants agreed are as follows:

"Some of the guys beat their girlfriends to excite themselves. But there are some girls too, they love it when you force them (like rape) before having sex with them and that excites them. It makes them very wet. It's very true; some guys really get sexual pleasure from beating their sexual partners".

(32-year-old male respondent)

4.9.6 *Men who use sexual enhancers*

Responses from the discussions that ensued from the FGDs, pointed to the fact that the age group that are using these sexual enhancers most in recent times are the youth. This was illustrated from the following narrative to which all participants agreed , thus:

"20 to 40 years".

(39-year-old male respondent)

To conclude, out of the 161 users of sexual enhancers, only 5 of them used them to increase penile size.

When asked why men do not visit the clinic when they have reasons to think that they will need the sexual enhances, this is what one respondent had to say, to which all agreed:

"No no, not at all; we don't go to the hospital. We normally do not go there because we feel too shy to do that. And also they are sold all over so you don't need to go all the way to the hospital".

(25-year-old male respondent)

Finally, a large proportion of the users (88.2%) spent less than GHC 40.00 on the sexual enhancers per month. Hence they were easily available, accessible and affordable.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.1 Introduction

This research investigated the practices of men in LEKMA to enhance sexual performance. Additionally, the study explored the reasons for using sexual enhancers, local perceptions governing their use, types of sexual enhancers used and their sources. In this study, almost 42.0% of the respondents were users of sexual enhancers. Some of the reasons why they use the sexual enhancers are premature ejaculation, to satisfy sexual partner(s) and performance anxiety. The main sources of these sexual enhancers are friends and drug peddlers. The commonly patronized sexual enhancers in LEKMA are dragon spray, Viagra, AK-47, ginseng, alcoholic beverages (alomo, atemuda, okramankoti and mandingo) and foods like carrots and tiger nuts. Some also indulge in practices such as physical exercises to enhance their sexual performance or seek remedy for their sexual problems from their spiritual leaders. These findings will be discussed in detail in the following paragraphs.

5.2 Demographic characteristics

Sexual activity decreases with advancing age and the use of sex enhancing drugs is more prevalent in the middle and late life than the younger generation (George & Weiler, 1981) However, this study showed the contrary. This probably may be due to the publicity given to sexual enhancers in both the print and electronic media. In this study,

there was an association between age and the use of sexual enhancers. Men aged 25 to 35 years were more associated with the use of sexual enhancers. A study by Foxman et al also showed similar results where men aged 20 to 34 years were the highest users of sexual enhancement aids (Foxman et al., 2006) .

Education is an important determinant of health seeking behavior. Advancement in formal education is also believed to be associated with an individual's ability to reason better in making health choices (Schaefer, 1996). However, this was not the case in this study and this was very worrying. This was worrying because the high users of sexual enhancers in this study were senior high and tertiary students. These categories of students are advanced in formal education hence was expected to make better health decisions and not resort to the use of sexual enhancers in their youthful age. This also conformed to the findings of a similar study done in the Kumasi metropolis by Danquah et al which showed that the senior high and tertiary students were the highest users of sexual enhancers in the Kumasi metropolis.

Study findings revealed that both skilled and semi-skilled workers purchased sexual enhancers from drug peddlers thus it is not surprising that they happen to be high users of sexual enhancers. Also among the high users were respondents with white collar jobs and this is probably because they are well informed about sexual enhancers and can afford to purchase it from the pharmacies.

In this study, though there was no association between ethnicity and use of sexual enhancers, it was surprising that Akans were in the majority because LEKMA is a predominantly a Ga community from the 2000 Ghana Population and Housing Census (Statistical service, 2002). Nevertheless, all the major ethnic groups were well represented since LEKMA is a metropolitan area and also heterogeneous with respect to ethnicity.

In this study, single men, married men and men in relationships were the highest users of sexual enhancers. This is consistent with findings in another study (S. Papaharitou et al., 2006). Married men are high users probably due to the fact that they are more predisposed to erectile dysfunction (ED) which is positively correlated with marital difficulties and moreover, the pressure of the partner as well as the impact of ED in the relationship motivates them to use sexual enhancer (Dunn et al., 1999, Speckens et al, 1995). Study findings suggest that single men are likely to use sexual enhancers regularly because they have multiple sexual partners; this is worrying. This study showed that 70.2% of respondents had multiple sexual partners.

In many societies worldwide, religion and health seeking behaviour are synonymous. Hence it follows that one's religious background may influence the use of sexual enhancers. Though the Bible does not endorse sexual promiscuity, Islam appears to be stricter where this is concerned and outwardly rebukes and chastises anyone found to be guilty. Sex education is not even permitted in Islamic schools (Halstead, 1997). Islam

also frowns on their followers talking or openly discussing sexuality. It was therefore not surprising that most users were Christians (80.5%).

5.3 Level of use of sexual enhancing drug or substances

From the time of our fore fathers, the use of sexual enhancers has increased steadily (Foxman et al, 2006, Bellis et al., 2008). This phenomenon was initially thought to be a practice employed by only older men; however in recent times, the youth use sexual enhancers more than other population groups (Danquah et al, 2011). Study findings revealed a high level of use of sexual enhancing drugs or substances among the respondents (41.8%). This figure is quite high compared to a similar study by Bellis et al that studied men with similar age bracket in nine countries in Europe (Bellis et al., 2008).

5.4 Reasons why young men in LEKMA use sexual enhancing drugs or substances.

This study revealed various reasons for the use of sexual enhancers which includes; delaying ejaculation, satisfying sexual partners, preventing performance anxiety, curiosity, having more sexual rounds, achieving and maintaining hard erections sufficient for a satisfactory sexual performance. For most of the respondents, sexual weakness was synonymous with premature ejaculation. In a similar study, young men used sexual enhancers to prevent premature ejaculation (Papaharitou et al., 2006). In this study, other significant reasons for the use of sexual enhancers were to satisfy sexual partners and to manage performance anxiety. In reality, performance anxiety is linked to premature ejaculation. Jannini et al., 2011 argued that premature ejaculation is a precursor for

performance anxiety (Jannini et al, 2011). Narratives from FGDs suggested that fear of sexual failure and premature ejaculation was linked to performance anxiety and to curtail this, respondents resorted to the use of sexual enhancers. This was especially the case if one was going to have sex with a different girl for the first time. Other studies have shown a significant relationship between achieving and maintaining very hard erections and the use of sexual enhancers, however that was not the case in this study (Papaharitou et al., 2006, Bechara et al, 2010, Wright, 2009). Although study findings did not show a significant relationship between the use of sexual enhancers and sustaining penile erections, the majority of respondents used sexual enhancers to achieve very hard erections ($p=0.862$) or used them just out of curiosity ($p=0.456$). In a study by Wright, curiosity or experimentation (50%) was the main reason why some college men in the United States use sexual enhancers (Wright, 2009).

5.5 Pattern of use of sexual enhancing medication or practice among men aged 20 to 39 years in LEKMA

The main sources where young men in LEKMA obtain sexual enhancers are friends (37.3%), drug peddlers (25.8%) and pharmacy shops (24.4%). This is consistent with findings from an earlier study that showed that the main sources of sexual enhancers are friends (Wright, 2009). However, in other studies in the Western world, the internet was a major source of information about sexual enhancers, followed by friends or peers (Evans-Brown et al, 2012, Wright, 2009, Musacchio et al, 2006). This was not the case in this study. Friends were the main source of sexual enhancers because young men found it easier to approach friends (peers) for these products than to go to the pharmacy shops to

buy them or hospitals for medical advice. This might be due to shyness or embarrassment. As indicated from the FDGs, friends share their experiences and sexual escapades with each other. It is therefore easier for young men to seek advice and use drugs recommended by their friends. The reason why the drug peddlers are also a major source of sexual enhancers for the young men in LEKMA is that, they make the drug readily available, accessible and affordable as well as giving them free information about the drugs so as to convince them to buy and use. One study suggested that friends are usually the main source of information about the acquisition and use of sexual enhancers (Danquah et al., 2011).

5.6 Practices employed by men for achieving hard erection in LEKMA

Even though alcoholic beverages, herbal preparation and food can be used to achieve erections, medications are the main class of sexual enhancers patronized by men (Freitas et al, 2008, Harte & Meston, 2012, Wright, 2009).

The main sexual enhancer used for achieving hard erections in LEKMA is Viagra (25.2%). This is understandable because when Viagra was launched, there was lot publicity worldwide. In the United States of America, about one million prescriptions were written by clinicians in less than two months and over one hundred and seventy-seven million prescriptions were written worldwide in over 120 countries (Rajfer, 2008, Wright, 2009). Other similar studies done in other parts of the world also revealed that the main medication used by men for achieving and maintaining hard erections was Viagra (Smith & Romanelli, 2005, Santtila et al., 2007, Harte & Meston, 2012). It is worth noting, that most of the alcoholic beverages used for achieving and maintaining

hard erections by the young males in LEKMA are locally produced, namely; 'alomo', 'atemuda', 'okramanloti', 'herb afrique', 'laka', 'under', and 'joy dadi bitters'. However, the ingredients of some of these preparations ('laka', 'under' and 'atemuda') have not been ascertained or inscribed on the bottles hence it is very difficult to know which ingredient is actually causing these hard erections and whether it may have serious health implications.

With respect to herbal preparations used to achieve hard erections, the main one used by respondents is ginseng preparations (79.1%). This notwithstanding, survey results showed that ginseng preparations were predominantly used. Additionally, some youth in LEKMA resorted to herbal concoctions made from the neem tree, the bark of the mahogany tree and 'kotidindin' (literal meaning is, 'hard penis'). Other studies also reported neem, mahogany and 'kotidindin' being used by men to achieve hard erections (Amponsah et al., 2002, Caldwell, 2007). It is however worrying that the safety profile of these concoctions have not been ascertained.

The respondents believe that some foods have aphrodisiac properties and hence capable of helping them achieve hard erections. The use of food to enhance sexual potency has been recorded in other cultures and today, there are thousands of foods presumed to help men achieve hard erections. These include chocolate, pork, salmon, chillies, oatmeal, wine, drumstick and mackerel and fresh tuna and are believed to have the ability to enhance blood flow to the genitals (Asha et al., 2009).

Physical activities are known to enhance blood circulation, which is believed to improve erections (Young & Penhollow, 2004) . Respondents engaged in regular physical exercises or activities like jogging or football for the same purpose.

5.7 Practices employed by men for treating premature ejaculation in LEKMA

Premature ejaculation can sometimes be so bad that the man cannot even manage to have intercourse because he invariably ejaculates before he can get into the vagina. This can be devastating for a man's self-confidence and can be hugely frustrating and annoying for his partner. According to the participants of the FGDs, for some men lasting 5 minutes maybe sufficient enough to please their partner, while for the average women 20 or 30 minutes of penetrative sex is necessary to achieve orgasm.

The young males preferred the dragon spray because of three reasons; firstly, it desensitizes or numbs the tip of the penis hence delays ejaculation; secondly, it is relatively cheap compared to other desensitizing sprays on the market; and lastly, it is easily accessible or available. They also preferred anafranil because according to them it delays ejaculation long enough to satisfy themselves and their sexual partners. It is worth noting however, that, anafranil is not a sexual enhancing drug but rather an antidepressant. From the FDGs, another substance that respondents mentioned as being used a lot for delaying ejaculation is a small black stone called 'Jamaican stone'. The Jamaican stone numbs the tip of the penis after it has been rubbed on it so as to prevent premature ejaculation. According to the respondents, the Jamaican stone has several other names including Black Stone, Sex stone, Black rock Stone and the Love stone. This stone is purported to be a natural herbal desensitizing stone that helps in preventing premature

ejaculation whilst at the same time maintaining a firm and hard erection. The stone is also purported by the respondents to delay ejaculation for up to about four hours. Therefore, young men in LEKMA use this stone because they claim it makes them last long enough to satisfy their sexual partners and also have pleasurable sexual intercourse.

The FDGs also brought out other practices employed for delaying ejaculation. This was captured in a narrative by one of the participants who attributed sexual problems such as premature ejaculation to witchcraft (spiritual) hence the best remedy is to consult a pastor, 'mallam' (Muslim fetish priest), traditional fetish priest or a spiritual leader depending on the faith of the man suffering from it.

Some men also believe that the cause of premature ejaculation is all in the mind (psychological) and therefore anytime they are about to ejaculate early, they think about something else other than sex so as to help delay the ejaculation.

Some young men in LEKMA also squeeze the tip of the penis or press the space between the scrotum and the anus when they are about to ejaculate showing the length at which they will go in delaying ejaculation .These are all techniques that some participants have read from books.

And just as some young males in LEKMA drink alcoholic beverages to achieve hard erections, others also drink them to delay ejaculation.

5.8 Practices employed by men for increasing sexual desire in LEKMA

On average, men are estimated to have 400% more erotic fantasies than women hence have higher sexual arousal threshold. Therefore young men do not have much problems when it comes to having sexual desire (Asha et al., 2009). This study confirmed this notion because only a few of the respondents patronized sexual enhancers for achieving sexual desire. Notwithstanding the low patronage of sexual enhancers for achieving sexual desire, the main class of sexual enhancers employed by the respondents is drinking alcoholic beverages. However interesting results emanating from the FDGs, pointed out that, some young males also use illicit substances like marijuana to boost their sexual desire. This therefore conforms to results from other similar studies that reported young adult males patronizing recreational substances like cocaine, marijuana and ecstasy to achieve high sexual desire (Semple et al, 2009, Bellis et al., 2008b, Harte & Meston, 2012). This is because marijuana contains some hallucinogens which raises their excitement level and also gives them a feeling of well being. Though some foods are believed to have aphrodisiac (sexual arousal) potency, they are not used much by young males in LEKMA.

Another interesting thing that ensued from the FDGs was that, some men also mix herbal preparations with the genitals of some animals like dogs or goats to cure problems of low sexual desire. As they believe these animals have capacity of great sexual prowess and by drinking such preparations from their genitals they can improve their sexual prowess or potency too.

Some men also mix orthodox drugs like paracetamol with locally brewed gin called akpeteshie to achieve sexual desire. Clearly, these men do not know the detrimental consequences of such practices. This is very worrying.

5.9 Local perceptions about the use of sexual enhancers among men in LEKMA

Knowledge about a health condition is an important determinant of one's health seeking behaviour and also the type of drug to use. Hence respondents' knowledge about sexual dysfunction in a way determines where they seek help from or which sexual enhancer to use.

In this study, most of them linked sexual dysfunction to premature ejaculation (52.1%) and erectile dysfunction (29.8%). This is similar to a study by Papaharitou et al which showed that the most reported sexual problems by young men was premature ejaculation followed by erectile dysfunction (Papaharitou et al., 2006).

Just as a prognosis or diagnosis of any ailment in the clinical setting gives the physician the required information to prescribe the exact medication for treatment, in the same vein the local terminologies of illnesses or health conditions by local people provide them with the knowledge on how to manage the condition. Understanding and documenting local terminologies given to illnesses or health conditions is an essential aspect of any socio-cultural assessment of disease particularly from the local perspective of the community. Therefore understanding local terminologies given to sexual dysfunction in LEKMA provides an indication of the kinds of treatment that people are likely to seek.

For example, saying, *'wo koti ewu'* (Akan) or *'efe ava tu'* (Ewe) both literally means, 'your penis is dead' which actually means complete erectile dysfunction. By this meaning, the man will go and seek help from a healer or clinician who is well vexed with the knowledge and resources to help him achieve hard erection. The man may also decide to go and buy a sexual enhancing drug or substance for hard erections.

Most of the respondents also perceived the actual outcome of sexual enhancers use as; satisfying sexual partner or achieving more sexual rounds during a sexual encounter. Despite all the reasons given for using sexual enhancers, the main outcome that the respondents expect from using the enhancers is sexual satisfaction for both themselves and sexual partners.

Some of the respondents also perceived that most girls enjoyed being dominated (struggling, forcing and beating) by their sexual partners just before sexual intercourse. Therefore young men with such sexual partners probably use sexual enhancers in order to maintain their erections and also give them stamina as the normal desire for sex is usually reduced prior to penetration. This is however worrying because, aside inflicting pain on their sexual partners, the men also abuse the sexual enhancers just to sustain their sexual drive and erection throughout the whole sexual act.

Studies from Foxman et al and Bellis et al also confirmed findings from this study that the youth (16 to 40 years) are indiscriminately using sexual enhancers. This has also been

worsened by the fact that sexual enhancers are now easily accessible, available and affordable.

This being the first of such study involving the youth in Ghana, it is hoped it will provide the basis for a national survey on the indiscriminate use of sexual enhancers by the youth.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

The study set out to ascertain the measures or practices men in LEKMA employ to enhance sexual performance including the level of use, reasons for using sexual enhancers, local perceptions governing their use, types of sexual enhancers used and their sources.

From the study, the level of use of sexual enhancing drugs or substances was 41.8% of 380 study respondents in Ledzokuku Krowor Municipal Area (LEKMA).

There were also several reasons why men in LEKMA use sexual enhancers. The predominant reason was premature ejaculation. Other reasons of significance were; satisfying sexual partner, performance anxiety, erectile dysfunction and curiosity. Another reason that emerged was that 70.1% of the respondents had multiple sexual partners hence needed sexual enhancers to satisfy them all. With respect to socio-demographic characteristics, the study showed that an association exist between variables such as age, religion, marital status and occupation and use sexual enhancers.

From the study, the main sexual enhancers used for achieving hard erections sufficient for a satisfactory sexual performance were medications (Viagra, dragon capsule, AK-47, ginseng and recharger), alcoholic beverages (alomo', 'atemuda', 'okramankoti', 'herb

afrik', 'laka', 'under', and 'joy dadi bitters') and herbal preparations (ginseng, 'mighty power', 'adom kooko capsules', 'angel natural capsules', 'waist and power', 'gidi power', 'neem tree concoction', 'mahogany concoction' and 'kotidindin concoction).

The main sexual enhancers used for preventing premature ejaculation by men in LEKMA were, medications (dragon spray, anafranil, and Jamaican stone) and some practices like squeezing the tip of the penis, pressing the space between the scrotum and the anus or thinking about something else other than sex when the man is about to ejaculate. Some also attributed sexual problems such as premature ejaculation to witchcraft hence some also consult their spiritual leaders for a remedy.

The main sexual enhancers for achieving sexual desire or increasing libido is the alcoholic beverages like 'alomo', 'atemuda', 'laka', mandingo, herb afrik, 'okramankoti', 'match' and 'opeimu' which are all locally brewed. But it is worth noting that alcoholic beverages in general are used by men in LEKMA to increase libido. Some men in LEKMA also smoke illicit substances like marijuana to achieve sexual desire. Some also mix orthodox drugs (e.g. paracetamol) or genitals of animals like dogs with locally brewed alcoholic bitters for increasing libido.

From this research, the main sources of the sexual enhancers are friends (peers), drug peddlers and pharmacy shops.

With respect to knowledge about sexual dysfunction, most of them related it to premature ejaculation. Some men in LEKMA also believe women enjoy being dominated (forcing, struggling and beating) just before sexual intercourse hence they (men) had to use sexual enhancers to sustain their erection, stamina and desire during the whole sexual act. They also believed that women of recent times are too sexually demanding hence in order to satisfy them and also prevent them from going for other men, they had to use sexual enhancers.

With respect to their perception about the actual outcome of sexual enhancers they reported that the main outcomes are; partner satisfaction, more sexual rounds and achieving very hard erection. They also believe that the predominant users of sexual enhancers in recent times are the youth from 16 to 40 years.

6.2 RECOMMENDATIONS

6.2.1 Recommendations from study

1. There must be increased collaboration and support from partners in the district, to strengthen health education activities and increase behavioural change communication (BCC) among men in the district. It is important that they are educated on other ways they can enhance their sexual performance through lifestyle modifications (e.g. physical activity and diet).

2. The Ministry of Health, Pharmacovigilance department and the Food and Drugs Authority should work together to check the illegal sale of unregistered sexual enhancers purported to be made in China and India.
3. At community level, there should be intensified education on healthy sexual practices at durbars, festivals, in schools, churches and other community gathering.

6.2.2 Areas of further research

1. A larger survey or nationwide research should be conducted to ascertain the level of use of sexual enhancers, reasons for use, types used, sources and local perceptions governing their use.
2. Further research should be done to ascertain the actual ingredients of the commonly used sexual enhancers.
3. There is the need to conduct a national research into male sexual dysfunction, including epidemiology, social and psychological consequences on men and their families to inform and provide basis for future actions to improve male sexual needs.
4. Research is needed to ascertain the safety, efficacy and pharmacological properties of sexual enhancing drugs or substances men use to enhance their sexual performance.

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APPENDICES

Appendix 1

Informed Consent Form for structured questionnaire.

Project Title

Sexual enhancing practices among men in the Ledzokuku Krowor Municipal Area.

Address

Department of Social and Behavioural Science: School of Public Health, College of Health Sciences, University of Ghana, Legon.

Background

Dear Participant, my name is Nana Kwadwo Asante. I am a student from the School of Public Health, University of Ghana. I am conducting a study on the Sexual enhancing practices amongst men (20-39 years) in the Ledzokuku Krowor Municipal Area (LEKMA).

The aim of this study to investigate the sexual enhancing practices among men aged between 20- 39 years in Ledzokuku Krowor Municipal Area.

Procedures

The study will involve answering questions from a questionnaire on individual experience or otherwise of using sexual enhancers and also answer questions on knowledge on sexual enhancers and its use. This is purely an academic research which forms part of my work for the award of a Masters Degree in Public Health.

Risks and Benefits

The results of the study will be used to advice the Municipal health directorate on ways to educate the youth on good sexual health and also advice the youth from indiscriminately abusing sexual enhancers since they have harmful effects on the human body. It will also give the knowledge on the types of sexual enhancers being used and the reasons why they are used. It will also help in further research.

CONSENT

I,.....

declare that the purpose, procedures as well as risks and benefits of the study have been thoroughly explained to me in English language and I have understood.

I hereby agree to answer the questionnaire.

Signature of participant .....

Date..... / ..... / .....

Interviewer's statement:

I, the undersigned, have explained this consent form to the subject in the English language that she/he understands the purpose of the study, procedures to be followed as well as the risks and benefits involved. The subject has freely agreed to participate in the study.

Signature of interviewer .....

Date ..... / ..... / .....

Address .....

Right to refuse

Participation in this study is voluntary and you can choose not to answer any individual question or all the questions. You are at liberty to withdraw from the study at any time. However, I will encourage you to fully participate since your opinions are important to help investigate the sexual enhancing practices among men (20-39 years) in the Ledzokuku Krowor Municipal Area.

Anonymity and Confidentiality

I would like to assure you that whatever information you will provide will be handled with strict confidentiality and will be used purely for research purposes. Your responses will not be shared with anybody who is not part of the study team. Data analysis will be done at the aggregate level to ensure anonymity.

Dissemination of Results

The results of this study will be mailed to you, if you provide your address below.

Before taking consent

Do you have any questions you wish to ask about the study? Yes ☐ No ☐

(If Yes, questions to be noted below)

.....

.....

.....

.....

.....

Contacts for additional information

Please call the person responsible for this study Nana Kwadwo Asante on 0541221166 if you later have any further questions about this study.

If you have any questions about your rights as a research participant or feel you have not been treated unfairly call the Ethical Review Committee of the Ghana Health Service; Nana Abena Kwaa Addai Donkoh at 0244712919.

Appendix 2

Structured Questionnaire

Sexual enhancing practices among men aged 20-39 years in Ledzokuku Krowor Municipal Area

SURVEY INFORMATION		
A.1	Location and Date	
A.2	Respondent's ID	[ ][ ][ ]
A.3	Interviewer ID	[ ][ ][ ]
A.4	Date of completion	[ ] [ ] [ ] Date month year
A.5	Consent has been read out to participant	Yes [ ] 1 No [ ] 2 If No read consent
DEMOGRAPHIC INFORMATION		
B.1	How old were you at your last birthday?	Years/ .....
B.2	What is your religion?	Christian [ ] 1 Moslem [ ] 2 Traditionalist [ ] 3 Atheist [ ] 4 Other.....15
B.3	Which ethnic group do you belong to?	Akan [ ] 1 Ewe [ ] 2 Ga/Dangme [ ] 3 Mole-Dagbani [ ] 4 Other(s).....15
B.4	What is your current level of education?	Primary [ ] 1 Middle/JSS [ ] 2 Secondary/SSS [ ] 3

		Tertiary	[ ] 4
		Vocational/Technical	[ ] 5
		None	[ ] 6
		Other.....15	
B.5	What is your marital status?	Single	[ ] 1
		Married	[ ] 2
		Widowed	[ ] 3
		Separated/Divorced	[ ] 4
		In a relationship	[ ] 5
		Other..... 15	
B.6	What is your occupation?	Unemployed	[ ] 1
		Student	[ ] 2
		Professional	[ ] 3
		Skilled labour	[ ] 4
		Semi-skilled	[ ] 5
		Other.....15	
KNOWLEDGE ABOUT SEXUAL DYSFUNCTION			
C.1	What is Sexual dysfunction	Erectile dysfunction	[ ] 1
		Premature ejaculation	[ ] 2
		Low sex drive	[ ] 3
		Orgasmic disorder	[ ] 4
		Other(s).....15	
SEXUAL HISTORY			
D.1	Do you sometimes experience any sexual problem (impotence)?	Yes	[ ] 1
		No	[ ] 2
D.2	Do you use drug/ substance/practice aimed at enhancing sexual performance	Yes	[ ] 1
		No	[ ] 2
		If No, end here If Yes, ANSWER the following questions	
USER			
E.1	Why do you use sexual	Hard erection	[ ] 1
		To delay ejaculation	[ ] 2

	enhancers or practices?	Increases sexual desire	[ ] 3
		More rounds	[ ] 4
		Peer pressure	[ ] 5
		Performance anxiety	[ ] 6
		Satisfy partner	[ ] 7
		Enhance performance	[ ] 8
		increase semen volume	[ ] 9
		Improves orgasm	[ ] 10
		Boost self-confidence	[ ] 11
		Curiosity	[ ] 12
		Other(s.....15	
E.2	Where do you obtain these sexual enhancing drugs from/ practice?	Herbal clinic	[ ] 1
		Chemist	[ ] 2
		Herbalist	[ ] 3
		Drug peddler	[ ] 4
		Friend	[ ] 5
		Relative	[ ] 6
		Shrine	[ ] 7
		Other(s).....15	
E.3	Where do you obtain information about the sexual enhancer(s) or practice you use?	Radio	[ ] 1
		Television	[ ] 2
		Magazine	[ ] 3
		Chemist	[ ] 4
		Friend	[ ] 5
		Relatives	[ ] 6
		Newspapers	[ ] 7
		Other(s).....15	
E.4	What are some of sexual enhancers/practice commonly used?	Viagra	[ ] 1
		Comit	[ ] 2
		Mars	[ ] 3
		Recharger	[ ] 4
		Craziness	[ ] 5
		AK-47	[ ] 6
		Cialis	[ ] 7
		Dragon	[ ] 8
		US Lange	[ ] 9
		Yohimbe	[ ] 10

		Maca [ ] 11 Ginseng [ ] 12 Atadwe [ ] 13 Other(s).....15
E5	Which of the following sexual enhancers or practices do you use for hard erections?	Medication [ ] 1 Alcoholic beverage [ ] 2 Herbal preparation [ ] 3 Exercise [ ] 4 Food [ ] 5 Other(s).....15 **If none, skip to E.6.0**
E.5.1	If medication, which one do you use?	Viagra [ ] 1 Comit [ ] 2 Mars [ ] 3 Recharger [ ] 4 Craziness [ ] 5 AK-47 [ ] 6 Cialis [ ] 7 Dragon [ ] 8 US Lange [ ] 9 Other(s).....15
E.5.2	If alcoholic beverage, which one do you use?	Atemuda [ ] 1 Herb afrique [ ] 2 Alomo [ ] 3 Mandingo [ ] 4 Kasapreko gin bitters [ ] 5 Other(s).....15
E.5.3	If herbal/root preparation, which one do you use?	Yohimbe [ ] 1 Ginseng [ ] 2 Maca [ ] 3 Horny goat weed [ ] 4 Other(s).....15
E.5.4	If food, which one do you use?	Atadwe [ ] 1 Carrots [ ] 2

		Other(s).....15
E.5.5	If exercise, what form?	Jogging [ ] 1 Brisk walking [ ] 2 Other(s).....15
E.5.6	How often do you use it for hard erection?	Daily [ ] 1 More than 3 times a week [ ] 2 1-3 times a week [ ] 3 Once per week [ ] 4 Once every 2 weeks [ ] 5 Once per month [ ] 6 Other, specify.....15
E.6.0	Which of the following sexual enhancers or practices do you use to excite you sexually?	Medication [ ] 1 Alcoholic beverage [ ] 2 Herbal preparation [ ] 3 Exercise [ ] 4 Food [ ] 5 Other(s).....15 **If none, skip to E.7.0**
E.6.1	If medication, which one do you use?	Viagra [ ] 1 Comit [ ] 2 Mars [ ] 3 Recharger [ ] 4 Craziness [ ] 5 AK-47 [ ] 6 Cialis [ ] 7 Dragon [ ] 8 US Lange [ ] 9 Other(s).....15
E.6.2	If alcoholic beverage, which one do you use?	Atemuda [ ] 1 Herb afrique [ ] 2 Alomo [ ] 3 Mandingo [ ] 4 Kasapreko gin bitters [ ] 5

		Other(s).....15
E.6.3	If herbal/root preparation, which one do you use?	Yohimbe [ ] 1 Ginseng [ ] 2 Maca [ ] 3 Horny goat weed [ ] 4 Other(s).....15
E.6.4	If food, which one do you use?	Atadwe [ ] 1 Carrots [ ] 2 Other(s).....15
E.6.5	If exercise, what form?	Jogging [ ] 1 Brisk walking [ ] 2 Other(s).....15
E.6.6	How often do you use it to raise your libido?	Daily [ ] 1 More than 3 times a week [ ] 2 1-3 times a week [ ] 3 Once per week [ ] 4 Once every 2 weeks [ ] 5 Once per month [ ] 6 Other, specify.....15
E.7.0	Which of the sexual enhancers or practices do you use to prevent premature ejaculation?	Medication [ ] 1 Alcoholic beverage [ ] 2 Herbal preparation [ ] 3 Exercise [ ] 4 Food [ ] 5 Other(s).....15 **If none, skip to E.8**
E.7.1	If medication, which one do you use?	Viagra [ ] 1 Comit [ ] 2 Mars [ ] 3 Recharger [ ] 4 Craziness [ ] 5 AK-47 [ ] 6

		Cialis	[ ] 7
		Dragon	[ ] 8
		US Lange	[ ] 9
		Other(s).....	15
E.7.2	If alcoholic beverage, which one do you use?	Atemuda	[ ] 1
		Herb afrique	[ ] 2
		Alomo	[ ] 3
		Mandingo	[ ] 4
		Kasapreko gin bitters	[ ] 5
		Other(s).....	15
E.7.3	If herbal/root preparation, which one do you use?	Yohimbe	[ ] 1
		Ginseng	[ ] 2
		Maca	[ ] 3
		Horny goat weed	[ ] 4
		Other(s).....	15
E.7.4	If food, which one do you use?	Atadwe	[ ] 1
		Carrots	[ ] 2
		Other(s).....	15
E.7.5	If exercise, what form?	Jogging	[ ] 1
		Brisk walking	[ ] 2
		Other(s).....	15
E.7.6	How often do you use it to prevent premature ejaculation?	Daily	[ ] 1
		More than 3 times a week	[ ] 2
		1-3 times a week	[ ] 3
		Once per week	[ ] 4
		Once every 2 weeks	[ ] 5
		Once per month	[ ] 6
		Other, specify.....	15
E.8	Do you use sexual enhancer(s) or practices to increase erection or penile size?	Yes	[ ] 1
		No	[ ] 2
		If yes, specify,.....	15

E.9	What **actually happens** when you use the sexual enhancer or practice?	It increases my libido [ ] 1 It makes sex more pleasurable [ ] 2 I'm able to satisfy my sexual partner [ ] 3 I obtain harder erection [ ] 4 I'm able to go for more rounds of sex [ ] 5 It increases my discharge [ ] 6 Other(s), specify.....15
E.10	How long have you used the sexual enhancing drug(s) or practice	Less than 6 months [ ] 1 Between 6-12 months [ ] 2 More than a year [ ] 3 Cannot remember [ ] 4
E.11	Is the sexual enhancing drug or practice you are using or used prescribed by a doctor/clinician	Yes [ ] 1 No [ ] 2
E.12	How much do you spend on sexual enhancers a month?	GHC 1- 20 [ ] 1 GHC 21- 40 [ ] 2 GHC 41- 60 [ ] 3 GHC 61- 80 [ ] 4 GHC 81- 100 [ ] 5 More than GHC 100 [ ] 6 Nothing at all [ ] 7
E.13	What are the complications or side effects experienced when they are used?	Headaches [ ] 1 Priapism [ ] 2 Prolonged ejaculation [ ] 3 Fatigue [ ] 4 Other.....15
E.14	Do you have more than one sexual partner?	Yes [ ] 1 No [ ] 2 Difficult to answer [ ] 3
E.15	Which sexual behaviors excite you or raise your libido?	Dominating/controlling partner [ ] 1 Threatening/frightening partner [ ] 2 Beating/injurying partner [ ] 3 Being dominated/controlled by partner [ ] 4 Being threatened/frightened by partner [ ] 5 Being beaten/injured by partner [ ] 6
E.16	Do you use any alcohol or recreational drugs?	Yes [ ] 1 No [ ] 2 Difficult to answer [ ] 3

		If yes, specify.....15
E.16.1	Did this influence your decision to use the sexual-enhancement drug/substance?	Yes [ ] 1 No [ ] 2

Appendix 3

Informed Consent Form for focus group discussion.

Project Title

Sexual enhancing practices among men in the Ledzokuku Krowor Municipal Area.

Address

Department of Social and Behavioural Science: School of Public Health, College of Health Sciences, University of Ghana, Legon.

Background

Dear Participant, my name is Nana Kwadwo Asante. I am a student from the School of Public Health, University of Ghana. I am conducting a study on the Sexual enhancing practices amongst men (20-39 years) in the Ledzokuku Krowor Municipal Area (LEKMA).

The aim of this study to investigate the sexual enhancing practices among men aged between 20- 39 years in Ledzokuku Krowor Municipal Area.

Procedures

The study will involve having a focus group discussion on individual experience or otherwise of using sexual enhancers and also answer questions on knowledge on sexual enhancers and its use. Permission will be sought to audio-record discussions as well as take notes; the session will last between 60 and 120 minutes. I will very much appreciate

your participation in this study. This is purely an academic research which forms part of my work for the award of a Masters Degree in Public Health.

Risks and Benefits

The results of the study will be used to advice the Municipal health directorate on ways to educate the youth on good sexual health and also advice the youth from indiscriminately abusing sexual enhancers since they have harmful effects on the human body. It will also give the knowledge on the types of sexual enhancers being used and the reasons why they are used. It will also help in further research.

CONSENT

I,.....

declare that the purpose, procedures as well as risks and benefits of the study have been thoroughly explained to me in English language and I have understood.

I hereby agree to be a participant of this focus group discussion.

Signature or thumbprint of participant .....

Date..... / ..... / .....

Interviewer's statement:

I, the undersigned, have explained this consent form to the subject in the English language that she/he understands the purpose of the study, procedures to be followed as well as the risks and benefits involved. The subject has freely agreed to participate in the study.

Signature of interviewer .....

Date ..... / ..... / .....

Address .....

Right to refuse

Participation in this study is voluntary and you can choose not to answer any individual question or all the questions. You are at liberty to withdraw from the study at any time. However, I will encourage you to fully participate since your opinions are important to help investigate the sexual enhancing practices among men (20-39 years) in the Ledzokuku Krowor Municipal Area.

Anonymity and Confidentiality

You are assured that whatever information you provide will be taken with strict confidentiality and will be purely for research purpose. Your responses will not be shared with anybody who is not part of the study team. Data analysis will be done on aggregated level to ensure anonymity. Data collected and all materials related to the study will be stored in locked cabinet in the PIs office. The person responsible for the data storage will be Nana Kwadwo Asante, a student of the School of Public Health, University of Ghana Legon (contact on 0541221166).

Dissemination of Results

The results of this study will be mailed to you, if you provide your address below.

Before taking consent

Do you have any questions you wish to ask about the study? Yes ☐ No ☐

(If Yes, questions to be noted below)

.....

.....

.....

.....

.....

Contacts for additional information

Please call the person responsible for this study Nana Kwadwo Asante on 0541221166 if you later have any further questions about this study.

If you have any questions about your rights as a research participant or feel you have not been treated unfairly call the Ethical Review Committee of the Ghana Health Service; Nana Abena Kwaa Addai Donkoh at 0244712919.

Appendix 4

Focus Group Discussion Guide

Men aged twenty to thirty-nine years who reside in LEKMA

Discussion Questions

1) What is sexual dysfunction (probe for impotence, sexual dysfunction, erectile problems, local names for all the types of sexual dysfunction)?

2) How are these different types of sexual dysfunction problems treated? (probe for local treatment, hospital treatment, across the counter drugs etc).

Probe: a) Find out the different types or kinds of sexual enhancers that are used.

b) Find out which ones are used for

- hard erections
- preventing premature ejaculation
- increasing sexual desire
- treating orgasmic disorders
- increasing penile size
- increasing semen

c) Find out the source of the sexual enhancers.

d) Find out about how they get to know about the sexual enhancers.

3) What are the reasons why men use sexual enhancers?

4) What do you think or know are the benefits of using sexual enhancers?

5) What do you think or know are the side effects or complications of using sexual enhances?

6) What are some of the sexual deviant behaviours (beating partner) or practice (watching pornographic movie) that men indulge in to excite them sexually?

7) Who are the groups of men (e.g. students, gay men, men who use illicit drugs, men of a particular ethnicity or religion, etc) who use sexual enhancing drugs or practice more?

8) Is there anything I didn't ask that you'd like to discuss about sexual enhancing practices among men?

Appendix 5

List of unregistered SEDs on Ghanaian illicit market (FDA, 2012)

No	Name of SED	Dosage form	Source
1	Black warrior	Capsule	China
2	Black superman	Capsule	China
3	B-man	Capsule	China
4	The king	Tablet	China
5	Great penis	Capsule	China
6	Super fox capsules	Capsule	China
7	Jaguar power	Capsule	China
8	Africa king	Capsule	China
9	Red succubae	Capsule	China
10	Glo power	Capsule	China
11	To be big cream	Cream	China
12	Super strong	Capsule	China
13	Beautiful penis augment powder	Powder	China
14	12^{TH} night	Capsule	China

15	Orang-utan	Capsule	China
16	AK-47	Capsule	China
17	African knight	Capsule	China
18	Afrique knight	Capsule	China
19	Puissant	Capsule	China
20	African Viagra	Capsule	China
21	Maxman	Capsule	China
22	Sex men	Capsule	China
23	Longue jambe frères	Capsule	China
24	Gun king	Capsule	China
25	Magic man	Capsule	China
26	Pulsions sexuelles	Capsule	China
27	Viagra kingkong	Capsule	China

Source: survey data, 2013

Appendix 6

Examples of creams and sprays used by men to prevent premature ejaculation

No	Name of medication	Dosage form
1	Lignocaine (Stud 100)	Aerosol spray
2	Lidocaine-prilocaine (EMLA)	Cream
3	Lidocaine-prilocaine (PSD520)	Aerosol
4	Benzocaine	Cream
5	Severance-secret (SS)	Cream
6	Aprostadil	Cream
7	Dyclomine	Cream
8	Procomil	Aerosol spray
9	Dragon	Aerosol spray
10	Man and Woman	Cream

Source: survey data, 2013

Appendix 7

Medicinal plants used for the management of sexual dysfunction in Ghana

No	Scientific name	Common name(s)	Part used
1	*Adenia lobata*	Not available	Root; whole plant; leaf; stem
	Alchornea cordifolia	Gyama (akan)	Bark; root; leaves
2	*Blighia unjugata*	Not available	Bark
3	*Celtis adolphi-friderici*	Not available	Root
4	*Cocos nucifera*	Not available	Root
5	*Cyperus esculentus*	Not available	Root
6	*Dioclea reflexa*	Ntew (akan)	Root
7	*Elaeis guineensis*	Oil palm (english) Edeti (ewe)	Kernel; root
8	*Elytraria marginata*	Not available	Flower
9	*Fagara xanthoxyloides*	Not available	Root/bark
10	*Ficus exasperata*	Not available	Leaf

11	*Guarea cedreta*	Not available	Bark
12	*Jatropha curcas*	Barbadod nut (english) Abrototo (akan) Babakpoti (ewe)	Root
13	*Khaya ivorensis*	Mahogany (english) Odupon (akan)	Bark
	Kigelia Africana	Sausage tree (english) Nufuten (akan) Nyakpekpe (ewe)	Bark; root; seeds; fruits
14	*Paullinia pinnata*	Tuoatini (akan) Tsiotsi (ewe)	Root
15	*Penianthus zenkeri*	Okramankote (akan)	Root; whole plant
16	*Piptadeniastrum africanum*	Yewo ye (ewe)	Bark
17	*Plumbago zeylanica*	Not available	Bark
18	*Portulaca quadrifila*	Not available	Flower
	Rauvolfia vomitoria	Kakapenpen (akan) Dodemakpowoe (ewe)	Bark; root; seeds; leaves

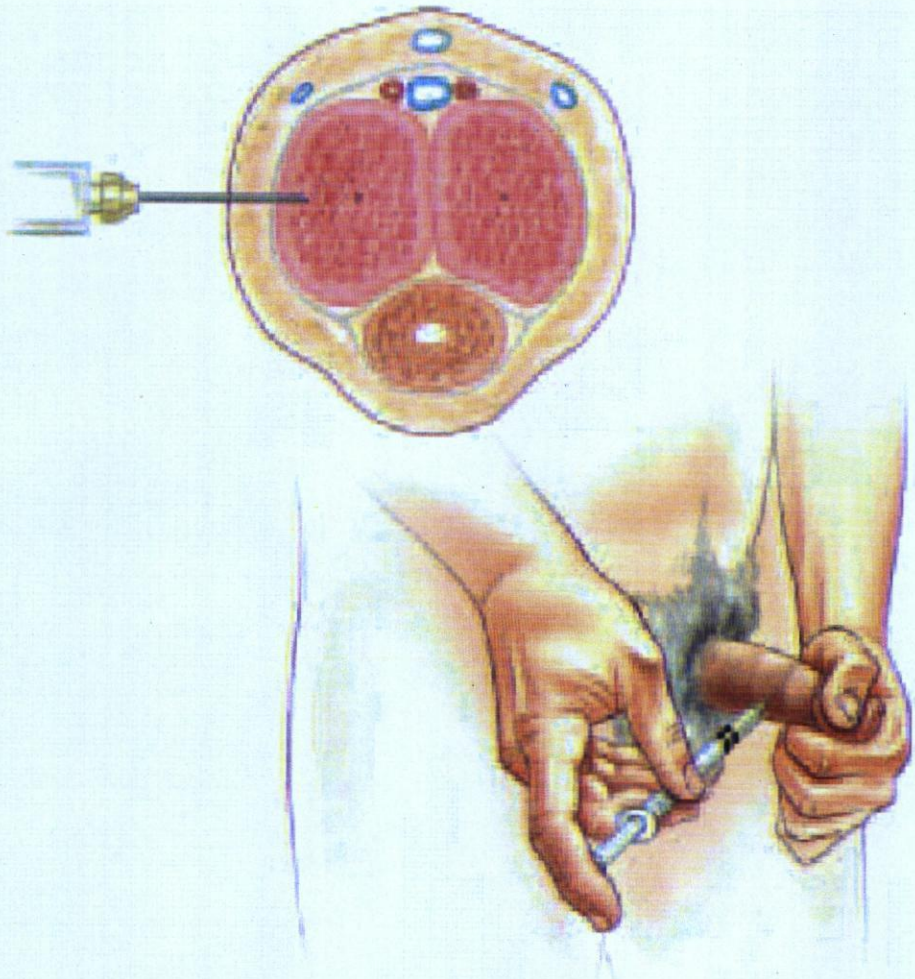
19	*Schwenckia americana*	Not available	Leaf
20	*Sida acuta*	Ademademe (ewe)	Root; whole plant
21	*Spathodea campanulata*	African tulip (english) Adatsigolo (ewe)	Bark
22	*Sphenocentrum jollyanum*	Not available	Root
23	*Tabernaemontana africana*	Not available	Root
24	*Tieghemella heckelii*	Not available	Bark
25	*Vitex grandifolia*	Not available	Root

Sources; (Diame, 2010, Caldwell, 2007, Amponsah et al., 2002)

Appendix 8

Invasive devices or techniques for achieving hard erections

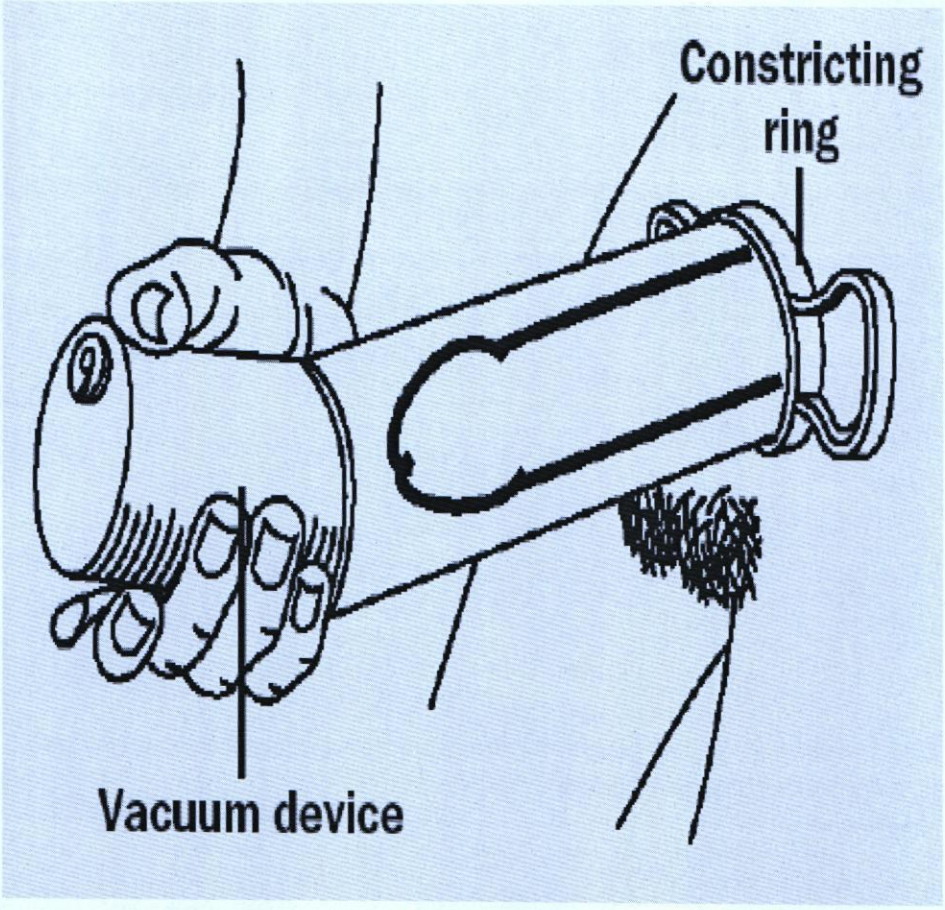
Intracavernosal self injection technique



Source: Arduca, 2004

Penis vacuum device

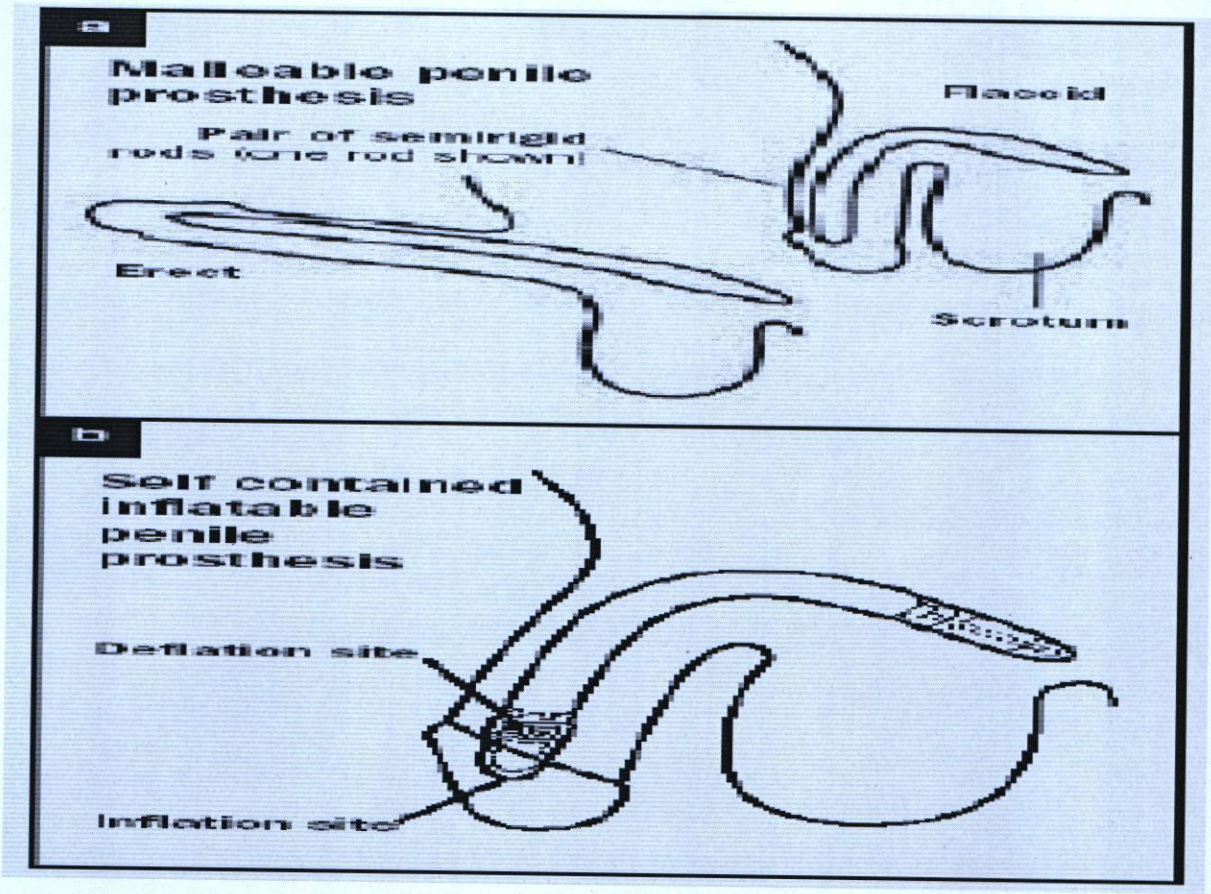
The vacuum device is placed over the penis, subsequent vacuum draws blood into the penis: the constructor ring is rolled onto the base of the penis and the device is removed from the engorged penis.



Source: Arduca, 2004

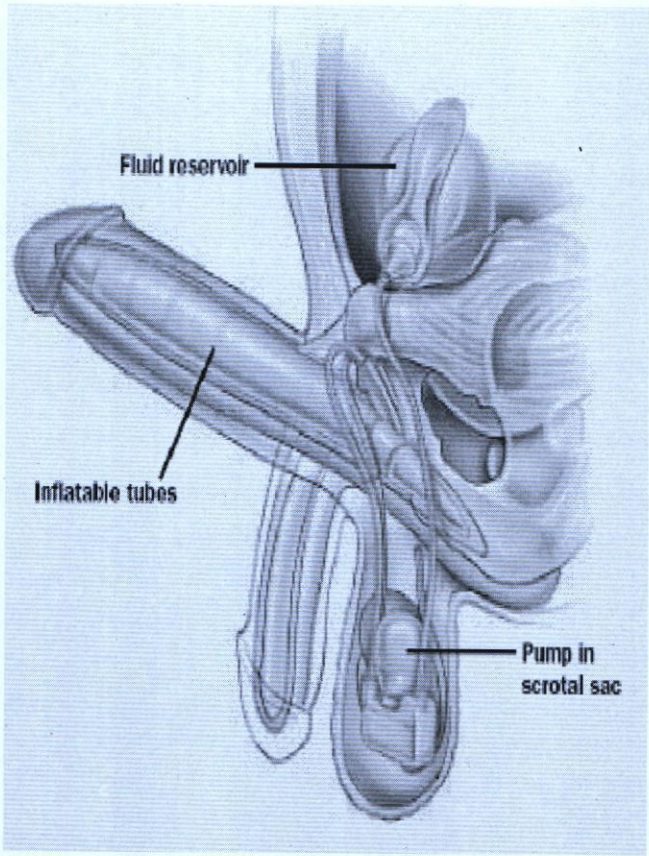
Penile prosthetic implants

a. Malleable rod **b.** Inflatable implant



Source: Arduca, 2004

Penile inflatable implant



Source: Arduca, 2004

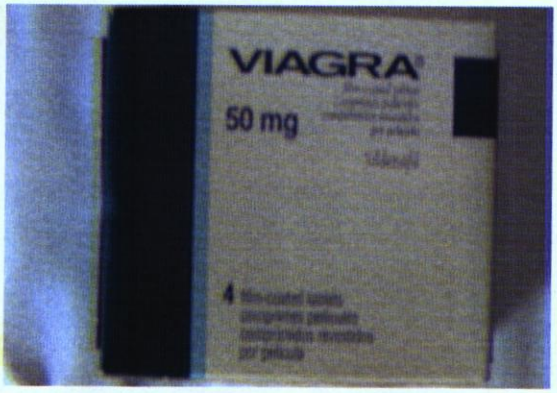
Appendix 9

Some herbal sexual enhancers being sold at a lorry park, LEKMA *

Note the wooden carving of an erect penis (white arrowed) – an indication of the nature of products being sold and their purpose.

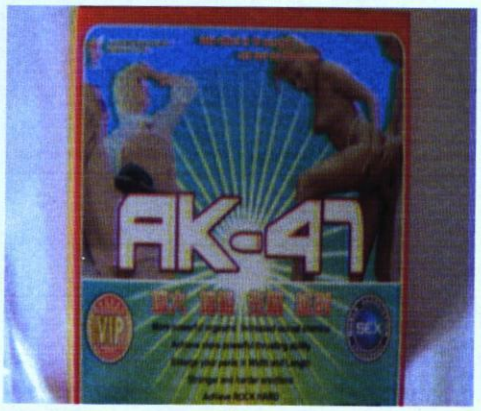
Appendix 10

Pictures of some sexual enhancers sold in pharmacy shops in LEKMA

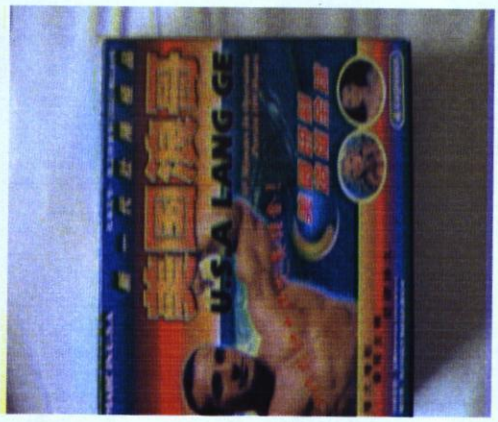


a) Viagra

b) Dragon capsules

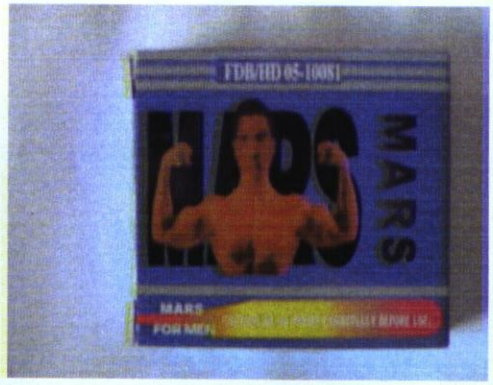


c) AK-47

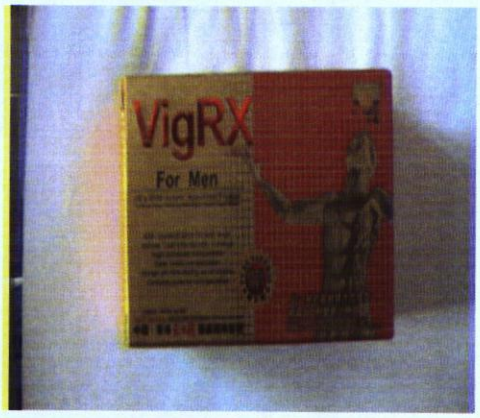


d) USA LANG GE

e) **Dragon spray**



f) **Mars for Men**

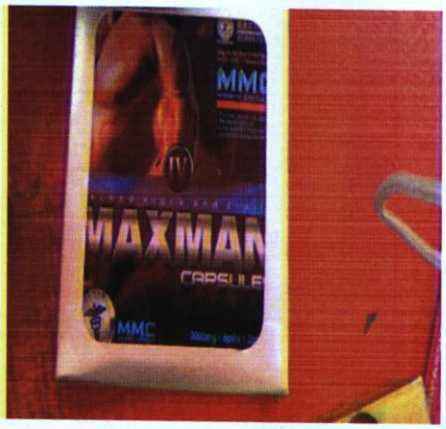


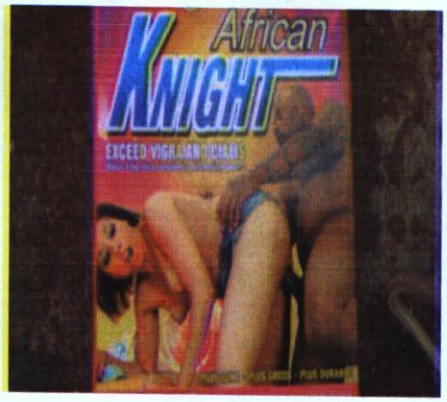
g) **VigRX**

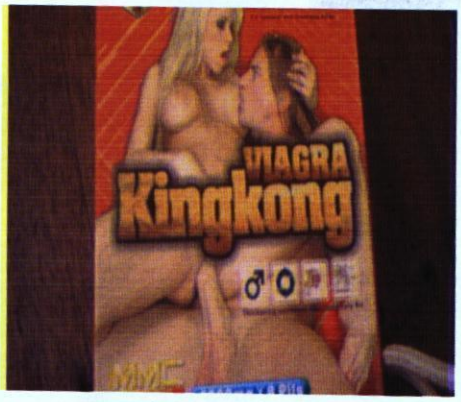
Picture taken by Nana Kwadwo Asante at a pharmacy shop in Teshie , LEKMA, 2nd June, 2013.

Appendix 11

Pictures of some sexual enhancers sold by drug peddlers in LEKMA







Source; survey pictures, 2013

Picture taken by Nana Kwadwo Asante in Teshie , LEKMA, 2nd June, 2013.