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The Increasing Use of Sex Enhancing Drugs among Men in the Tamale Metropolis

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ABSTRACT

Introduction: *Gender roles as performed by individuals are based on the different social expectations on the basis of sex, values, and beliefs. These roles are arranged along masculinity (men) and feminine (women) lines.* ***Materials and methods:*** *A cross-sectional descriptive study design among men in the Tamale Metropolis was conducted. Total 30 clusters (communities) were selected in the metropolis using the probability proportional to their size. The second stage involves the use of EPI random walk method to select 19 men each from 10 communities and 20 men from 20 communities.* ***Results:*** *The socio-demographic characteristics of the respondents showed that 37.3% of them were living in urban areas within the Tamale metropolis whilst 29.5% were living in rural areas and 33.2% were living in peri-urban. The mean age of the respondents was 26.3 ± 4.1 years.* ***Conclusion:*** *There was a widespread use of sex enhancement drugs among men in the Tamale metropolis. There is a need for public education/enlightenment by government and advocacy groups to address the problems of ignorance and stigmatization associated with erectile dysfunction.*

Keywords: Tamale metropolis, Aphrodisiacs, Viagra, Levitra

INTRODUCTION

Gender roles as performed by individuals are based on the different social expectations on the basis of sex, values, and beliefs [1]. These roles are arranged along masculinity (men) and feminine (women) lines. One of the key roles men profess much is the ability to, not only perform their sexual roles but remaining sexually potent all the time [2]. In some local communities, procreation is assured when men are able to perform their sexual roles satisfactorily. As such, men may consider their existence worthless if they are not able to perform their sexual functions well. Some of the sexual problems are due to erectile dysfunction; defined as the persistent inability of the male to attain and/or maintain an erection of the penis sufficient to permit satisfactory sexual intercourse [3]. Porst and Feldman, et al., have postulated that most of the problems men faces are associated with sexual dysfunction [4,5]. It is refreshing to point out that men generally suffer lack of awareness of their reproductive health needs; leading to unplanned pregnancy and early fatherhood [6]. The sexual role is rated so high among men such that Amidu, et al., have indicated there is yet to be a known condition more devastating to man's ego than sexual dysfunction because it annihilates his very essence of masculinity [7]. Besides that, next to thirst, starvation, and sleep, the sexual urge is the most powerful biological drive [8].

It has been observed that issues related to erectile dysfunction are underestimated in many developing countries, including Ghana because it is not a life-threatening condition and men rarely report such cases, even though sexual health of men is an important determinant of quality of life [9]. The embarrassment of victims and the reluctance of both victims and healthcare providers to discuss sexual matters candidly contribute to under-diagnosis of erectile dysfunctions [10]. The occurrence of sexual dysfunction in the marital context often has implications for both partners and society. A common cause of domestic violence has been traceable to sexual dysfunction of the partners. Specifically, among the consequences of erectile dysfunction is either wife's separation or divorce in addition to its link with stress and anxiety [11]. The buildup of anxiety creates mental stress, thereby affecting their interactions with family and associates. There are arguments to the effect that change in socioeconomic state of men dis-empower them, and often leads to loss of social value and self-esteem with its consequence being an increasing rate of unemployment

and the inability to fulfill social roles which includes sex [12]. Research indicates that more than 152 million men worldwide experienced erectile dysfunction in 1995 and that this number will rise by 170 million, to about 322 million by the year 2025. In a study by Amidu, et al., it was found that 66% of Ghanaian men have sexual dysfunction with prevalent problems being infrequency, premature ejaculation, and impotence [7]. To overcome problems associated with sexual dysfunctions, various aphrodisiacs are sought to enhance performance. Cargiulo has indicated how men reported engaging in sex under the influence of drugs [13].

People place a very high premium on sex and as a result, men who are not able to perform their sexual roles satisfactorily tend to rely on products that promise to enhance sexual performance. The actions of these individuals are accordingly deemed to be rational. The theory of rational choice is premised on the assumption that all actions are fundamentally rational in character and that people calculate the likely costs and benefits of any action before deciding what to do [14]. These calculated benefits to the rational choice theory serve as compensators. Compensators denote the belief that the rewards people seek to attain for embarking on an activity [15]. Rewards denote things human beings would ordinarily incur a cost to obtain. Compensators in the lexicon of the rational choice theory are promises that serve as substitutes for the desires that human beings aspire to achieve. This implies the various sex enhancing drugs men use provide guidelines on how their desires and expectations could be obtained. The desire for using sex-enhancing drugs is to be able to satisfy a partner. To this end, men settle for sex-enhancing drugs, making them rational consumers of the aphrodisiacs and decision to continue using or not is based on the cost implications.

Laumann, et al., have indicated that individual sexual tastes are variable, so it takes time to learn how to please a partner, making sexual competence partner-specific [16]. They argue that investing in learning to make a particular partner happy sexually through the use of aphrodisiac is rational. Laumann, et al., have further indicated that finding a partner is costly, and staying with her and using an aphrodisiac to satisfy her is rational. As Waite, et al., have noted, having sexual intercourse with a partner who knows what the other party expects and how to provide it is bound to be more satisfying and maintaining it is rational [17]. Thus, if the deliberate investment is required to learn how to satisfy a partner through the use of sex enhancement drugs, we would expect women's orgasm to remain low, because one can presume investment is motivated by commitment. This version of the partner-specific experience predicts that ongoing relationships will lead to orgasm because the partners have more practice with each other.

It is also worth noting that experience in the use of sex enhancing drugs leads to the creation of imagery in the imperfect attempt to communicate and preserve the experience [18,19]. The phenomenological images of rational choice provide an explanation for experience gained in the use of sex-enhancing drugs and rational choice. According to this model, the effect of men keeping to or failing to keep to the rules and regulations regarding usage of sex enhancing drugs is dependent upon individual experience in the consumption of the products [18]. The model assumes that experience is an event that cannot be empirically verified. However, the experience of sex enhancing drugs can be known by men's actions as absolutely real. What is important here is that one cannot appreciate how it feels to use sex enhancing drugs prior to its consumption. This is explained by the fact that experience is unique and individualistic in character [18]. According to the model, the consumption of any sex-enhancing drug comes in the form of non-rational knowledge of experience. The acquisition of this knowledge leads to a continued pursuit of the experience, making its consumption rational. Rationality here is borne out of people's prior experience, which influences their continued consumption of the sex enhancing drugs.

PATIENTS AND METHODS

Study Settings

The Tamale Metropolitan Assembly (TaMA) was established under Legislative Instrument (L.I) 1801 of 2004. It is one of the six metropolitan assemblies in the country and the only metropolis in the northern part of Ghana. TaMA has 3 sub-metros comprising Tamale Central and South. The TaMA is one of the 26 districts located in the center of the Northern Region and shares boundaries with 6 other districts namely the Savelugu-Nanton to the north, Mion Municipal Assembly to the east, Tolon and Kumbungu districts to the west, Central Gonja to the southwest and East Gonja to the south. The metropolis has a total estimated land size of 750 km sq which is about 13% of the total land area of the Northern Region. Geographically, the metropolis lies between latitude 9º 161 and 9º 341 North and longitudes 0º 361 and 0º 571 west. The population of Tamale Metropolis, according to the 2010 Population and Housing Census, is 233,252 representing 9.4% of the northern region's population. Males constitute 49.7% and females represent 50.3%.

Study Design

This study was conducted between January 2015 and July 2015 using a cross-sectional descriptive study design among men in the Tamale metropolis. The metropolis was chosen because it serves as a melting point of many activities in addition to the fact that it is the administrative capital of the region. The eligibility criteria were all men aged 15 years and above and resident in the Tamale metropolis. In the first place, 30 clusters (communities) were selected in the metropolis. They were selected using the probability proportional to their size. These communities were selected because each community has its own unique features in view of the diversity of people in the metropolis. The second stage involves the use of EPI random walk method to select 19 men each from 10 communities and 20 men each from 20 communities. Three field enumerators were recruited and trained on the study protocol and the questionnaire. Additionally, a pre-test was conducted in a different community which was not among the 30 selected to ascertain the validity and reliability of the study instruments.

Sampling Procedure

A '20 × 20' + '19 × 10' cluster sampling method was used for the study. The 30 communities were selected using cluster identification form through the probability proportionate to size simple random method. Twenty (20) households were selected from 20 communities each and 19 households from 10 communities each. The first household served as the starting point and the process continued after every fourth household until the required number of men in the community was obtained. However, in houses where there were more men who were eligible for the study, only one of them was selected using convenient sampling.

Sample Size Determination

The sample size was calculated using the formula:

$$n = p_0\left(1-p_0\right)z_\alpha + \left(z_1-\beta\right)\sqrt{p_1\left(1-p_1\right)} / p_0\left(1-p_0\right)^2 / K$$

Where: p_0=global awareness levels and use of sex enhancing drugs among men above 18 years is 80% (Food and Drugs Authority of America, 2014),

p_1=Since knowledge of health implications of sex-enhancing drugs and use of the drugs among men in Tamale metropolis is not known it is assumed based on 50% which is acceptable by convention in cross-sectional studies [20],

α=probability of type I error and

z_α=1.96 (at α=5% 2-tailed)

β=probability of type II error and

z1-β=-0.157 (at 80% power 2-tailed)=0.03 (sum of binomial probabilities for exact methods for one sample tests)

n=0.588/0.0009=592.

The actual number of respondents was 590 men.

Data Collection Tools and Procedure

A semi-structured questionnaire was developed and used for the data collection. The questionnaire included items on socio-demographic characteristics and information on the use of sex enhancement drugs. After an informed consent was received from the respondents, a structured interview took place to elicit information on the use of aphrodisiac drugs. The respondents were asked to feel free and respond to questions to the best of their knowledge. Each interview lasted between 30 to 35 minutes. The research languages were both English and Dagbani (the local dialect of the local people in Tamale).

Data Processing and Analysis

At the end of the interview, a questionnaire was checked for completeness and for internal consistency. Data entered, cleaned and analyzed using the Statistical Package for Social Sciences (SPSS version 21.0). Descriptive statistics such as frequencies and percentages were produced and presented in tabular form. In addition, a test of statistical significance was done by the use of p-values and Chi-square values at a 0.05 significance level.

Ethical Considerations

An informed consent of the respondents was sought and in the consent form, the objectives and significance of the study were clearly stated and explained to the prospective respondents. Respondents were given the free will to decide whether to partake in the study or not. Anonymity and confidentiality of the actual source(s) of information obtained from the study were ensured by not indicating the names of facilities and individuals who took part in the study. Names were not provided on the data collection tools and therefore no clues were provided for someone to trace the source of information.

RESULTS AND DISCUSSION

Socio-demographic Characteristics of Respondents

The socio-demographic characteristics of the respondents showed that 37.3% of them were living in urban areas within the Tamale metropolis whilst 29.5% were living in rural areas. The proportion of respondents living in peri-urban areas was 33.2%. The mean age of the respondents was 26.3 ± 4.1 (mean ± standard deviation). This is consistent with the mean age of respondents in a study conducted by Chassin, et al., to assess the use of aphrodisiacs among men in Kenya [2]. The minimum age of the respondents was 15 years whilst the maximum age was 62 years, with the variance of the ages being 98.7. Additionally, 32.0% of the respondents were below 20 years with 13% above 50 years. This tie in well with Cargiulo study, where many of the men using aphrodisiacs in the Tema Metropolis were below 20 years. There is the need for a proper assessment of the illicit use of the drugs in view of the fact that many are in their youthful ages. In terms of ethnicity, 49.8% were Dagombas, whilst 20% were Gonjas. Additionally, 61.5% of the respondents were Moslems, 33.8% Christians with 4.7% traditionalists. This supports the claim that over 65% of the population of the Tamale metropolis were Muslims [21]. Analyses of the marital status also revealed that 57.8% were married whilst 13.9% were living in consensual sexual relationships. The proportion of respondents who were single was 23.4% and 3.9% divorced as shown in Table 1. It is also instructive to note that 14.9% of the respondents did not have any formal education whilst 36.8% were educated up to the basic level, 28.9% had secondary education, whilst 19.4% had tertiary education. In terms of economic activities, 9.8% were artisans, 16.4% were farmers, 20% salaried workers, 11.5% unemployed and 8.1% were employed in other professions.

Table 1 Socio-demographic characteristics of the respondents

Variable	Frequency (n=590)	Percentage
Residential Status		
Rural	174	29.5%
Urban		37.3%
Peri-urban	960	33.2%
Total	590	100.0%
Age Group		
>20	189	32.0%
20-30	127	21.5%
31-40	92	15.6%
41-50	103	17.4%
<50	79	13.4%
Total	590	100.0%
Ethnicity		
Dagomba	294	49.8%
Gonja	118	20.0%
Akan	72	12.2%
Other	106	50.0%
Total	590	100.0%
Religion		
Christianity	199	33.8%
Islam	363	61.5%
ATR	28	4.7%
Total	590	100.0%
Marital Status		

Single	138	23.4%
Married	341	57.8%
Widowed	6	1.0%
Consensual relationship	82	13.9%
Divorced	23	3.9%
Total	590	100.0%
Educational level		
No Formal Education	88	14.9%
Basic	217	36.8%
Secondary	171	28.9%
Tertiary	114	19.4%
Total	590	100.0%
Occupation		
Artisan	58	9.8%
Salaried worker	118	20.0%
Farming	97	16.4%
Commerce	201	34.2%
Unemployed	68	11.5%
Others	48	8.1%
Total	590	100.0%
Source: Field Survey, 2016		

Knowledge of Sex Enhancement Drugs

The study results revealed 11 different aphrodisiac drugs that were known to the respondents. The most widely known sex enhancement drug among the respondents was Viagra (80.2%). Additionally, 18.5% of the respondents knew Cialis and 15.9% claim knowledge of Levitra. The least known sex enhancement drug was Extenze (0.3%). It is interesting to note that some of the local sex enhancement drugs are manufactured purposely for penis enlargements. Interestingly, 7.8% and 8.1% of the respondents said that beautiful penis capsules and great penis respectively as sex enhancement drugs manufactured locally for penis enlargement. Besides the drugs is the existence of 23 different sex enhancement alcohol drinks that are also locally made. Among the local aphrodisiacs, drinks are Joy Dadi Bitters and Alomo Bitters. These drinks were known by all the respondents (100%). Table 2 below shows the list of sex enhancement drugs among respondents.

Table 2 Knowledge of sex enhancement drugs

Variable	Yes (n/%)	No (n/%)
Knowledge of Sex enhancing drug		
Sildenafil citrate	69 (11.7%)	521 (88.3%)
Viagra	473 (80.2%)	117 (19.8%)
Cialis	109 (18.5%)	481 (81.5%)
Levitra	94 (15.9%)	496 (84.1%)
Kamagra soft tablet	51 (8.7%)	539 (91.3%)
Kamagra jelly	11 (1.9%)	579 (98.1%)
Extenze	2 (0.3%)	588 (99.7%)
VigRX plus	16 (2.7%)	574 (97.3%)
VirMax	48 (8.1%)	542 (91.9%)
ProSolution	36 (6.1%)	554 (93.9%)
SinRex	21 (3.5%)	569 (96.5%)
Knowledge of local aphrodisiac drugs and drinks		
Joy Dadi Bitters	590 (100.0%)	0 (0.0%)
Alomo Bitters	590 (100.0%)	0 (0.0%)
Adonko Bitters	291 (49.3%)	299 (50.7%)
Atadwe Ginger Gin	322 (54.6%)	268 (55.4%)
Agya Appiah Bitters	340 (57.6%)	250 (42.4%)
Rockman capsules	412 (69.8%)	178 (30.2%)

Tinatett Be4 Be4	173 (29.3%)	417(70.7%)
Angel natural capsules	387 (65.6%)	203 (34.4%)
Recharger	92 (15.6%)	498 (84.4%)
Jaguar power	68 (11.5%)	522 (88.5%)
AK-47	73 (12.4%)	517 (87.6%)
Yan Duniya	33 (5.6%)	557 (94.4%)
Play boy	51 (8.7%)	539 (91.3%)
Original Karyagado	23 (3.9%)	567 (96.1%)
Great penis	48 (8.1%)	542 (91.9%)
Africa King	4 (0.7%)	586 (99.3%)
The King	12 (2.0%)	578 (98.0%)
B-man	32 (5.4%)	558 (94.4%)
Beautiful Penis Augments Capsules	46 (7.8%)	544 (92.2%)
12th Night	9 (1.5%)	581 (98.5%)
Super Strong	28 (4.7%)	562 (95.3%)
Pomade Crocodile	20 (3.4%)	570 (96.6%)
Black Butterfly	16 (2.7%)	574 (97.3%)
Source: Field Survey, 2016		

Use of Sex Enhancement Drugs

According to Amidu, et al., there is yet to be known a condition more devastating to man's ego than erectile dysfunction because it annihilates his very essence of masculinity [7]. Besides that, next to thirst, starvation, and sleep, the sexual urge is the most powerful biological drive. Incidentally, the majority of the respondents in the Tamale metropolis use sex-enhancing drugs for sexual performance (78%). However, the frequency of usage varies with 34.6% using it once a while and, 3.2% once a week. This reflects Crockett, et al., study where men who use aphrodisiacs in the Greater Accra region use them once a while especially when they fell in love with young ladies for the first few months. However, 3.2% who use once a week is far lower than the 18.4% of men who used sex enhancement drugs once a week as reported by the study conducted in Greater Accra by Crockett, et al. The difference could be attributed to the diversity of interest and lifestyle between the two places. Tharakan and Manyam, have argued that individuals who enjoy active sex life with minimal stress generally maintain better emotional outlook and tends to remain healthier than individuals who were sexually inactive.

It also emerged that an overwhelming majority (90.0%) of the respondents were not using sex enhancement drugs on their wives or regular sexual partners. Only 10% of them used the sex enhancement drugs on their wives. This implies the 90% used the sex enhancement drugs on casual partners. The results further showed 35.9% of the respondents using the sex enhancement drugs on women they struggled to win, corroborating the assertion by Cappelleri, et al., that men use sex enhancement drugs with the notion of 'punishing' women through sex by several bouts of sexual encounters to prove they are real men. The majority of men in this group were unmarried young men, corroborating Adeniyi, et al., report that young men are more likely to use sex enhancement drugs than older men due to their sexual exploits (Table 3) [22].

Table 3 Frequency of use of sex enhancement drugs

Variable	Frequency	Percentage
The frequency of use of sex enhancement drugs		
Not even once	127	21.5%
Once a week	19	3.2%
Once month	68	11.6%
At least twice a week	8	1.3%
Anytime I get the opportunity to have sex	158	26.8%
Once a while	204	34.6%
Can't remember	6	1.0%
Total	590	100.0%
Who do you use sex enhancement drug on?		
My wife/regular sexual partner	59	10.0%

A casual partner	192	32.6%
A lady I struggled to win	212	35.9%
Not applicable	127	21.5%
Total	590	100.0%
Source: Field Survey, 2016		

Type of Sex Enhancement Drugs Respondents Use

The results revealed that Viagra is the widely used sex enhancement drug among the respondents with 39.8% usage. Recently, two additional drugs for the treatment of erectile dysfunction, tadalafil (Cialis, Lilly-ICOS Inc., Bothell, WA) and vardenafil (Levitra, GlaxoSmithKline Inc., Philadelphia, PA), have been approved. It has been alleged that these 3 drugs work through the same mechanism: inhibition of the enzyme phosphodiesterase type 5, which leads to vasodilation and increased blood flow to the penis [23]. It also emerged that 6.9% of the respondents use AK-47 whilst 4.6% used playboy which are both locally made sex enhancement drug. Among the local alcoholic aphrodisiacs, Joy Dadi Bitters and Alomo Bitters are the most used drinks with 3% and 3.4% consumption rate. It has been observed that since alcohol is a central nervous system depressant, it inhibits sexual response including the capacity for erection and orgasm [24]. The results also showed that 2.5% of the respondents used beautiful penis capsules for the enlargement of their penises. Table 4 below shows the types of sex enhancement drugs and substances used by respondents.

Table 4 Sex enhancement drugs used by respondents

Type of drug or substance used	Frequency (n=463)	Percentage
Sildenafil citrate	16	3.2%
Viagra	184	39.8%
Cialis	11	2.4%
Levitra	7	1.5%
Kamagra soft tablet	8	1.7%
Kamagra jelly	9	1.9%
VirMax	6	1.3%
Joy Dadi Bitters	14	3.0%
Alomo Bitters	16	3.4%
Adonko Bitters	11	2.4%
Atadwe Ginger Gin	7	1.5%
Rockman capsules	13	2.8%
Angel natural capsules	5	1.1%
Recharger	7	1.5%
Jaguar power	21	4.6%
AK-47	32	6.9%
Yan Duniya	5	1.1%
Play boy	21	4.6%
Original Karyagado	16	3.5%
Great penis	3	0.6%
Africa King	2	0.4%
B-man	17	3.8%
Beautiful Penis Augments Capsules	11	2.5%
12th Night	7	1.5%
Super Strong	9	1.9%
Pomade Crocodile	5	1.1%
Source: Field Survey, 2016		

Satisfaction with Sex Enhancement Drugs

The majority of the respondents (79.6%) fully enjoyed sexual intercourse after taken sex enhancement drugs. However, 44.3% of the respondents expressed the view that obtaining erection after taking sex enhancement drugs is dependent upon the type of drug used. Yet 42.5% maintained that they have always experienced a delayed erection, with 94.4% having sustained erection when they took sex enhancement drugs. Due to the sustained erection, 69.5% of the respondents said that they were able to always delay ejaculation whilst 5.2% said that they occasionally had delayed ejaculation after taking sex enhancement drugs. Thus 90.5% of the respondents were impressed and satisfied

with the drugs they used. A further analysis of the reasons for the use of sex enhancement drugs revealed that 66.2% used to impress their partners, 18.6% to increase erectile rigidity, and 7.7% for fear of losing partners, confirming Geidam, et al., claim that some of the consequences of male sexual dysfunction are either wife's separation or divorce [11].

Reasons and Source of Sex Enhancement Drugs

The reasons for using sex-enhancing drugs were broadly categorized into two: for recreational purpose and also physician prescription for the treatment of erectile dysfunction. Surprisingly, an overwhelming majority of respondents who used sex enhancement drugs did so for recreational purposes. Cooper has indicated in a study that the majority of men in their study used sex enhancement drugs for recreational purposes. Recreation here denotes a case where the sex enhancement drugs are used without a doctor's advice [25]. Out of the 463 respondents who used sex enhancement drugs; only 1.5% was prescribed by physicians and the remaining 98.5% did so for a recreational purpose. The majority of the respondents (44.5%) bought their sex enhancement drugs from roadside vendors and 36.9% bought their sex enhancement drugs from over the counter vendors. The finding is consistent with the assertion by the Amal, et al., that sex enhancement drugs by the roadside sell their products to unsuspecting men who refuse to go to accredited pharmacy or physicians to seek proper medical advice [26]. Only 11.2% obtained theirs from pharmacy shops, 7.3% obtained from friends and 3.0% bought theirs on the internet. The results further showed that 54.8% of the respondents were introduced to sex enhancement drugs by their friends or peers whilst 8.2% were introduced by their sexual partners. In a study by Geelhoed, et al., it was found that the men learned or acquired these habits from their friends during their youthful ages [27].

Socio-demographic Characteristics and Use of Sex Enhancement Drugs

The results show that the age of respondents is significantly related to the use of sex enhancement drugs ($p<0.001$, $\chi^2=16.8$). However, the educational level of respondents has no significant relationship with the use of sex enhancement drugs ($p<0.08$, $\chi^2=5.1$). This implies that there is no clear-cut difference in the use of sex enhancement drugs between men with higher educational level and those with lower education level. The results further showed that the residential status of men has a significant relationship with the use of sex enhancement drugs. Men living in urban and peri-urban areas were more likely to use sex enhancement drugs than those living in rural areas ($p<0.001$, $\chi^2=26.1$). This may partly be due to lifestyle differences between the urban and rural dwellers. Marital status of men was also found to be significantly related to the use of sex enhancement drugs. Unmarried men used sex enhancement drugs more than married men ($p<0.001$, $\chi^2=17.3$). Table 5 below shows the relationship socio-demographic characteristics of men and the use of sex enhancement drugs.

Table 5 Relationship between the use of sex enhancement drugs and socio-demographic characteristics

Use of sex enhancement drug in the past three 2 months				
Variable	**N**	**Yes (463)**	**No (127)**	**Test statistic**
Age (years)				
>20	189	121 (64.0%)	68 (36.0%)	$\chi^2=16.8$, $p<0.001$
20-30	127	113 (89.0%)	14 (11.0%)	
31-40	92	76 (82.6%)	16 (17.4%)	
41-50	103	92 (89.3%)	11 (10.7%)	
<50	79	61 (77.2%)	18 (22.8%)	
Education				
No formal education	88	62 (70.4%)	26 (29.6%)	$\chi^2=5.1$, $p=0.08$
Basic	217	184 (84.8%)	33 (15.2%)	
Secondary	171	144 (84.2%)	27 (15.8%)	
Tertiary	114	73 (64.0%)	41 (36.0%)	
Residential status				
Rural	174	81 (46.5%)	93 (53.5%)	$\chi^2=26.3$, $p<0.001$
Peri-urban	220	211 (95.9%)	9 (4.1%)	
Urban	196	171 (87.2%)	23 (63.9%)	
Marital Status				
Married	341	252 (73.9%)	89 (26.1%)	$\chi^2=17.3$, $p<0.001$
Unmarried	249	211 (84.7%)	38 (15.3%)	
Source: field survey 2016				

Factors that Influence the Use of Sex Enhancement Drugs

A multivariate analysis was performed to determine the factors that influence the use of sex enhancement drugs among men. The proportion of men who use sex enhancement drugs based on physician's prescription was statistically insignificant whereas men who use sex enhancement drugs for recreational purposes were found to be statistically significant (AOR=2.4, CI: 1.0 to 1.1). This implies that recreation and pleasure are significant determinants of the use of sex enhancement drugs. Among the recreational reasons that promote the use of sex enhancement drugs were men's desire to impress their sexual partners. This came up as one of the main factor that influenced them to use sex enhancement drugs (AOR=4.6, CI: 0.0 -0.9) and p<0.001. According to Corrao et al., men's desire to use sex enhancement drugs is for recreational purposes [28]. Others were influenced to use sex drugs for fear of losing their sexual partners (AOR=4.2, CI: 1.1-2.3). Other equally important factors that were found to significantly influence the use of sex enhancement drugs are advertisements (AOR=5.6, CI: 1.2-3.1), p<0.001 and the consumption of alcohol (AOR=5.1, CI: 2.5-7.4). Table 6 below shows factors that influence the use of sex enhancement drugs among men.

Table 6 Factors that Influence the use of sex enhancement drugs

Variables	Wald	Sig.	Exp (B)	95% C.I. for Exp(B)	
				Lower	Upper
Reason for use of sex drugs	4.3	0.100	-	-	-
Physician prescribed	0.3	0.600	1.200	0.6	2.1
Recreational purpose	4.2	<0.001	2.400	1	1.1
Recreational reasons for sex drugs	16.3	0.001	-	-	-
Increase erectile rigidity	11.8	0.010	0.300	0.1	0.6
Impress sexual partner	4.6	<0.001	0.200	0	0.9
Enhance self-esteem	2.7	0.010	0.200	0	1.3
Fear of losing wife or girlfriend	4.2	<0.001	3.000	1.1	2.3
Who introduced you to sex drugs?	7.8	0.000	-	-	-
Friends	7.9	0.010	4.500	1.6	12.8
Advertisement	5.6	<0.001	3.500	1.2	3.1
Sexual partner	4.2	0.000	3.000	1.1	8.7
Do you drink alcohol or abuse other substances?	18.5	<0.001	-	-	-
Yes	12.0	<0.001	7.300	2.5	7.4
No	1.2	0.300	1.700	0.7	4.5
Constant	4.91	0.027	0.172	-	-
Source: field survey 2016					

CONCLUSION

We conclude that there is a widespread use of sex enhancement drugs among men in the Tamale metropolis. Apart from the fact that majority of them used it on other partners other than their wives; the users of these drugs procure them from roadside without advice from competent physicians. The practice of using without doctors advice may have a long-term health implication on the users. It is our belief that sufferers of erectile dysfunction need not suffer in silence because effective medical help is available to them. Physicians, especially primary care providers need to pay more attention to the sexual history of their patients in order to diagnose and manage erectile dysfunctions more frequently. There is a need for public education/enlightenment by government and advocacy groups to address the problems of ignorance and stigmatization associated with erectile dysfunction. This will go a long way to ameliorate the psychosocial burden of the ailments related to sexual or erectile dysfunction.

DECLARATIONS

Conflict of Interest

It is affirmed that this manuscript is an honest, accurate, and transparent account of the study being reported, no important aspects of the study have been omitted. All authors and co-authors worked honestly.

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