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Clinical, cultural and psychosocial impediments to self reporting of erectile dysfunction by men in Edo state, Nigeria

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Abstract

Introduction: Organic ED is presently considered as vasculogenic in the majority of affected middle age and elderly men and a sentinel event for cardiovascular disease. When men present with ED, it is advised that the opportunity should be used to assess their cardiovascular health.

Objective: To determine the impediments to self reporting of ED and to assess the help seeking habits of men in Edo state with regards to ED. The secondary objective is to evaluate how acceptable sexual assessment is to these men when they present.

Subjects and methods: This is a cross sectional study using a multi-facet, questionnaire with a section consisting of the international index of erectile function (IIEF). All men above 30 years who consented were included.

Results: The response rate was 71.1%. The mean IIEF score was 20.33 with standard deviation of 4.656. The overall prevalence of ED was 51.2. Three hundred and eight of the respondents (33.3%) did not know where ED is treated, 273 (29.5%) thought that it is treated by complementary and alternative medicine practitioners while 237 (25.6) opted for the hospital as a point of care. This had a statistically significant correlation with location of the respondent (P = 0.000), level of education (P = 0.000) and senatorial zone (P = 0.000). Sexual evaluation was acceptable to 384 (41.5%) respondents when men present without ED and 757 (81.8%) when ED has occurred. This had a statistically significant correlation with level of education (P = 0.000), alcohol consumption (P = 0.000) and senatorial zone (P = 0.000).

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Conclusions: ED is highly prevalent in this community. Alcohol consumption, low educational level, ignorance of who and where ED is treated, location of respondent (rural) indifference, presence of co-morbidities and tribal beliefs appear to be associated with low self reporting. Affected men are more likely to patronize complementary and alternative medicine (CAM) practitioners than medical practitioners or may be out rightly indifferent. Acceptability of sexual evaluation of men is low when ED is absent and high when it has occurred.

Introduction

Erectile dysfunction (ED) is the inability to achieve and/or maintain penile erection sufficient for satisfactory sexual intercourse [1]. In the past, it was ascribed to aging and therefore considered not treatable. Currently, its causes are well documented with good evidence of a cause–effect relationship. Hypertension, diabetes mellitus, hyperlipidemia, cigarette smoking and low serum testosterone level cause vasculogenic erectile dysfunction through endothelial dysfunction and/or atherosclerosis [2]. These life style abnormalities are also known as cardiovascular risk factors.

ED has been documented as a forerunner for coronary and cerebral artery disease [3]. For this reason, physicians are being advised to evaluate men who present with ED for cardiovascular risk factors. By extension, there is need to evaluate the sexuality of middle aged and elderly men when they present with or without ED as they may not self report ED. According to Moser et al. [4] "the weak link in the chain of events leading to prompt and effective treatment for coronary artery disease is patient delay in seeking care. More than 50% of the 1.2 million people who suffer an acute myocardial infarction (AMI) or coronary death each year in the United States die in an emergency department (ED) or before reaching a hospital within an hour of symptom onset. About 700 000 individuals will have a stroke each year, 167 000 of those who have strokes will die, and more will suffer a major disability. Of the stroke deaths that occur each year, almost half occur before the patient reaches the hospital. Many of these deaths and significant disability could be prevented". A good proportion of these cases are men and there is good evidence that a reasonable number of them had ED predating the coronary artery event for up to five years or more especially those with diabetes mellitus [5].

The African culture encourages the discussion on sex and sexuality to be done in low tunes and reverence. Spiritual teachings and beliefs also tend to suppress such discussions during child up-bringing and these in the long run influence the help seeking habit of men when they develop ED. According to Ngubane [6], in South Africa for instance, adults often assume that young people are too young to discuss and be concerned about sex when in truth, such assumptions are often as a result of their own embarrassments about the subject. In all these, the young ones are at a loss as they are prevented from having access to vital information they need for healthy living. Though his work was done on HIV/AIDS mostly in youths, the poor information base on healthy living affects their help seeking habit when ED develops as the men age. This may explain the embarrassment faced by the elderly in discussing sex and sexuality because they themselves probably lack the requisite information on the subject. The former name, impotence, carried with it a stigma which men in these communities may not want to be associated with. According to Pommerville [7], an impotent man was in the past considered powerless and worthless and the topic was hardly discussed until the early 1980s when ED became a diagnostic entity and a subject of intense research.

This work aims primarily to determine the clinical, cultural and psychosocial impediments to self reporting of ED, assess the help seeking habits of men with regards to ED and secondarily to evaluate how acceptable sexual assessment is to men in Edo state. Acceptability would mean early detection of ED and by extension, risk factors for coronary and cerebral artery disease while the reverse would mean that men may not give a true history of themselves with regards to ED.

Subjects and methods

This is a cross sectional, questionnaire based study of the subject of erectile dysfunction in middle age and elderly men. Following approval by the Ethic Committee, a list of the towns and major villages in each local government, including the local government headquarters, was made and villages for sampling were selected. A four page questionnaire was administered to men above thirty years who consented to participate within the study period. The only exclusion criteria were failure to give consent and the age limit of thirty years. To ensure confidentiality, the names of the participants were excluded from the questionnaire. However, consent was obtained from them.

Participants were informed of their right to withdraw from the study at any time if they so wish without any consequences. A consultant who is knowledgeable in research methodology of this nature and who is multilingual was employed for the day to day supervision in order to ensure professionalism and confidentiality.

The predictor variables assessed were age, educational attainment, location (urban or rural), number of wives, awareness of ED treatment, quality of exercise, use of local stimulants, cigarette smoking, alcohol consumption, sex and sexuality, ED severity from participants perspective, need for ED treatment and the reason, awareness of who treats ED in the index community and the awareness of the relationship between ED and cardiovascular health. The outcome variables assessed were the international index of erectile function (IIEF) score, the proportion of men in relation to the predictor vari-

Table 1a Age and ED severity cross tabulation.

		Classification					Total
		Normal	Mild	Mild/moderate	Moderate	Severe	
Age	31–40	70	51	10	1	1	133
	41–50	210	129	24	3	1	367
	51–60	112	84	39	8	7	250
	61–70	23	31	24	6	9	93
	71–80	6	8	6	3	9	32
	Above 80	1	2	1	0	0	4
	Not recorded	29	12	3	0	1	45
Total		451	317	107	21	28	924

Table 1b Relationship between level of education and knowledge of available treatment. P = 0.000.

		Educational level							Total
		Percent	None	PSLC	WASC	Graduate	Others	No response	
Option	Do not know	33.3	7	64	57	133	44	3	308
	Traditional	29.5	10	46	53	138	22	4	273
	Hospital	25.6	6	16	40	152	18	5	237
	Not treated	7.9	3	13	14	31	12	0	73
	Others	0.9	0	1	0	5	1	0	7
	No response	2.8	0	3	7	12	2	2	26
Total			26	143	171	471	99	14	925

PSLC—primary school leaving certificate. WASC—West African school certificate.

ables and tests of correlation. P value of 0.05 or less was taken as statistically significant.

Quality control was assured by advising the respondents to fold and staple the questionnaire neatly before handing over to the consultant for onward delivery to the lead researcher. All forms in which the IIEF and age section were unfilled were rejected. The data obtained were analyzed using the statistical programming for social sciences (SPSS) version 21.

Results

This study was done between October 2015 and April 2016. Following ethical approval and consent from participants, one thousand three hundred questionnaires were hand delivered to participants. Nine hundred and twenty four were correctly filled and returned, giving a response rate of 71.1%. The mean IIEF score was 20.33, standard deviation 4.656, the mode 25.00 and median 21.00. The overall prevalence of ED was 51.2%. ED was present in 75% of respondents above 70 years of age with increasing severity from the fifth decade of life while the mild form was documented in 38% of respondents below forty years (Table 1a). Variables with statistically significant correlation with IIEF score were respondents' location (P = 0.000), respondents' educational level (P = 0.000), number of wives (P = 0.002), cigarette smoking (P = 0.003), alcohol consumption (P = 0.012), age (P = 0.000) and existing morbidities (P = 0.000). There was no statistically significant correlation with exercise (P = 0.065) and the use of stimulants such as bitter kola and kola nut (P = 0.585). A statistically significant correlation (P = 0.03) existed between the presence of co-morbidities and acceptance of sexual evaluation by a medical practitioner.

Of the 924 respondents, 607 (65.6%) were aware that ED is treatable while 651 (70.4%) were not aware that ED has any relationship with cardiovascular health. In spite of this high awareness that ED is treatable, 308 (33.3%) did not know where it is treated, 273 (29.5%) thought that it is treated by herbal practitioners, 237 (25.6%) chose the hospital as the treatment facility, while, the others either did not respond or chose other options. Table 1b shows the relationship between this variable and the level of education of the respondents.

This perceived care giver also had a statistically significant correlation with respondents' location (P = 0.000) and senatorial zone (P = 0.000). Of the 699 respondents who were resident in urban areas, 231 (33%) did not know where ED is treated, 201 (28%) thought that it is treated by herbal practitioners and 188 (26%) opted for the hospital while of the 186 rural respondents, 66 (35%) did not know where ED is treated, 39 (21%) opted for the hospital and 58 (31.2%) thought that it is treated by herbal practitioners. The others either did not respond to this inquiry or chose other options.

Eight hundred and thirty five (90.30%) of the participants were of the opinion that men who have ED should be treated. The reasons given for this were: to enable such men enjoy sex [167 (18.1%)], so that affected men can maintain the relation with their spouse [368 (39.8%)], both reasons [158 (17.1%)], to ensure good cardiovascular health [106 (11.5%)], other reasons [32 (3.5%)]. Ninety three (10.1%) did not respond. There was a statistically significant correlation between this variable and the educational level of respondents (P = 0.000) (Table 2).

Of the 924 men, 384 (41.5%) said they will accept sexual assessment even when they present without ED, 329 (35.6%) will not. One

Table 2 Correlation between educational level and reason for ED treatment. P = 0.000.

		Education						Total
		Percent	None	PSLC	WASC	Univ. degree	Others	No response	
Reason	Spouse	39.82	8	37	53	228	34	8	368
	Enjoy sex	18.07	8	24	39	85	11	0	167
	Both	18.00	4	41	27	61	25	0	158
	Heart	11.47	2	9	29	56	10	0	106
	Others	3.50	2	5	5	12	5	3	32
	No response	10.06	2	27	18	29	14	3	93
Total			26	143	171	471	99	14	924

Table 3 Severity and assessment acceptability weighting.

		Assessment				Total
		Yes	No	Indifferent	No response	
Severity	Prostate	124	108	43	15	290
	Limb	59	34	27	10	130
	Eye	60	70	33	17	180
	No response	135	115	35	29	314
	None above	6	2	1	1	10
Total		384	329	139	72	924

(Prostate—prostate enlargement with inability to urinate. Limb—loss of a limb. Eye—loss of an eye).

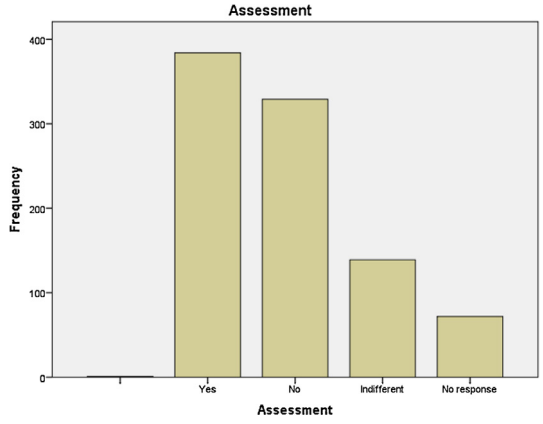

Figure 1 Respondents' acceptability of sexual assessment of men who present without ED.

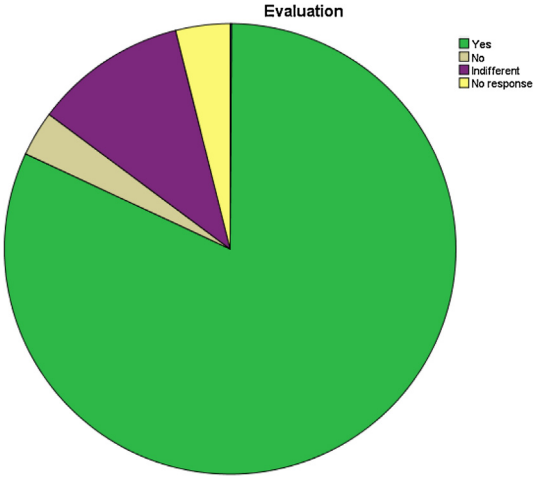

Figure 2 Respondents' acceptability of sexual evaluation of men who have ED.

hundred and thirty nine (15%) were indifferent while 72 (7.8%) did not respond (Fig. 1). There was a significant correlation between this variable and alcohol consumption (P = 0.000), senatorial zone (P = 0.000) and the level of education of respondents (P = 0.000).

Alcohol consumption and low educational level were more often associated with indifference to sexual assessment. Sexual evaluation by a doctor was acceptable to 757 (81.8%) respondents when men already have ED while it was not so to 30 (3.2%). One hundred and one (10.9%) were indifferent and 36 (3.9%) did not respond to this inquiry (Fig. 2).

Similar to the above, this variable had a statistically significant correlation with alcohol consumption (P = 0.000), respondents' educational level (P = 0.000) and senatorial zone (P = 0.000). Following their participation in this study and the increased awareness of the relationship between ED and cardiovascular health, 616 (66.6%) of the respondents said that they were better disposed to accept sexual assessment by a medical doctor even when they have no ED. Table 3 shows the respondents weighting of the perceived impact of ED on affected men.

In addition, verbal and hand written comments such as 'that is death sentence' and "that will cause a divorce" featured in the course of collection or in some of the questionnaires. This accounts for the non response rate of 33% to this inquiry as participants felt that the investigators underrated the social impact of ED.

Discussion

There is no longer controversy as to whether ED is a sentinel event for coronary and cerebral artery disease [8]. The effect on the qual-

ity of life of affected men is also well documented to the extent that Korean men see ED as a disease as severe as early stage cancer [9]. In most African cultures, issues of sex and sexuality are highly revered and therefore secretly and highly discretely discussed. Self reporting of ED is therefore low. Cultural and psychosocial beliefs keep men away from seeking medical care. For instance, Nureli et al. [10] in their study of patient delayed presentation by Aceh women with breast cancer documented that cultural beliefs, traditional medicine, spiritual healing, reluctance to accept Western medicine and low socioeconomic status are an impediment to early presentation. These variables affect all diseases (including ED) and their presentation in most of Sub Saharan Africa. This ignorance is well documented by this study which shows that even in the urban areas, 33% of respondents did not know who treats ED, 28% thought that it is treated by herbal practitioners, while only 26% opted for the hospital.

The above situation is similar to what was obtainable in the developed world before the advent of quality research into ED. According to Hellstrom [11], "for centuries, sexual medicine was a taboo subject practiced by quasi-scientists, back alley Charlatans and village Shamans. Because of a paucity of basic knowledge about the anatomy, physiology and pharmacology of the erectile process, many myths on causation and therapy were promulgated through time". This correctly describes the present situation in our communities in spite of enormous research into the subject in the developed world. In the latter, penile erection is presently considered a window through which the cardiovascular health of men can be viewed. In contrast to this, poorly regulated complementary and alternative medicine practitioners (CAM) still hold sway here as revealed by the 29.5% of respondents who in this study thought that ED is treated by CAM compared to 25.6% who chose the hospital as a point of care. The implication is that the low level of self reporting of ED by affected men, according to this study, is as a result of ignorance of who treats ED or that majority of men prefer CAM. The 73 (7.9%) of men who thought that ED is not usually treated still probably regard it as part of aging and therefore not worthy of reporting.

Age remains an independent risk factor for ED. The reasons for this have been documented to include endothelial dysfunction, progressive atherosclerosis and the emergence of cardiovascular risk factors as men age. In the work of Shaeer et al. [12], the prevalence of ED was found to be 54 among primary care attendees in Nigeria. This is higher than the 51.2 in this study. Co-founders such as morbidities in the primary care attendees and location of the study and the associated cultural differences between the study populations may account for this difference. Shaeer et al. in the same study opined that it is difficult to compare prevalence rates because of variable age range and definitions in different settings. However, Fedman et al. [13] in their comprehensive study of aging men showed that the prevalence of ED increases with age such that at 70 years, almost 70% of men have ED. This is similar to the 75% prevalence in men above 70 years obtained in this study. Mild ED appears to be common (38%) in respondents below forty years of age. The explanation for this may be found in the high risk of day to day living and the stress of unemployment which is common in this group and in the developing countries like ours. It may mean that psychogenic ED, which is the type seen in this age group, is actually common among our youths or that organic ED occurs earlier in this community. Age however did not appear to affect the knowledge of the perceived care giver for ED ($P = 0.921$), alcohol consumption ($P = 0.154$) acceptance of sexual assessment when men present without ED ($P = 0.414$) and with ED ($P = 809$) implying that it is neither an impediment to self reporting nor does it impair the acceptance of sexual evaluation when men present to a medical doctor.

Alcohol has a central sedating effect while cigarette smoking has been documented as a cause of endothelial dysfunction and atherosclerosis and subsequently, ED. Alcohol was also significantly associated with indifference to ED in this study. According to Adlaf et al. [15], alcohol consumption is accountable for high levels of mortality, morbidity and social malaise in Canada, and worldwide, its abuse is expected to take an increasing toll on lives and communities. Heavy alcohol consumption has been documented to cause cardiac diseases, mood changes and dementia all of which may be associated with indifference, in this case, to ED. In the presence of these gross diseases, ED may not be seen as worthy of reporting as their effect on quality of life may overshadow that of ED. The zonal differences in the likelihood of self reporting and acceptance of sexual assessment and evaluation may also be contributed to by alcohol consumption. However, distinct cultural, tribal, religious, educational and social differences between the three zones may, to a larger extent, be responsible for the differences in attitude.

CAM practice is being increasingly recognized worldwide with varying degree of differences between countries in the regulation of the activities of the practitioners. In this country for instance, unlike orthodox medical practice, CAM practitioners are involved in trade fares and street hawking, which means that their services may be more readily available, cheaper and conducted strictly between the practitioner and the "patient". This may be more appealing as the process is shrouded in secrecy and the chances of stigmatization are low. This is well documented by Aghaji [16] in his work on Fourniers gangrene.

The severity of the health and social impact of ED from the perspective of the patient, to a large extent, will affect their decision on whether or not to report. This means that Korean men are likely to report it if they regard ED as serious as early stage cancer. Table 3 shows how respondents rate the social impact of ED. In spite of this high weighting, most respondents did not know where ED is treated or thought that it is treated by CAM out of ignorance, indifference or both.

Inquiry into sexual behaviors and capabilities leads to invasion of the privacy of respondents [14] and often elicits unexpected emotions. This varies with individual respondents, between cultures and between countries and hence the need for assessment of its acceptability in different communities. This is a translational process which prepares the community for the intended intervention, in this case, assessment of the sexual health of men who present with or without ED. While MEDLINE search did not reveal any previous work on this, there are studies of acceptability of similar evaluation methods. For instance, Marrazzo and Scholes [17] in their systematic review of the acceptability of testing asymptomatic men for *Chlamydia trachomatis* obtained a 64% acceptability rate. This is far higher than the 41.5% (when there is no ED) in this study. However, 81.8% of respondents said that they will accept evaluation by a medical doctor when they already have ED while 66.6% [(when there is no ED)(25.1% difference)] were favorably disposed to it when they became aware of the relationship between it and cardiovascular health. This indicates that proper enlightenment about the pros and cons of reporting and creating an appropriate environment will improve acceptability. According to the above author, creating

such an environment will ensure confidentiality and remove the fear of stigmatization which is often the reason for poor acceptability and self reporting.

The limitations of this study are in the sampling method and the difficulty in translating the English language to the local languages as some emphasis may be dropped or misplaced in the process. Because of the sensitive nature of the topic in the African setting, randomization could not be applied in order to obtain a reasonable sample size. The strength of this study is however in its sample size.

Conclusion

This study reveals that ED is highly prevalent in this community. Alcohol consumption, low educational level, ignorance of who and where ED is treated, location of respondent (rural) indifference, presence of co-morbidities and tribal beliefs appear to be associated with low self reporting. Affected men are more likely to patronize CAM practitioners than medical practitioners or may be out rightly indifferent to their ED. Zonal differences in these factors and attitudes are accounted for by distinct tribal, religious, cultural, social and educational variations between the zones. Acceptability of sexual evaluation of men by a medical practitioner is low when ED is absent and high when it has occurred. However, findings from this study indicate that enlightenment campaign can remarkably improve this.

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None.

Authors' contributions

E. Irekpita: Conception, drafting of questionnaire, data collection, data analysis and manuscript preparation.

O. Awe: Data collection, analysis and intellectual contribution to manuscript preparation.

T. Salami: Data collection, analysis and intellectual contribution to manuscript preparation.

P. Imomoh and T. Oseni: Data collection and intellectual contribution to data analysis.

Ethical committee approval

Ethical approval was obtained from Irrua Specialist Teaching Hospital, Irrua, Nigeria through the letter ADM/PERS/ETHICS/VO.1/93 on 20 May, 2015.

Conflict of interest

The authors declare no conflict of interest.

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