

Age-Related Variations In The Prevalence And Severity Of Erectile Dysfunction Among Men In Jalingo Metropolis, Taraba State, Nigeria

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Abstract: Erectile dysfunction (ED) is a common condition that increasingly affects men's quality of life, particularly with advancing age. This study explores the relationship between age and the prevalence and severity of ED among men in Jalingo Metropolis, Taraba State, Nigeria. A cross-sectional survey was conducted with 230 male participants aged 20-80 years, utilizing a structured questionnaire to gather data. The analysis, performed using one-way ANOVA, revealed a significant age-related increase in ED prevalence. Specifically, 18% of men aged 20-34 years reported experiencing ED, while the prevalence rose sharply to 83% in the 35-50 age group, 87% among those aged 51-64, and 91% in the 65-80 age group. Statistical findings confirmed that age is a critical factor in the severity of ED, accounting for 88% of the variance observed among respondents. These results highlight the need for age-specific interventions, including regular screening and targeted therapeutic strategies, to effectively manage ED in older men. The study also recommends enhancing public health education and conducting further research to gain a deeper understanding of the age-related factors contributing to ED, aiming to improve health outcomes for affected men.

Keywords: Erectile Dysfunction (ED), Age-Related Variations, Prevalence, Severity, Jalingo Metropolis, Taraba Nigeria

1. Introduction

Erectile dysfunction (ED) is a common issue marked by the inability to achieve or sustain an erection necessary for successful sexual activity. Various demographic factors, including age, have been found to be associated with the frequency and seriousness of ED (Kumar et al., 2023; Zhang et al., 2022). As people grow older, physiological changes like decreased testosterone levels, vascular changes, and comorbidities frequently play a role in the increased occurrence of ED in men (Zhu et al., 2021; McVary, 2022). In the city of Jalingo, located in Taraba State, Nigeria, there is an increasing worry about how aging is affecting the frequency and seriousness of ED. The demographics and socio-economic factors in this area are distinct and could impact the way emergency departments are affected in comparison to other regions. Recent research has pointed out that in Nigeria, there is a significantly high rate of erectile dysfunction among elderly men, mirroring trends seen worldwide (Olowe et al., 2021; Adepoju et al., 2022). Nevertheless, there is a lack of localized data on age-related differences in ED within Jalingo Metropolis.

Worldwide, studies show a continuous rise in the occurrence of erectile dysfunction as individuals get older. An example is the data from the Massachusetts Male Aging Study (MMAS) which showed that about 40% of men between 40-70 years old experienced varying levels of ED (Finkelstein et al., 2022). Likewise, research in Africa has found notable age-related rises in ED, showing differing levels of seriousness (Akinloye et al., 2021; Mosi et al., 2022). This highlights the importance of conducting research at a local level to gain a deeper insight into the effects of age on erectile dysfunction, particularly in places like Jalingo Metropolis. The process of getting older plays a role in causing erectile dysfunction by various means, such as decreased vascular health, lower levels of testosterone, and a higher occurrence of chronic conditions like diabetes and hypertension (Corona et al., 2023). These factors are further influenced by lifestyle decisions and socio-economic circumstances, which can differ by region. In Jalingo, social and economic circumstances, availability of healthcare, and cultural views on sexual health could also be important factors in the occurrence and seriousness of ED across various age brackets.

The goal of this research is to examine how the prevalence and severity of ED changes with age among men in Jalingo Metropolis. Through analyzing data from the local area, this study aims to gain an understanding of how aging impacts erectile dysfunction in this particular group and to pinpoint potential factors that play a role in variations in ED severity with age.

1.2 Objective of the Study

To assess the influence of age on the prevalence of various levels of erectile dysfunction among men in Jalingo metropolis, Taraba state of Nigeria.

1.3 Statement of the Problem

Erectile dysfunction (ED) is a common and increasing health issue, especially as people get older. The issue of age-related erectile dysfunction is becoming more acknowledged on a global scale, however, there is a lack of localized data in certain areas like Jalingo Metropolis, Taraba State, Nigeria. Erectile dysfunction affects a substantial number of older men, impacting their quality of life and causing psychological distress (Finkelstein et al., 2022; McVary, 2022). Typically, as men get older, the likelihood of experiencing ED rises, with current research indicating that roughly half of men aged 50-70 encounter some level of ED (Corona et al., 2023). Research in different parts of the world, such as sub-Saharan Africa, supports the notion that there is a noticeable increase in the prevalence of ED with age (Akinloye et al., 2021). In Nigeria, Olowe et al. (2021) conducted a study that pointed out noticeable age-related differences in the prevalence of ED, indicating that older men are at a higher risk of experiencing severe forms of the condition. Nevertheless, the absence of precise data for Jalingo Metropolis hinders the capacity to effectively meet local public health demands.

Erectile dysfunction linked to aging is connected to various physical and mental aspects, like hormone fluctuations, declining vascular health, and the presence of other conditions such as diabetes and hypertension (Zhu et al., 2021; Kumar et al., 2023). For example, the drop in testosterone levels and reduced blood circulation play a major role in the higher prevalence of erectile dysfunction in elderly men (McVary, 2022). Even though these factors are well-documented, the level to which they appear in Jalingo Metropolis has not been thoroughly examined. It is important to have specific information about the frequency and seriousness of ED in various age groups in Jalingo to create effective intervention plans. Comprehending these specific dynamics in the area can assist healthcare professionals and policymakers in creating tailored health initiatives to enhance sexual health and overall well-being for older men in this vicinity. As a result, this research seeks to address the void by examining the frequency and intensity of ED in various age groups in Jalingo Metropolis, offering understanding into the particular obstacles encountered by this demographic.

2.1 Research Methodology

This research was done at the Taraba State Specialist Hospital in Jalingo, which is a top tertiary medical center situated in Jalingo, Taraba State, Nigeria. The hospital caters to a varied population and is visited by residents from the nearby areas as well as those from the surrounding areas. As per the 2006 population census data, Jalingo has a land area of around 401.2 square kilometers, inhabited by over 187,500 individuals, and experiencing a yearly growth rate of 2.9% (National Population Commission, 2006). A cross-sectional study design was used, stretching from September to December 2022. The research focused on male individuals aged between 30 and 80 years from different sections of the hospital, such as the accident and emergency unit, general outpatient department, inpatient department, and male ward specialist clinic. A population of 700 male patients was selected for this study.

The Yamane formula was used to calculate a sample size of 250 for the study. Participants were selected using a convenience sampling method. Information was gathered through an online survey using Google Forms, with questions covering Erectile Function, Intercourse Satisfaction, Orgasmic Function, Sexual Desire, and Overall Satisfaction. The IIEF-5 was chosen because it has been shown to be reliable and valid. Expert healthcare professionals reviewed and confirmed the validity, while reliability was assessed using a Cronbach's alpha of 0.72, showing acceptable consistency. A preliminary study involving 15 patients validated the effectiveness of the tool, without any adjustments required.

A group of trained volunteers gathered data from August to September 2022. 230 out of 250 questionnaires were completed and returned, leading to a 92% response rate. Analysis of data was conducted using SPSS software, utilizing descriptive statistics to summarize demographic variables and responses. Ethical clearance was acquired from the Ethics Committee at the National Open University of Nigeria. All participants were provided with informed consent, ensuring confidentiality and voluntary involvement. All protocols were followed according to institutional guidelines to guarantee the ethical behavior of the research.

3.1 Result

Research question: What is the influence of age on the prevalence of the various levels of erectile dysfunction among men in Jalingo metropolis, Taraba State, Nigeria?

Table 4.1: Influence of Age on the Prevalence of the levels of Erectile Dysfunction Among Men in Jalingo Metropolis, Taraba State, Nigeria.

Age Group	No of Respondents	Categories of Dysfunction	No of Men with Erectile Dysfunction	Percentage
20-34yrs.	96	Severe	0	0
		Moderate	2	2
		Mild to Moderate	7	7
		Mild	8	8
		Total	17	18%
35-50yrs	35	Severe	1	3
		Moderate	6	17
		Mild to Moderate	10	29
		Mild	12	34
		Total	29	83%
51-64yrs.	45	Severe	2	4
		Moderate	10	22
		Mild to Moderate	15	33
		Mild	12	27
		Total	39	87%
65-80yrs.	54	Severe	3	6
		Moderate	31	57
		Mild to Moderate	12	22
		Mild	3	6
		Total	49	91%
Grand Total	230		134	58%

The prevalence of erectile dysfunction among the singles, married, widower and divorced are 33%, 88%, 100% and 100% respectively ($p > 0.05$).

Hypothesis Testing

There is no significant difference on the influence of age on the prevalence of erectile dysfunction among men in Jalingo Metropolis.

Table 4.2: One-way Analysis of Variance with Post-hoc Tests on the influence of age on Prevalence of Erectile Dysfunction among men in Jalingo Metropolis.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	11312.396	3	3770.799	555.552	0.000
Within Groups	1533.969	226	6.787		
Total	12846.365	299			

On table 4.2 above, a one-way between-groups analysis of variance was conducted to explore the influence of age on the prevalence of various levels of erectile dysfunction among men in Jalingo Metropolis. The respondents were categorized into four age groups. The results of the analysis revealed that there was statistically significant difference in the influence of age on the prevalence of erectile dysfunction among men in Jalingo Metropolis, $p < 0.05$ of significance, for the four age groups [$F(3, 226) = 555.552$, $p = 0.000$]. The effect size (calculated using eta square = 0.88) was very large and it indicates that 88.0% of the difference in the mean score of erectile dysfunctions among men is based on their age group. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the four age groups were significantly different from one another.

4.1 Discussion

The research examined how age affects the occurrence of different stages of erectile dysfunction (ED) in men living in Jalingo Metropolis, showing notable age-related differences. The results support previous studies, showing that the occurrence of ED rises as individuals get older, a widely recognized pattern worldwide. The research revealed that men aged 20-34 had the lowest rate of ED, with only 18% experiencing any level of dysfunction. This decrease in occurrence aligns with research suggesting that younger males are typically less impacted by ED, mostly because of improved vascular health and elevated testosterone levels (Zhu et al., 2021). As men grow older, the frequency and seriousness of ED rise significantly. Within the 35-50 age group, 83% indicated they

had encountered erectile dysfunction, with 34% of them dealing with a mild form of the condition. Research has shown that erectile dysfunction commonly starts in middle age, with a notable rise in occurrence as men reach their late 40s and 50s, as noted by Corona et al. (2023).

The frequency of ED in men aged 51-64 years increased to 87%, specifically in the moderate and mild-to-moderate dysfunction categories. This discovery aligns with the physical changes linked to getting older, such as decreased testosterone, lower blood circulation, and higher chances of diabetes and hypertension, which are key factors for ED (McVary, 2022). In the age group of 65-80 years, the highest rate of ED was seen, with 91% of men reporting it and 57% experiencing moderate dysfunction. This pattern reinforces the claim that age plays a significant role in the severity of ED, as older individuals are more prone to facing the compounded impact of age-related health problems that worsen ED symptoms (Kumar et al., 2023).

The one-way ANOVA results validated that age has a notable impact on ED prevalence, showing a substantial effect size ($\eta^2 = 0.88$), suggesting that 88% of the variability in ED levels is due to age. The post-analysis Tukey HSD test showed significant differences in mean ED scores among age groups, supporting the age-related aspect of ED (Finkelstein et al., 2022). These results stress the crucial significance of age as a contributing factor for Erectile Dysfunction and underscore the necessity of specialized interventions for elderly males. Identifying and treating ED in younger individuals sooner may help slow down its progression, while older men might benefit from more aggressive treatment methods (Akinloye et al., 2021).

5. Conclusion

The research highlights how age plays a crucial role in the occurrence and seriousness of ED among males in Jalingo Metropolis, with older age brackets experiencing a higher impact. The rise in ED rates as people age aligns with worldwide patterns and highlights the necessity of age-appropriate approaches to address and reduce the effects of ED on men's health and well-being.

6. Recommendations

1. Healthcare professionals need to regularly screen for erectile dysfunction, especially in males who are 35 years old and older. The timely identification of ED can lead to interventions that help stop its progression.
2. Public health initiatives need to be created to increase understanding of the age-related dangers associated with ED. Educational programs need to focus on the significance of upholding a healthy lifestyle, which includes consistent physical activity, a well-rounded diet, and effectively managing concurrent illnesses like diabetes and hypertension.
3. Older men, particularly those who are 50 years old and older, should consider using more aggressive treatment approaches. Pharmacological treatments, lifestyle changes, and psychological assistance may be needed to tackle the various factors contributing to erectile dysfunction in this age group.
4. More research is needed to investigate how aging is connected to ED, specifically looking into vascular health, hormonal changes, and psychological factors. This research has the potential to shape better prevention and treatment approaches.
5. Create support groups in the community for men with ED, especially targeting older individuals who could benefit from peer support and exchanging experiences. These groups could also function as platforms for distributing information about how to manage and treat ED.
6. It is important for policymakers to focus on creating guidelines for managing age-related ED, which should include evidence-based practices tailored to the specific needs of various age ranges. This may involve providing older men with subsidized healthcare services to enhance their access to effective treatments.

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