

Urinary Incontinency in Women in Uyo Metropolis, South-South, Nigeria

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Abstract:

This study was a cross sectional study which examined urinary incontinence in women within Uyo metropolis of Akwa Ibom State, Nigeria. The survey was carried out among women within the ages of 16-75 years. Questionnaire was the instrument used for data collection and total sample of 254 women were selected using simple random sampling univariate association between the demographic characteristics of the subject. Urinary incontinence was examined using Chi-Square Test and multiple variate association was tested using multiple logistic regression. Results showed that Prolong Labour (OR = 3.01, C.I = 1.545 – 6.80, P<0.05), Episiotomy (OR = 1.82, C.I = 1.547-5.001), Vaginal Infection (OR = 3.08, C.I = 1.544-10.899) and High Birth Weight (OR = 2.66, C.I = 1.961-7.370) were the factors were significantly associated with urinary incontinency in women. Hence, it could be concluded that prolong labour, episiotomy, vaginal infection and high birth weight babies are significantly related to urinary incontinence in women.

Keywords: Urinary-incontinence; Episiotomy; Women; Infection; Labour

1. Introduction

Urinary incontinence (UI) is a complaint of any involuntary leakage of urine. It is a common problem that affects many women of all ages but more prevalent in elderly women and men. Though urinary incontinence is not life threatening, but it is a very debilitating condition (Gartley, 2006) that is associated with social embarrassment. The international continence society (ICS) also stated that in each specific circumstance, urinary incontinence should be further described by specifying relevant factors such as type's frequency, severity, social impact, and effect on the quality of life (Abrams *et al.*, 2002). It is a condition in which the independent urine flow will result in social problem as well as affecting personal hygiene if not properly managed (Chapple *et al.*, 2005).

The burden of urinary incontinence is not only in terms of the cost the incontinence produce and the nursing home cost, but also in terms of loss of quality of life and decreased productivity owing to the associated depression. Jayachandran (2007) reported in a master's thesis thus;

A Gallup poll result in 1994 indicated that almost 70% of urinary incontinence sufferers failed to seek medical treatment, and the majority of those who eventually sought medical help had waited for at least 4 years before talking to their physicians about this problem.

Research by Harrison (2009) showed that urinary incontinence affects as many as 1 in 3 people, and fewer younger people. Family predisposition, congenital defects of the anatomy of the lower urinary tract, urinary tract diseases or injuries of the nervous

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system are known to be among the common predisposing factors to incontinence. Several factors can promote incontinence including medications, menopause, cognitive and behavioural disturbances, urinary tract infections, obesity, co-existing disease, age, injury to tissues surrounding the bladder, pregnancy, childbirth, increased pressure in the abdominal area (Sandvik *et al.*, 2000; Bidzan *et al.*, 2010).

Continence in women is usually affected by the pelvic floor muscles that basically help to hold and when required, help to release urine from the urinary bladder. Urine is stored in the bladder, with gradual expansion in proportion to the quantity stored. The bladder wall contracts in response to stimuli, forcing urine out into the urethra with a corresponding relaxation of the sphincter muscles surrounding the urethra, to permit urination. However, incontinence occurs when the pressure in the bladder (the expulsive force) exceeds the pressure within the urethra (the closure force), causing an involuntary leakage of urine. Malfunctioning of the urethral sphincter can also induce urinary incontinence.

Contrary to the popular believe that urinary incontinence occur only in elderly women, teenagers and middle-aged women live with this anomaly without considering the debilitating effect of its continuity. Those afflicted with it do not discuss the condition even with their partner or closest relative, their main fear being the perception that they will be seen as dirty and unclean. This could be as a result of a possible stigmatization attached to urinary incontinence that causes one to suffer in silence.

2. Purpose of the study

This study seeks:

- i. To determine the prevalence of urinary incontinence in women in Uyo metropolis, Akwa Ibom State, Southern Nigeria, based on the new International Continence Society (ICS) definitions.
- ii. To determine effect of parity on continence in women.
- iii. To create social awareness and encourage people with urinary incontinence to seek medical attention.

3. Methodology

Research Design

Survey research design has been adopted for this study. According to Creswell (2013), this research design studies the nature and situation of things towards determining its situation as it exists at the time of investigation.

Study Population/Area

A population of 254 female participants between the ages of 16-75years were used for the study. All the participants were residents of Uyo metropolis of Akwa Ibom State, Southern Nigeria, where the study was conducted.

Instruments

The instrument used for data collection was the Questionnaire designed by the researchers. The questionnaire was divided into two sections;

Section A: this was designed to get the respondents' personal data such as age, marital status, weight, height, BMI.

Section B: was designed to collect respondents’ parity, place of delivery, and number of times delivered at a particular place.

Section C: was designed to classify Urinary Incontinency in women based on etiology.

Section D: was designed to ascertain the respondent’s approach to seeking medical attention and ‘where’, if sought at all.

Research Procedure

The instrument (questionnaire) was administered to the subjects personally by the researchers and their response rate was high. All the 254 questionnaires administered to the respondents were returned and found useable for the study.

Data Analysis

Frequencies and simple percentages were used to analyse qualitative variables. Univariate association between qualitative variables were tested using Chi-square while differences in qualitative variables were tested using Independent t-test. Multivariate association between different causes of incontinence was tested using multiple logistic regression. Hence, Odd ratio and its 95% confidence interval were estimated. However, all hypotheses are tested at $P < 0.05$ level of significance.

4. Results

Demographic Information of the Respondents

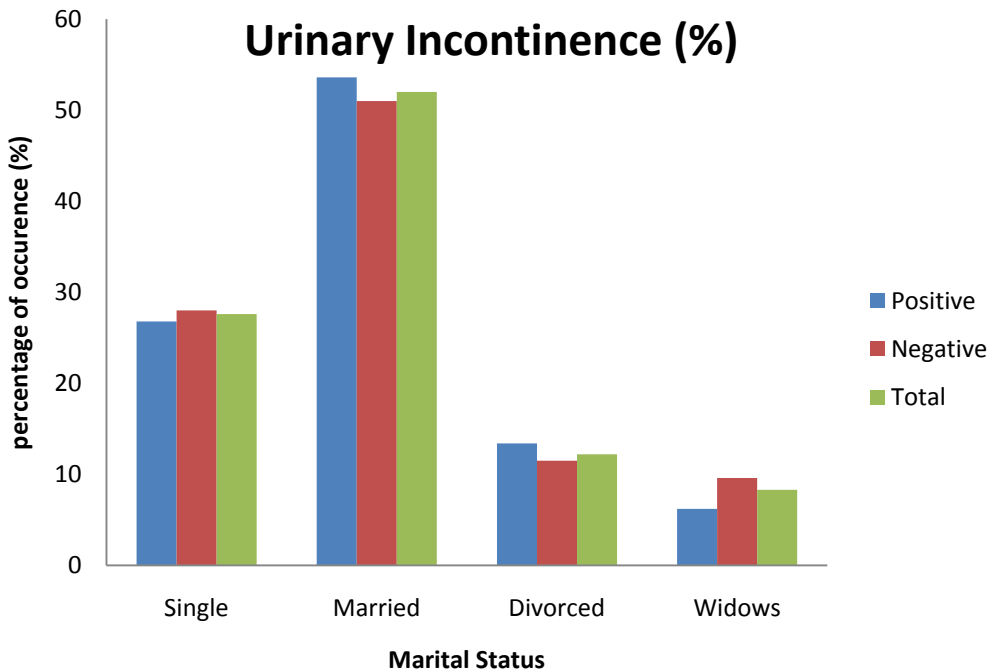


Figure 1: Bar Chart Showing the Distribution of Respondents by Marital Status.

NS=Not significantly different at 5% ($p > 0.05$)

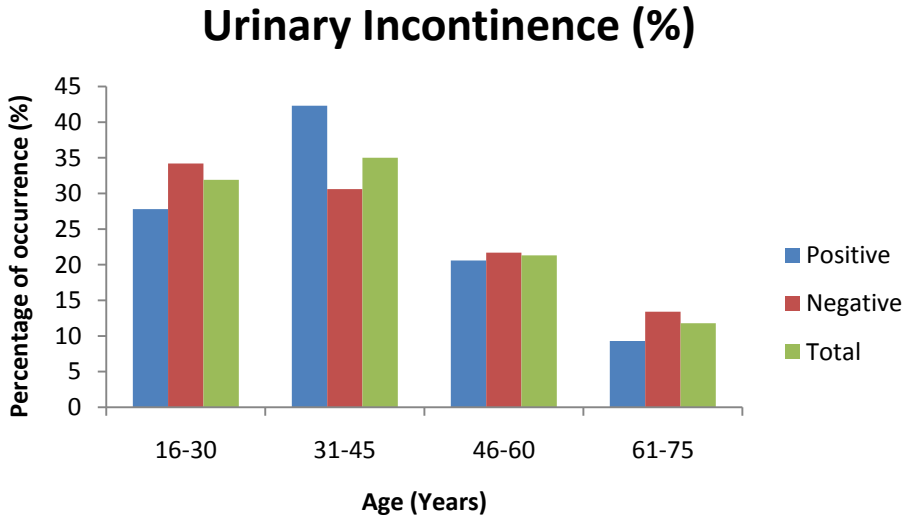


Figure 2: Bar Chart Showing the Distribution of Respondents by Age-group. NS=Not Significantly Different ($p>0.05$)

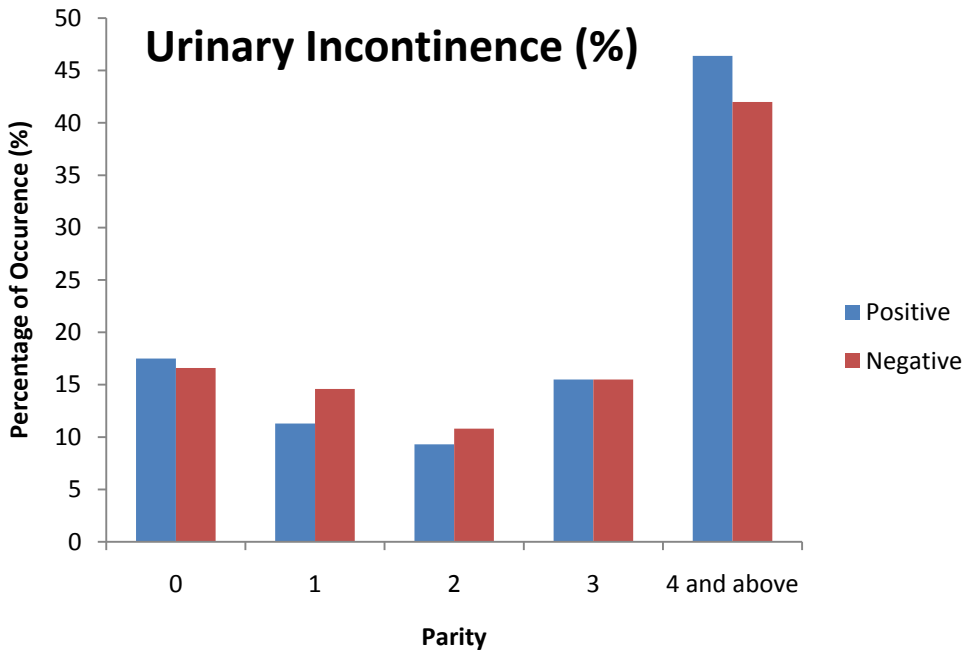


Figure 3: Bar Chart Showing the Distribution of Respondents by Parity.

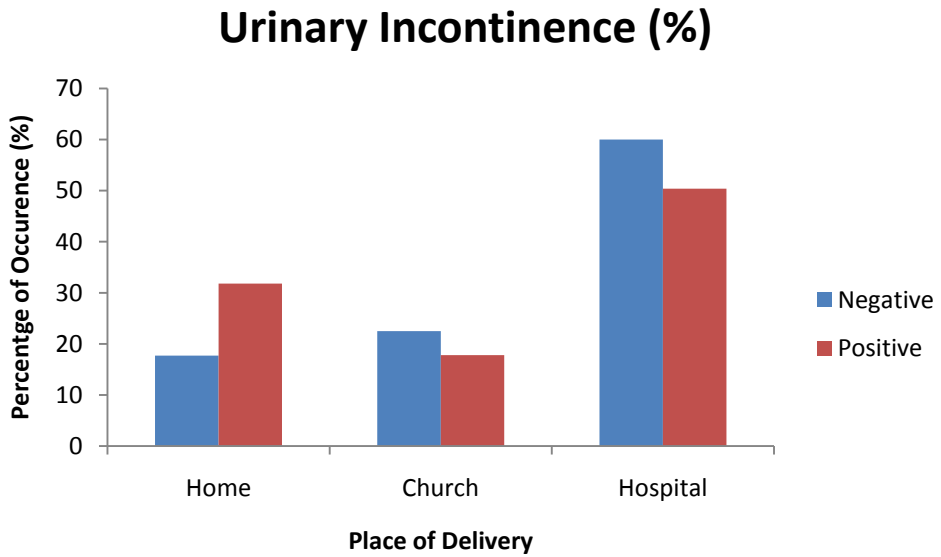


Figure 4: Bar Chart Showing Distribution of Place of Delivery of the Respondents.



Figure 5: A Pie Chart Showing the Distribution of Urinary Incontinence among Respondents.

Urinary Incontinence (%)

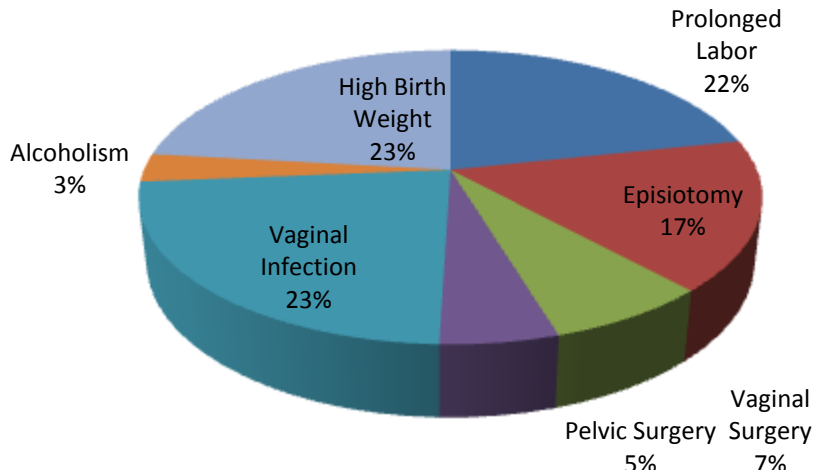


Figure 6: A Pie Chart Showing the Prevalence of Urinary Incontinence in Women in Relation to Etiology.

Table 1: Multiple Logistic Regression showing possible causes of Urinary Continence among respondents.

Etiology	Odd Ratio	95% Confidence Interval of Odd Ratio	p-value
Prolonged Labour (Yes/No)	3.01	1.545 – 6.180	0.006*
Episiotomy (Yes/No)	1.82	1.547 – 5.011	0.042*
Vaginal Surgery (Yes/No)	2.01	0.809 – 3.847	0.169
Pelvic Surgery (Yes/No)	1.764	1.145 – 8.291	0.154
Vaginal Infection (Yes/No)	3.08	1.544 – 10.899	0.026*
Alcoholism (Yes/No)	1.26	1.961 - 7.370	0.594
High Birth Weight (Yes/No)	2.66	1.961 -7.370	0.0060*

Significant at 5% ($p < 0.05$)

Percentage of Respondents

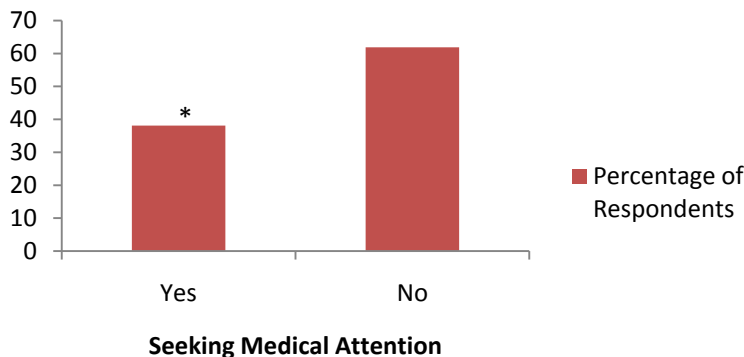


Figure 7: A Bar Chart Showing Respondents' Attitude to Medical Attention. *Significantly different ($p < 0.05$)

5. Discussion

Urinary incontinence occurs regardless of the one's marital status. As it is shown in figure 1, out of the 97 respondents that had urinary incontinence 53.6% were married women. Single women, divorced and widows also had incontinence to show that incontinence is not dependent on the status of the respondents. The high prevalence observed in married women may be due to different stages of delivery and parity. Bump and Norton (1998) submitted that some women may undergo anatomical and neuromuscular injury during childbirth but remain clinically asymptomatic as long as there is compensation by other components of the continence mechanism. Abraham *et al* (2002) also reported that after childbirth trauma and loss of the pelvic floor muscles, a woman might not have incontinence until she loses a small percentage of muscle strength and innervations to the urethral sphincter because of aging and other injuries, and that small loss could alter the balance in favour of urinary incontinence instead of continence.

According to the result shown on figure 2, the highest occurrence of urinary incontinence was observed in women between the ages of 31-45 years, followed by 16-30 years. This explains that urinary incontinence in women is much prevalence in reproductive age. This must have been due to vaginal surgery and episiotomy owing to overweight babies. Marinekovic and his colleagues (2012) asserted that damage to the pelvic floor muscles and structures as a result of childbirth could cause stress urinary incontinence.

The findings of this study as seen in figure 3 shows that the higher the number of delivery, the higher the chances of an individual to have urinary incontinence. This is because the increased pressure exerted on the pelvic floor muscles each time of delivery tends to weaken those muscles, with a consequential reduction in their constricting and contracting abilities (Haliloglu *et al.*, 2010). Urinary incontinence may occur as a result. Series of complications observed during labour (in maternity homes and other locations) may be the major reason while respondents that delivered in the hospital (after referral) have incontinence than others as seen in figure 4. More so, figure 5 shows that stress incontinence is predominant among the respondents. This may be attributed to the overweight foetuses and their exerted pressure that tends to weaken the pelvic floor as earlier mentioned.

Further, high birth weight, vaginal infection and prolonged labour are shown (see figure 6) to be the major etiologic factors associated with urinary incontinence among the respondents. Apart from the increased pressure exerted on the pelvic floor muscles by an overweight foetus to cause weakening; prolong labour results in episiotomy, also bacteria that invades the urethra may destroy the external sphincter muscle thereby resulting in an impromptu relaxation of the external sphincter. Consequently, urinary incontinence may result.

Although, a massive 61.2% of 97 women that incontinence never seek for medical attention (see figure 7). This may be due to the stigma attached to urinary incontinence that causes one to suffer in silence. Many patients are so reluctant to bring it up even when the primary care physicians specifically ask about incontinence problems during a physical examination.

Conclusion

The findings of this study show that incontinence is common in women within the reproductive age with increased number of delivery, high birth weight and prolonged labour shown to be the major causes. These result in episiotomy and vaginal infections. The study also shows that most women conceal it and live on with the disorder. In this sense, women should promptly report any case of incontinence to the nearest physician or care giver. Several treatment modalities are available in the clinics. Reversible causes of incontinence should be explored and pharmacological substances as well as bladder irritants that contribute to incontinence should be avoided. Also, maintaining a healthy weight, practicing Kegal exercise could reduce the risk of incontinence in women. It is necessary to educate and inform the patients about the treatment of various postnatal and vaginal infections before and after birth. Still, adequate and constant check up is highly recommended. However, further studies should be carried out on the variables that were not investigated.

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References

- Abrams P, Cardozo L, Fall M. (2002). The Standardization Terminology of the lower urinary tract function: Report from the standard sub-committee of the International Continence Society. *American Obstetrics and Gynecology* **187** (1): 116-126.
- Bidzan M, Smutek J and Blzdan L. (2010). Psychosexual Biography and the strategies used by women affected with stress urinary incontinence during intercourse: two case studies. *Medical Science* **16**(1): C56-10
- Bump R. C and Morton P. A. (1998). Epidemiology and Natural History of Pelvic Floor Disfunction. *Obst. Gynecol Clin North AM.* **25**: 723-46.
- Chapple C.R, Wein A.J., Artibani W. et al (2005). A critical review of diagnosis criteria for evaluating patients with asymptomatic stress urinary incontinence. *British Journal of Urology International.* **95**(3): 327-34.
- Gartley C. (2006). Life with Continence. *Lancet* **367**, 68.
- Haliloglu B, Karateke A., Coksuer H., Peker, H. (2010). "The role of urethral hypermobility and intrinsic sphincter deficiency on the outcome of transobturator tape procedure: a perspective study with 2 year follow-up". *International urogynecologist journal pelvic floor distinction* **21**(2) 173-8.
- Harrison G. L and Memel D.S. (1996). Urinary incontinence in women: it prevalence and management in a health promotion clinical. *British Journal of Gynecology Practice.* **44**: 149-52.
- Jayachandran, C. (2007), "Prevalence of Stress, Urge, and Mixed Urinary Incontinence in Women". *Master's Thesis and Doctoral Dissertations.* Paper 228.
- Marnikovic S. P., Rovne E.S., Moldwin R.M., Staton S. L., Gillen L.M and Marinkovic C. M. (2012). The management of overactive bladder syndrome. *British Medical Journal* **17**: 344.
- Sandvik H, Seim A, Vanvik A, et al. (2000). The severity index for epidemiological surveys of female urinary incontinence comparison with 48 hours pad-wetting tests. *Neurourology and Urodynamics* **19**: 137-45.