

Prevalence and Predictors of Hemorrhoids among Commercial Motorcyclists in Kaduna State, Nigeria

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Abstract Objective: This study was carried out to assess the prevalence and predictors of hemorrhoids among commercial motorcyclists in Kaduna State, Nigeria. **Methods:** Stratified simple random sampling technique was used to obtain the representative participants of 290 motorcyclists drawn from ten randomly selected commercial motorcyclist parks in Samaru. **Results:** The study shows that the majority (97.5%) of participants knew about hemorrhoids and most (90.5%) of them admitted to have one time or the other, suffered from hemorrhoids with nearly a third (32.5%) of them having four or more year's encounter. Furthermore, more than half (58.0%) of the participants mostly sat on their motorcycles while waiting for passengers, a similar portion, more than half (58.3%) spent between 6 – 15 hours per day riding motorcycle and nearly three in every five (58.7%) of them spent minimum of 5-6 days working (riding motorcycle) in a week. **Conclusion:** There was high prevalence of hemorrhoids among commercial motorcyclist who are within the active workforce of the nation. Factors associated with this high prevalence include prolong sitting on the motorcycle while waiting for passengers, long time duration of riding commercial motorcycle per day and for the entire week without resting.

Keywords: hemorrhoids, prevalence, commercial motorcyclists, Kaduna, Nigeria

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1. Introduction

Hemorrhoids, also called piles or varicose veins of the anus and rectum are masses or clumps or cushions of tissues consisting of muscle and elastic fibers with enlarged, bulging blood vessels and surrounding supporting tissues present in the anal canal of an individual suffering from the disease. It is a condition characterized by the prolapsed of an anal cushion that may result in bleeding and pain [1,2]. Omale [3] classified the following predisposing and precipitating factors causing hemorrhoids. The predisposing causes of hemorrhoid include prolong erect posture (the human upright position), heredity, occupation and diet while precipitating causes include constipation, diarrhoea, pregnancy, infection, rectal carcinoma, pelvic tumours, cardiac failure, portal hypertension, coughing and physical exertion. Occupation involving severe muscular stress prolonged sitting or prolonged standing are believed to be predisposing factors. Similarly, studies [4,5,6,7,8] listed the followings as some of the risk factors and causes of hemorrhoids: constipation, diarrhea, genetic predisposition (heredity), overuse of laxatives, pregnancy and labor, chronic venous insufficiency, inflammatory bowel disease, portal hypertension, aging, prolonged sitting or standing,

frequent heavy lifting and sporting activities such as horse riding, motorcycles and bicycles riding.

Hemorrhoids are common disease among the commercial motorcyclists. Cycling often irritates the problem and causes more pain and swelling because sitting on a bike seat puts pressure on the anal area. Study [9] have shown history of rectal disorders occurrences in long sitting occupation, which duration of daily sitting is varied among different occupation ranging from 08 hours to 16hours. Data have shown that higher incidence was found in motorcycle riders (33.6%) long vehicle drivers (13.9%) computer operators (11.1%) students (8.8%) tailors/related work (7.9%) and store keepers (4.1%) [9].

Study by Agbo [10] shows that, hemorrhoids occurs at any age and it affect both men and women in developing nations. Epidemiologic study [11] reported a prevalence ranging from 4.4% in adults in the United States to over 30% in general practice in London. A peak in prevalence is seen between 45 and 65 years of age while the development of hemorrhoids before the age of 20 is unusual [11]. Comparably, Suma [12] estimated that 50-85% of people around the world have hemorrhoids and nearly one million new cases of hemorrhoids are reported annually in U S, as much as 47 per 1000 and increases with age, especially among age group of 45-65yrs. In India, 75% of the population is estimated. Among this, almost half a million population experience conditions

related to hemorrhoids. Usually, many are not aware that they have the symptoms associated with this condition.

Limited research exists, examining the prevalence and predictors of hemorrhoids among commercial motorcyclists. Therefore, the objective of the study is sought to assess the prevalence and predictors of hemorrhoids among commercial motorcyclists in Kaduna State.

2. Materials and Methods

2.1. Study Area

The study area is Samaru town under Giwa Local Government area of Kaduna state. Samaru is the fourth and the most recent addition to the Zaria suburban area which is made up of Zaria-City, Tudun-Wada, the Government Reservation Area (GRA), and Sabon-Gari. Samaru evolved from a small colonial farming settlement to become a large community, a melting-pot, often referred to as "the University village". Samaru is situated on latitude 112° 12" N and longitude 07° 37" E, at an altitude of 550-700 meters. It is about 13km from Zaria-city on the Sokoto road, 8km to Shika and 7km from Bassawa. It is cosmopolitan in nature, drawing and fusing people of divergent national and international backgrounds. Ahmadu Bello University main campus is located in Samaru which has different types of educational and research institutions [13].

2.2. Study Design

The study design was a cross sectional descriptive survey design.

2.3. Sampling Technique, Sample Size and Study Population

Stratified simple random sampling technique was used to obtain the representative participants of 290 motorcyclists drawn from ten commercial motorcyclist parks that were randomly selected out of the twenty parks in Samaru. The sampling technique was used to obtain representative sample from each stratum. Since the population of the study is not so large in each stratum 20% was used to determine the sample size in each stratum. Based on Nwana's [14] formula which states that, if a population is in many hundreds, one need a sample size of 20%, but if a population is a few thousands, one needs a sample size of 10%, and for a population of several thousands, one needs a sample of 5% or less. Therefore, the total sample size for the study is 290 motorcyclists which constitute 10% of the total population of the 2900 registered motorcyclists in Samaru.

2.4. Data Collection Tools

A self-administered structured questionnaire on the prevalence and predictors of hemorrhoids among commercial motorcyclists were administered to the participants (motorcyclists). Permission of the authority of the commercial motorcyclists in samaru where the participants were recruited from and the informed consent

of the participants were also obtained before the commencement of this study.

2.5. Data Analysis

The data was analyzed using simple statistical measures of frequency and percentages distribution and charts.

3. Results

3.1. Participants' Socio-demographic Characteristics

Table 1 below shows that a total of 290 questionnaires were distributed to commercial motorcyclists and 283 were returned giving a response rate of 97.5%. Of all participants, the majority (78.1%) were within the ages of 21-40 years. Majority of participants (80.6%) were Hausas and more than half (52.7%) of them possess senior school certificate.

Table 1. Socio-demographic data of the participants (n=283)

| Variables | Frequency | Percentage |
|---------------------------|-----------|------------|
| Age(years) | | |
| 16-20 | 37 | 13.1 |
| 21-25 | 56 | 19.8 |
| 26-30 | 87 | 30.7 |
| 31-40 | 78 | 27.6 |
| 40 and above | 25 | 8.8 |
| Religion | | |
| Christianity | 33 | 11.7 |
| Islam | 250 | 88.3 |
| Tribe | | |
| Hausa | 228 | 80.6 |
| Igbo | 10 | 3.5 |
| Yoruba | 6 | 2.1 |
| Others | 39 | 13.8 |
| Marital status | | |
| Single | 67 | 23.7 |
| Married | 213 | 75.3 |
| Divorced | 3 | 1.0 |
| Highest educational level | | |
| No formal education | 54 | 19.1 |
| Primary/Quranic | 68 | 24.0 |
| Secondary | 149 | 52.7 |
| Tertiary | 12 | 4.2 |

3.2. Prevalence of Hemorrhoids among Participants

Table 2 below shows that the vast majority of participants (97.5%) knew about hemorrhoids and most (90.5%) of them admitted that they had suffered or still suffering from hemorrhoids. Nearly one-third of participants (32.5%) have encountered hemorrhoids for four years and above.

Table 2. Prevalence of hemorrhoids among the participants (n=283)

| Variables | Frequency | Percentage |
|---|-----------|------------|
| Heard of hemorrhoids | | |
| Yes | 276 | 97.5 |
| No | 7 | 2.5 |
| Have you suffered from hemorrhoids before | | |
| Yes | 256 | 90.5 |
| No | 27 | 9.5 |
| Duration of ailment | | |
| Less than 1 year | 47 | 16.6 |
| 1 year | 77 | 27.2 |
| 2 years | 15 | 12.4 |
| 3 years | 32 | 11.3 |
| above 4 years | 92 | 32.5 |
| Signs and symptoms experienced | | |
| Pains | 223 | 78.8 |
| Anal swelling | 240 | 84.8 |
| Anal bleeding | 184 | 65.0 |
| Anal prolapsed | 256 | 90.5 |
| Difficulty on sitting | 148 | 52.3 |
| Others | 67 | 23.7 |

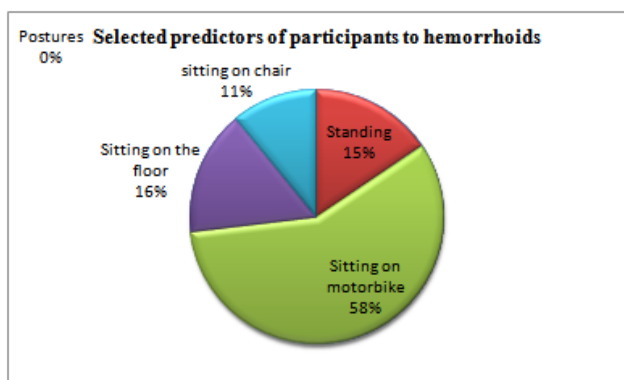
**Figure 1.** Showing selected predictors of participants to hemorrhoids

Figure 1 depicts that 58% of participants mostly sat on their motorcycles while waiting for passengers

Table 3. Selected factors causing hemorrhoids among the participants (n=283)

| Variables | Frequency | Percentage |
|--|-----------|------------|
| Time spent riding motorcycle per/day | | |
| 1-5hours | 42 | 14.8 |
| 6-10hours | 88 | 31.1 |
| 11-15hours | 77 | 27.2 |
| 16hours above | 76 | 26.9 |
| Duration of break time everyday | | |
| 10-30minutes | 144 | 50.9 |
| 1hour | 73 | 25.8 |
| 2hours | 42 | 14.8 |
| above 3hours | 0 | 0 |
| None | 24 | 8.5 |
| Working (cycling or riding) days in a week | | |
| 1-2days | 2 | 0.7 |
| 3-4days | 38 | 13.4 |
| 5-6days | 166 | 58.7 |
| 7days | 77 | 27.2 |
| Years in riding commercial motorcycle | | |
| 1-5years | 99 | 35.0 |
| 6-10years | 101 | 35.7 |
| 11-15years | 61 | 21.6 |
| above 16years | 22 | 7.8 |

Table 3 above presents that more than half (58.3%) of participants spent between 6 – 15 hours per day riding motorcycle and a similar portion (58.7%) spent minimum of 5-6 days working (riding motorcycle) per week.

4. Discussion

Hemorrhoids is a condition characterized by the prolapsed of an anal cushion that may result in bleeding and pain [2]. The findings of our study established that most cyclists (78%) in this study were at their youthful and middle ages of 21-40 years and (53%) of them possess senior school certificate. This study is in line with a study from Akure, Nigeria [15] on assessment of socio-demographic characteristics of commercial motorcyclists. The study [15] shows that most (55%) commercial motorcycle riders were between of 21 and 30 years while 49% possess secondary school certificates [15]. Similarly, a research from Yola, Nigeria [16] discovered that 88% of motorcycle riders were between the ages of 18 and 30 years and that economic depression and inadequate transport facilities were factors giving rise to the use of motorcycles as a means of public transportation.

A significant percentage 98% of participants in this study knew about hemorrhoids and 91% indicated that they had hemorrhoids. By contrast, Chukwuma and Vade [17] reported low incidence of hemorrhoids in their study and Pfenninger [18] established that about 80% of the patients who visited hospital with a self-diagnosis of hemorrhoids were later diagnosed of another ailment not hemorrhoids.

A study from India [19] reported that the uncomfortable condition (anal fissure) affects mostly adults who were between the age bracket of 45 to 65 years and that 65% had a long duration sitting occupations, had 2 to 6 years history of long sitting occupation ranging from 08 hours to 16 hours. Higher incidence was found among motorcycle riders (34%) followed by long vehicle drivers 13.9%. The assertions above were in agreements with our findings which revealed that about a third (32.5%) of participants had above 4 years history of hemorrhoids, 58% mostly sat on their motorcycles while waiting for passengers, 58.3% spent minimum of 6 – 15 hours per day riding motorcycle and 58.7% spent between 1-6 days working (riding motorcycle) per week.

4.1. Study Limitations

This study had several limitations. As a single localized country zone study, its generalization may be limited to other zones in the country.

5. Conclusion

Analytically, there was high prevalence of hemorrhoids among commercial motorcyclist who were within the active workforce of the nation. Factors associated with this high prevalence include prolong sitting on the motorcycle while waiting for passengers, long time duration of riding commercial motorcycle per day and for the entire week without resting.

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Competing Interest

The authors declare that no competing interests exist.

References

- [1] Kona V. Conditions and diseases of digestive system, 2010. available at: <http://www.OmniMedicalsearch.com>, retrieved on 4/25/2013 3:35pm
- [2] Health Grades. Hemorrhoids. 2011. Available at: <http://www.rightdiagnosis.com> retrieved on 5/1/2013 9:45pm
- [3] Omale M.K, Adegboye O.O. A ten year study of the management of hemorrhoids at a secondary Nursing home in south west Nigeria. *International research journal for pharmacy* volume 3; 2012: page 198-200 Available at: <http://www.american:irjponline.com> retrieved on 4/9/2013 6:11pm.
- [4] Diana K. Health Tips: How Did I Got Hemorrhoids. 2013. available at: <http://www.nlm.nih.gov/medlineplus>, 5/28/2013 2:53Pm.
- [5] Medicine Clinic "TibetMed" Hemorrhoids. 2011. at: <http://www.en.tibetmed-md.com/about>, retrieved on 5/28/2013 6:35Pm.
- [6] David B. What are hemorrhoids?. 2012. Available at: <http://www.myhemorrhoids.org>retrieved on 4/26/2013 8:50pm.
- [7] Kathy L.N. Introduction hemorrhoid problem. 2011. available at: <http://Ezine articles. com>, retrieved on 4/25/2013 4:02pm.
- [8] Health assist hemorrhoids causes and prevention. 2013. available a www.healthassist.net/contact retrieved on 5/2/2013 2:25Pm.
- [9] Valachi B., Valachi K. Preventing musculoskeletal disorders in clinical dentistry: Strategies to address the mechanisms leading to musculoskeletal disorders. *Journal of the American Dental Association*. 2003; 134(12):1604-1612.
- [10] Agbo, S P. "Surgical management of hemorrhoids", *Journal of Surgical Technique and Case Reports* 3(2): 68; 2011.
- [11] Peter S.C, David C.C.B. Hemorrhoids and Fissure in Ano. 2011. Available at: <http://www.factors.org/physician/education/core-subject>retrieved on 4/25/2013 1:53pm.
- [12] Suma K C. Medical Surgical Nursing. 2010. Available at: <http://www.blog.articlealley.com> retrieved on 4/25/2013 9:45pm.
- [13] Wikipedia. Okada (Commercial Motorcycle). 2011. available at: <http://www.wikipedia.com>, retrieved on 3/30/2013 11:03Pm.
- [14] Nwana, O.C. *Introduction to education research for student teachers*. 1981. Ibadan. Heinemann Educational Books.
- [15] Joseph O. Oyedepo. Assessment of socio-demographic characteristics of commercial motorcyclist in Akuru, Nigeria. *African Journal of Engineering Research*, Vol. 2(4), pp. 68-72, November 2014.
- [16] Ogunsanya A A and Galtima M, Motorcycles in public passenger transport services in Nigeria; Case of Yola town, Urban transport in Nigeria, Ikya (ed) 1993. Heinemann Education Books (Nig) Plc Ibadan.
- [17] Chukwuma M, Vade M. Cutting diseases risk with local vegetables. 2010. Available at: <http://www.guardiannewsngr.com/index...> sep 12, 2010, 02:04 AM.
- [18] Pfenninger J.L. Most 'hemorrhoid' aren't medical procedure centre PC 400 N Saginaw RD Midland MI 48640 (989). 2010; 631-4545.
- [19] Syed A A, Fareed A S, Khalid A. Occupational risk of Anal Fissure in young patients. *Pakistan journal of surgery*. Vol. 25(2)2009; 122-124.