

HEPATITIS B VIRUS - KNOWLEDGE, ATTITUDE AND PRACTICES AMONG TAXI DRIVERS IN CAPE COAST METROPOLIS, GHANA

M. S. Adamu^{*1}, A. Bockarie², M. Amoako-Boateng³, S. Eliason², A. Anyanful⁴, F. N. Ghartey Jnr.^{*1}, F. Yirdong⁵, C. Aryeh⁶

^{*1} Chemical Pathology Department, School of Medical Sciences, University of Cape Coast, Ghana

² Community Medicine Department, School of Medical Sciences, University of Cape Coast, Ghana

³ Central Regional Teaching Hospital, Cape Coast, Ghana

⁴ Department of Medical Biochemistry, School of Medical Sciences, University of Cape Coast, Ghana

⁵ Department of Psychological Medicine and Mental Health, School of Medical Sciences, University of Cape Coast, Ghana

⁶ Department of Medical Laboratory Science, School of Biomedical and Allied Health Sciences, College of Health Sciences, University of Ghana, Legon, Ghana

*1s.m.adamu@uccsms.edu.gh

Abstract

Keywords:

Hepatitis B, Virus, Taxi, Driver.

Globally 2 billion people have been infected with HBV at some point in time in their lifetime and 360 to 400 million people are chronic carriers. An estimated 600,000 deaths occur annually due to consequences or complications of HBV. The aim of this study was (i) to assess the knowledge of taxi drivers and relating this knowledge to attitudes and practices by the drivers and (ii) to determine the prevalence of HBV among the taxi drivers in Cape Coast metropolis.

A cross sectional study was undertaken with 150 taxi drivers between 5th September to 24th December 2012 using a designed questionnaire. About 5 ml of blood was drawn into plain tubes for serum separation for HBV test. 102 respondents (68%) had heard about HBV but only 26% knew about the causes and mode of transmission of the infection. Practices such as alcohol intake (54.7%), having multiple sexual partners or patronizing commercial sex workers (5.3%), non-condom use (72%) and use of herbal medication (68.8%) were very significant factors that increased their risk for infection and progression of HBV infection. The prevalence of the infection among the drivers was 7.0%.

INTRODUCTION

Hepatitis is a medical condition defined by the inflammation of the liver and characterized by the presence of inflammatory cells in the tissue of the organ. The causes of hepatitis are varied with hepatitis viruses being very common. The hepatitis viruses are A, B, C, D, E, F, and G. Hepatitis A and E are transmitted by the feco-oral route. Hepatitis B and C can cause more chronic infection and transmitted either horizontally or vertically (who, 2013).

Unlike tuberculosis, HIV/AIDS and malaria that have attracted both national and international attention, Hepatitis B infection has been relegated to the background such that information about the infection is even difficult to obtain. For developing countries the major reason for this would be inadequate funds for voluntary mass testing, vaccination and treatment. With more than half of infected Ghanaians are not aware of their status (GHS 2009), raising awareness is crucial to stemming the tide of new infections and reducing the stigma associated with the infection (Higgins et al, 1996).

The prevalence of Hepatitis B is increasing in Ghana as stated by the GHS report in 2009 that the rate of infection recorded in 2005 which stood at a ratio of 8:1 had increased to 6:1 in 2008 with a national prevalence of 15.3% (Higgins 1996 and Ghana Statistical Service 2010). Even though Ghana forms part of the 134 developing countries and economies in transition that have successfully introduced Hepatitis B vaccine into their national immunization schedules by 2003, particularly for newly born infants, there is no program for mass screening and vaccination of children born before 2003 and the general public. Media publicity on the disease is not substantial as compared to other infectious diseases. (Bartholomew, 2011).

This study is aimed to document the effect of knowledge about Hepatitis B Virus on the attitudes and practices of taxi drivers in Cape Coast metropolis. There is data on long distance drivers with regards to sexually transmitted infections (STI's) but very little data on intra-city drivers (Ramjee et al 1991 and Bwayo et al 2003). This research will therefore serve to bridge the gap in information concerning drivers in general. Taxi drivers are a very vibrant group and it's a business in Cape Coast that employs a lot of young men as well as middle-aged men and also made up of individuals with different educational background.

METHODOLOGY

The study was conducted in Cape Coast Metropolitan area, which is the capital of Central Region of Ghana from September 2012 to December 2012. Cape Coast is the third most populous city in the southern sector of Ghana with a population of 169,894 people according to the 2010 census.

The Raosoft sample calculator software was used to calculate the sample size of 141 with confidence level of 95% (standard value of 1.96), margin of error at 5% (standard value of 0.05) with an estimated taxi driver's population of 500.

Five main taxi stations were selected for the exercise base on their population size. They were University of Cape Coast Science Branch, University of Cape Coast Old site branch, Kotokoraba branch, Abora branch and Kingsway branch.

A questionnaire was used to obtain most of the data from participants similar to questionnaires used in similar project in Wa of Ghana and Alexandria of Egypt.

The participants who accepted to take part in the counseling and testing were directed to the Doctors In-Service Clinic where their blood samples were taken. About 5 ml of blood was drawn into a plain vacutainer tube and labeled for processing later in the laboratory.

The vacutainer tubes were later centrifuge at speeds of 1500 rpm for 5 minutes to separate serum from whole blood. The serum was then used for the testing of HBV. A drop of serum was put on VIKIA HBsAg cassette with buffer and results read after 15 minutes according to instructions by manufacturer.

A total of 150 questionnaires were administered with 100 of them taking part in the counseling and testing for HBV. The data were analyzed using Statistical package for the social sciences (SPSS) 16.0 version. Descriptive statistics such as frequencies and percentages were generated to describe the data. Cross tabulation and phi coefficient tests were used to analyze the association between independent variables as well as chi-square tests. Probability values of <0.05 were considered as statistically significant.

RESULTS

A total of 150 participants data were analyzed with a range of 48 years, the youngest person being 21 years while the oldest person was 69 years. The average age was 38.08 years with the median age being 36.50 years. 18% of the drivers reside in Cape Coast while 14.7 reside in Abora (a suburb of Cape Coast) with the rest scattered around all the suburbs of Cape Coast. Majority of the respondents were Christians (84%) with the remainder being Muslims and others. Education up to the secondary school level was the level most of the respondents had attained representing 70%. There were more married participants (56%) as compared to single and divorced individuals.

Most of the drivers (68%) had heard of Hepatitis B when it comes to the knowledge aspect with more than half of that number (73.5%) indicating the radio as their source of information. A lot more of people who were married (70.4%) had knowledge of Hepatitis B as compared to 29.6% who had not heard anything on the disease. Respondents who were single had almost equal percentages of knowledge of the existence of Hepatitis B infection (58.3%) as compared to those with no knowledge of it (41.7%). 71.4% of Christians had heard of the disease while 52.9% of Muslims had not heard of the disease.

80.4% indicated that they did not know the causes of hepatitis B infection with 47.1% having no knowledge about the availability of treatment for it. About half (49%) think it can be prevented. Table 1 summarizes the knowledge of hepatitis B among the taxi drivers.

72% of respondents does not use condom when engaging in intercourse with 5.3% of the respondents having patronize commercial sex workers in the last six months. 54.7% of the taxi drivers were regular consumers of alcoholic drinks with 57.9% being Christians with 35.3% being Muslims.

DISCUSSION

Though most of the drivers had heard of the disease (68%) there was generally low knowledge on the causes and modes of transmission of the disease. On the question of the infection being transmitted thru blood only 26% responded yes while 56.9% did not know that it could be transmitted thru blood. From table 2 most of the drivers had very little knowledge of the disease. The source of radio as the predominant source of information for the disease is not surprising as most of them spend most of the time behind the steering wheel and listening to the radio comes easy. The little knowledge on the causes and modes of transmission can be attributed to the fact that most the resource persons on radio stations are by spiritualist and herbalist trying to advertise their herbs and so do not educate the people more on the causes and prevention options.

The difference in the level of knowledge of the infection among the various religious group with 71% of Christians having knowledge of it while only 47.1% of Muslims had knowledge of it is related to the level of formal education existing in the various communities in Ghana.

The educational status of the participants impacted little on the knowledge of the disease as most of them even though had secondary education there was very low knowledge on the causes, transmission and prevention strategies on the disease. This finding is in lined with a study conducted in the Upper West region of Ghana among secondary school students, which showed very little knowledge on the disease even though they have heard of it (Bartholomew). Another study conducted among high school adolescents in Australia reported that although Hepatitis B presents real risks to adolescents, knowledge of the disease has been found to be very low in the different grades (29). This situation could be as a result of the fact that the diseases is not treated as a public health risk hence much attention is not given to it during health educations.

The effect of religion on the knowledge level of the drivers can be said to be very low as none of the drivers indicated a religious gathering as source of information. However most of the Muslim had very little knowledge on the disease as compared to the Christians. Statically there was no association between religion and knowledge of Hepatitis B with p value of <0.05 .

Most people in this part of the world have negative attitude toward sexually transmitted infections (37).

90.7% of the respondents had not been transfused before but most indicated they ask their barbers to change blades when having their hair and bear trimmed. This might be mistaken as a contradiction on the knowledge of the mode of transmission but since in general most education on HIV/AIDS talks about this precautionary measure its being applied all the time but not necessarily for Hepatitis B.

More than half of the respondents (54.7%) took alcohol with half of them being regular drinkers of the local gin. There were few smokers and few number having tattoos on their body. 50.7% had had more than one sexual partner in the last six months with most of them not using condoms. 72% of the participants don't use condoms when having intercourse with only 28% who use condom. This is very worrying considering a lot of public campaigns on HIV/AIDS, which has the use of condoms as one, its prevention strategies. 10% of the respondents had patronized the services of commercial sex workers in the last six months.

It can be concluded that most of the drivers engaged in practices that puts them at risk of contracting the disease or hasten the disease progression.

The study showed that there is significant association between knowledge and attitude towards the disease with p values of 0.00. There was however no association with p values of 0.136 between knowledge and practices among the respondents.

The prevalence of Hepatitis B obtained for the study is 7.0%, which is lower than the national prevalence of 15.3% according to GHS. This low prevalence might be due the small sample size use.

CONCLUSION

The study was a very high level of knowledge as per having heard of the disease but very low knowledge on the causes, mode of transmission and prevention strategies. The prevalence rate of 7.0% was recorded for the study. There is thus the need for a larger study to ascertain the extent of HBV in the metropolis and comprehensive health education campaigns on mode of transmission and prevention strategies within the community and in the mass media.

ACKNOWLEDGMENTS

We thank all the taxi drivers who voluntarily took part in the study and their station masters who assisted tremendously in the organization of the drivers. Our gratitude to the staff of Doctors In Service Clinic at Cape Coast, Ghana for allowing us to use their clinic for the screening.

REFERENCES

1. Batholomew Chireh, "Knowledge, Attitude and Practices (KAP) concerning Hepatitis B among adolescents in the Upper West Region of Ghana. The Rural-Urban Gradient". Master of Science Thesis in Public Health, Umeå International School of Public Health Epidemiology and Global Health Department of Public Health and Clinical Medicine Umeå University, Sweden 2011.
2. Ghana Health Service Annual Report (2009). Accessed on 24th December 2013. Available at www.ghanahealthservice.org/Final_Draft_2009_GHS_Annual_Report%20final%final.
3. Janice Main and Graham S. Cooke, "HIV and Hepatitis B Co-infection in Africa, Reflection and Reaction" in *The Lancet Infectious Diseases* 2008; 8:210-211
4. WHO, 2013. <http://www.who.int/mediacentre/factsheets/fs204/en/>. Accessed on 5th January, 2013
5. Brewer DD, Potterat JJ, Roberts JM Jr., Brody S, "Male and female circumcision associated with prevalent HIV infection in virgins and adolescents in Kenya, Lesotho and Tanzania" in *Ann Epidemiol.* March 2007;17:3:217-26
6. Matthew Crommett, "Confronting Religion: Perceptions and health-seeking behaviors of devout adolescents when faced with a Sexually Transmitted Infection in Ghana" in *GUJHS.* 2008;5:1
7. Aweis D, Brabin BJ, Beeching NJ, Bunn JE, Cooper C, Gardner K, Iriyagolle C, Hart CA, "Hepatitis B prevalence and risk factors for HBsAg carriage amongst Somali households in Liverpool" in *Sexually transmitted diseases;* January 2002;29:1:44-49
8. Ghana Statistical Service (2010): Population and housing census. Accessed on 5th August 2012. Available at www.statsghana.gov.gh/
9. CDC. Hepatitis B fact sheet – Signs, Symptoms and facts about hepatitis B. 2006. Accessed on 20th December 2012. Available at www.aids.about.com/od/hepatitisb/a/hepbfacts1.htm.
10. Ajzen I, "The theory of planned behavior" in *Organizational behaviour and human decision processes,* 1991, 50, p. 179-211
11. Forbes GB, "College students with tattoos and piercing: motives, family experience, personality factors and perception by others" in *Psychol Rep.* 2001;89:774-86
12. Wright S, Gabb R, Ryan M, "Reproductive health - Knowledge, attitudes and needs of adolescents" in *The Med J of Australia;* 1991, 155:325-28
13. Rosenblum I, Darrow W, Witte J. et al., "Sexual practices in the transmission of hepatitis B virus and prevalence of hepatitis delta virus infection in female prostitutes in the United States" in *Commun Dis Public Health.* 2001 Dec;4:4:247-52
14. Blankson A, Wiredu EK, Gyasi RK, Adjei A, and Tettey Y, "Sero-Prevalence of Hepatitis B and C Viruses in Cirrhosis of the Liver in Accra, Ghana" in *Ghana Med J.* 2005 December; 39:4: 132-137
15. Bwayo JJ, Omari AM, Mutere AN, Jaoko W, Sekkade-Kigundu C, Kreiss J, Plummer FA, "Long distance truck drivers: prevalence of sexually transmitted disease (STDs)" in *Vaccine,* May 2003;16:1948-1951
16. Higgins John W. "Sense-Making as a method of practicing a critical pedagogy in the multi-cultural classroom" <http://communication.sbs.ohio-state.edu/sense-making/meet/m96higgins.html>. 1996. Accessed on November 20, 2012

AUTHOR BIBLIOGRAPHY


	<p>Mohammed Saanid ADAMU</p> <p>The lead author is a Lecturer in Chemical Pathology at the School of Medical Sciences, University of Cape Coast in Ghana. My research interest is in the area of non-communicable diseases and diseases affecting most Africans</p> <p>s.m.adamu@uccsms.edu.gh</p>
---	--

Table 1. Knowledge of Hepatitis B Infection

	Frequency	Percentage (%)
Have heard of HBV	102	68
Have NOT heard of HBV	48	32
	Frequency	
Age boundary	Have heard of HBV	Have NOT heard of HBV
<31 years	36	15
32 – 41 years	33	16
>41 years	32	17
Formal Education		
Primary	21	20
Secondary	78	27
Tertiary	3	0
No Education	0	1
Marital Status		
Married	69	29
Single	14	10
Cohabiting	4	4
Relationship	12	2
Widowed	2	1
Divorced	1	2
Religion		
Christianity	90	36
Muslim	8	9
Others	4	3

Table 2. Is hepatitis B transmitted by infected blood?

	Frequency	Percentage (%)	
Yes	39	26	
No	5	3.3	
Don't Know	58	38.7	
	Frequency		
Age boundary	Yes	No	Don't Know
<31 years	18	1	17
32 – 41 years	12	2	19
>41 years	13	0	19
Formal Education			
Primary	6	0	15
Secondary	33	4	41
Tertiary	0	1	2
No Education	0	0	0
Religion			
Christianity	34	4	52
Muslim	4	1	3
Others	1	1	3