ejpmr, 2016,3(3), 89-93

SJIF Impact Factor 2.026

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Research Article

ISSN 3294-3211

EJPMR

KNOWLEDGE GAP ABOUT TUBERCULOSIS CASE DETECTION AMONG PATENT MEDICINE VENDORS IN OSOGBO: IMPLICATIONS FOR SOCIAL WORK

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Article Received on 11/01/2016 **Article Revised on 01/02/2015** **Article Accepted on 21/02/2016**

ABSTRACT

Background information: In Nigeria, a high proportion of patients affected with tuberculosis seek treatment from patent medicine vendors. This study seeks to assess the knowledge and current practices of Patent Medicine Vendors in TB control in Nigeria. Methodology: This was a descriptive cross sectional study, carried out among Patent Medicine Vendors in Osogbo, Osun- State, South-western Nigeria. The multi-stage sampling technique was used to select the respondents and data was collected with pre-tested, semi-structured questionnaires which were interview administered and supervised by trained research assistants. A total of 159 questionnaires were administered. Data were analyzed using Statistical Package for Social Sciences version 17. Level of significance was set with p-value less than or equal to 0.05. Result: Majority of the respondents (138, 86.8%) were within 20 – 39 years of age with a mean age of 31.9 $\pm$ 6.5 years, (84, 52.8%) were male, married (66.7%) and Yoruba (86.2%). Most of the respondents (101, 63.5%) were aware of the disease called tuberculosis, but only 108 (67.9%) had adequate knowledge after scoring the outcome variables for knowledge and categorizing the scores. Also, more than one quarter i.e 46 (28.9%) have not been referring TB suspect to Treatment centres. There is a significant association between religion and knowledge ($P< 0.05$) as well as Knowledge and Practice ($P<0.05$) Conclusion: The study revealed that the level of awareness about tuberculosis among respondents was high, but their comprehensive knowledge was low thereby emphasis should be laid on training and retraining of Patent Medicine Vendors in Osogbo towards improving TB case detection.

KEYWORDS: In Nigeria, a high proportion of patients affected with tuberculosis seek treatment from patent medicine vendors.

INTRODUCTION

Tuberculosis (TB), an ancient infectious disease caused by Mycobacterium tuberculosis, is the leading cause of death due to an infectious agent globally. It is both preventable and treatable.[1,2] The World Health Organization (WHO) records an average of nine million new TB cases annually and about 5000 TB deaths daily.[1] TB and human immunodeficiency virus (HIV) co-infection and the exponential increase in drug resistance are greatly responsible for the resurgence of TB.[3] Tuberculosis remains a serious public health threat to people of all sexes and ages in Nigeria.[4] The country ranks among the 10 top TB high burden countries in the world,[4] with an incidence rate of 338/100,000 and a prevalence rate of 322/100,000[4] and a projected 610,688 incident cases of TB in 2014.[4] The rate of TB case detection in Nigeria is one of the lowest in the world currently standing at approximately 17%.[4,5]

Community involvement in TB prevention, care and control is one of the STOP TB paradigm shift in strategy designed to engage communities as a resource for TB diagnosis, treatment and support,[6] using casual and volunteer health work force as a bridge between the health system and the community, community mobilization and TB campaigns, sensitizations, contact tracing and treatment support. This was found effective in Kenya and many African countries.[7] However, a high attrition rate among community volunteers (CVs) and casual health workers is a globally known problem.[8]

Patent medicine vendors (PMVs) are independent medicine sales persons that form the 1st line of health care provision for most communities in Nigeria. Their

business premises are largely fixed locations and therefore provide a veritable means for the referral and tracking of clients for health care. Surprisingly, despite effectiveness of DOTS therapy, delay in seeking care among tuberculosis patients has been documented in studies done by Onyeneho et al and Okeibunor et in Southern, Nigeria.[9,10] These studies also reported that reasonable number of tuberculosis patients were treated by traditional medical practitioners and Patent Medicine Vendors before they seek care at healthcare facilities. Their business premises are largely fixed locations and therefore provide a veritable means for the referral and tracking of clients for health care.[11,12] However, many of this patients developed resistant tuberculosis due to delay in TB diagnosis and mis-management by this providers. This study seeks to assess the knowledge and current practices of PMV in TB control in Osun-state, South Western, Nigeria.

METHODOLOGY

Osogbo is the capital of Osun State with 3 Local Government Areas namely Olorunda, Egbedore and Osogbo Local Government Areas. Majority of inhabitants are traders, farmers and civil servants. While there are about six large scale pharmaceutical wholesales outlets in the town, patent medicine stores are numerous, constituting most retail outlets. Most of the Patent Medicine vendors are easily accessible to people living around with no need for drugs prescription papers. Each of the 3 local government making the city have her own association of patent medicine vendors. In addition, TB management facilities exist at all levels of care i.e Primary, Secondary and Tertiary levels.

A cross sectional descriptive study was carried out in Osogbo to collect baseline data towards determining the Knowledge Attitude and Practices of these drug sellers towards Tuberculosis and its management. Eligible vendors were those currently registered with their respective associations' and who operates retail shops. Mobile vendors were excluded from this study.

Multi-stage sampling method was used for subject selection. In stage one, simple random sampling (employing simple balloting) was used to select 2 out of 3 LGAs in Osogbo. In stage two, 6 wards out of 10 per LGA were also randomly selected. Questionnaires were equally allocated to wards. In each ward, a list of registered vendors was obtained from their association. From the list, a systematic sampling method of one in 3 vendors on the list was made, and all sampled vendors were traced using their shop address given by the association.

Data collection which started with community entry and advocacy through executive members of the associations was done with the assistance of ten well trained research assistants. Study instruments consist of semi structured interviewer administered and pre tested questionnaires. A vernacular version was prepared after translation and back translation between English and the local Yoruba language to ensure better understanding of the uneducated vendors. Study variables include their knowledge of causes, symptoms, diagnosis and management of TB as it relates to their work in addition to some socio-demographic data as well as action taking when suspected TB patients are seen.

Ethical approval to conduct the study was obtained from LTH ethical review committee and the associations of patent medicine vendors in Osogbo. Data was managed using the SPSS software version 17 after sorting out the questionnaires, double entry. Frequency tables and charts were generated. Chi squared test was used to find association between categorical variables at a significant value of $P<0.05$.

RESULT

One hundred and fifty nine individuals aged range 20-49 years were interviewed with mean age 31.9 $\pm$ 6.5 years. Most respondents were male 84 (52.8%) , married 106 (66.7%) and Yoruba (137, 86.2%) as shown in Table 1.

Table 1: Socio-demographic Status of respondents

Variable	Frequency	Percentage
Sex		
Male	84	52.8
Female	75	47.2
Total	159	100%
Marital Status		
Single	52	32.7
Married	107	67.3
Total	159	100
Religion		
Christian	70	44
Moslem	89	56
Total	150	100
Ethnicity		
Yoruba	137	86.20%
Non-Yoruba	22	13.80%
Total	**159**	**100**

In terms of knowledge, the study shows that more than half of respondents are aware of TB control program regimen i.e 100 (67.9%), a larger percentage i.e 149 (93.7%) knew bacteria as causative organism. In terms of mode of transmission, only 108 (67.9%) knew Tuberculosis can be transmitted through air. In addition majority 158 (99.4%) did not know complete names of drugs used in treatment of tuberculosis patients. This is illustrated in table 2 below.

Table 2: Knowledge of respondents on Tuberculosis and its Management

Variable	Frequency	Percentage
Causative Organism		
Bacteria	149	93.70
Virus	10	6.30
Total	159	100.0
Mode of transmission		
Air borne	108	67.9
Contaminated water	6	3.8
Contaminated food	44	27.7
Total	159	100
Name of treatment drugs		
Correct complete names	1	0.6
Incorrect	158	99.4
Total	159	100
Aware of TB control Program		
Yes	100	62.90
No	59	37.10
Total	159	100

Also, more than half of the respondents i.e 108 (57.9%) had adequate knowledge while 51(32.1%) had inadequate knowledge. This is illustrated in figure 1 below.

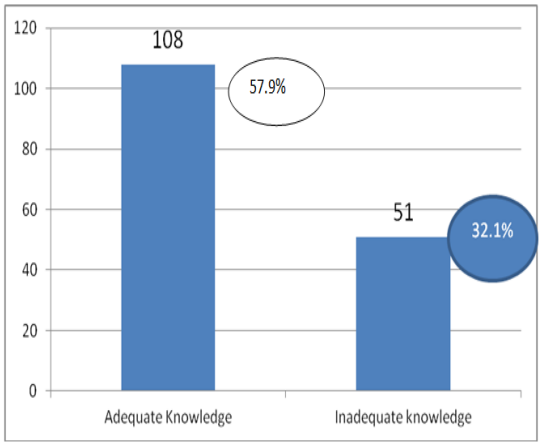

Figure 1: Knowledge score of respondents

In terms of practice, 113 (71.1%) have been referring TB suspect to Directly Observed Treatment Therapy Centre while 46 (28.9%) are not. This is shown in figure 2 below.

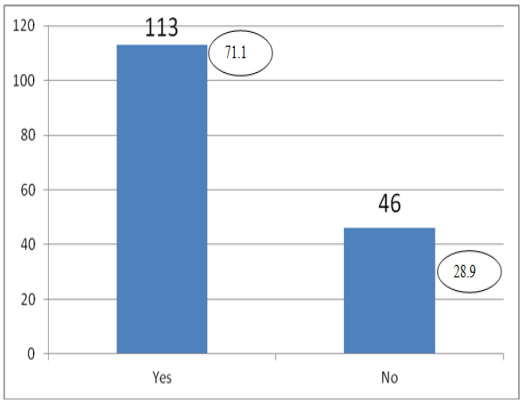

Figure 2: Referral of TB suspects for TB diagnosis by respondents

Table 3 shows cross tabulations of socio – demographic status with knowledge towards tuberculosis and its management. There was significant association between religion and knowledge score of respondents. (P< 0.05) as shown in Table 3 below.

Table 3: Cross tabulation of respondents religion and ethnicity against knowledge

Religion	Adequate Knowledge	Inadequate knowledge	X^2	P value
Christian	41(38.0%)	29 (56.9%)	5.02	0.025
Moslem	67 (62.0%)	22(43.1%)		
Total	108(100%)	51(100%)		
Ethnicity				
Yoruba	90(83.3%)	47(92.2%)	2.26	0.13
Non-Yoruba	18(16.7%)	4(7.8%)		
Total	108(100%)	51(100%)		

Table 4 shows cross tabulations respondents knowledge status with referral of suspects for TB diagnosis. There was significant association between knowledge of respondents and referral status for TB diagnosis (P< 0.05) as shown in Table 4 below.

Table 4: Cross tabulation of knowledge status of respondents with referral for TB diagnosis.

Knowledge Status	Referral of TB Suspects (Yes)	Referral of TB suspects (No)	X^2	P value
Adequate Knowledge	86(76.1%)	22 (47.8%)	12.0	0.001
Inadequate Knowledge	27 (23.9%)	24(52.2%)		
Total	108(100%)	51(100%)		

DISCUSSION

PMVs were the most sought place for initial care among TB patients as documented in other studies done by Kingsley et al in Enugu, South-Eastern, Nigeria and Oladayo et al in Abuja, North Central Nigeria with 79% and 22% TB patients first sought care following onset of ailments respectively.[13,14] It is likely that the communities do rely on PMVs as their first point of care for many health-related complaints. Majority of PMVs interviewed in our present study had aged range 20-49 years with mean age 31.9 $\pm$ 6.5 years. Most were male (i.e 52.8%) and married (i.e 66.7%). This was quite similar from another study in Enugu, South Eastern, Nigeria by Nkechi et al with ages ranged from 19 - 45 years and majority were males (73%).[15]

TB knowledge includes the ability to recognize symptoms, identify causes, and transmission routes, and familiarity with the availability of cure.[16] In our study, only 108 (57.9%) had satisfactory knowledge which was lower than 64% in Iraq by Nguyen et al.[17] Although Iraq study was done among TB patients with higher level of education which could possibly explain higher level of knowledge. The association between knowledge and level of education among TB patients has been further shown in studies in Tanzania[18] and Vietnam[19] but this was not demonstrated in our study.

In terms of causative agent, a larger percentage i.e 149 (93.7%) from the present study knew bacteria as causative organism. This was higher than 48.2% recorded among PMVs in Enugu
who did not know the causes of Tuberculosis.[15] Also, 31.1% did not know that TB could be transmitted airborne. This low awareness on mode of transmission among TB patients has been documented in other studies by Oladayo et al among TB patients in North Central, Nigeria. (i.e 40%).[14]

However, only 100 (67.9%) are aware of TB control program while majority 158 (99.4%) did not know complete names of drugs used in treatment of tuberculosis patients. Similarly, 113 (71.1%) have been referring TB suspect to Directly Observed Treatment Therapy Centre.

According to our study the poor referral practices is significantly linked to low level of satisfactory knowledge on TB control hence the need for routine health education seminars aimed at educating them on appropriate recognition and immediate referral of TB suspects to DOTS centres within the Local Government Area. This corroborated findings from a previous study that attributed the poor referral practices among PMVs to their low level of awareness of DOTS clinics in the communities and the false confidence of PMVs in their ability to handle all cases.[15]

Referrals should not be done when there are failed efforts to ameliorate client's condition or when symptoms get worst. The implications of such delays are not farfetched. The clients often engage in a process of multiple and varied healthcare-seeking, typical of poor patients, which often delays diagnosis and the start of treatment, which increases the likelihood of developing multidrug-resistant TB.[10,20]

CONCLUSION

Inadequate knowledge on TB was associated with poor referral of TB suspects to Treatment centres**.** Osun State TB Control Program should organize sensitization programs on TB for PMVs to increase their understanding of TB and ensure that they refer suspected TB cases promptly to DOTS centers where they can be diagnosed and properly treated.

REFERENCES

1. World Health Organization, Tuberculosis Control: WHO Report 2010,WHO, Geneva, Switzerland.
2. Eltringham, I.J and F. Drobniewski, "Multiple drug resistant tuberculosis: aetiology, diagnosis and outcome," British Medical Bulletin, 1998; 54(3): 569-578.
3. Becerra, I. F. Pachao-Torreblanca, J. Bayona et al.,"Expanding tuberculosis case detection by screening household contacts," Public Health Reports, 2005; 120(3): 271-277.
4. FMOH. National strategic plan for tuberculosis control 2010-2015. Abuja: Federal Ministry of Health. 2014
5. FMOH. National TB prevalence survey. Abuja: Federal Ministry of Health, 2013
6. WHO/ STOP TB Partnership. The Stop TB Strategy. Geneva: World Health Organization, 2006
7. Harries A, Kenyon T, Maher D, Floyd K, Nyarko E, Nkhoma W. "Community TB Care in Africa": a collaborative project coordinated by WHO. Report on a "lessons learned" meeting in Harare, 27-29 December 2000. (WHO/CDS/TB/2001.291)
8. Colvin C, Mugyabuso J, Munuo G, Lyimo J, Oren E, Z et al. Evaluation of community-based interventions to improve TB case detection in a rural

district of Tanzania. Glob Health Sci Pract, 2014; 2(2): 219-25.
9. Onyeneho, N. G. and Chukwu, J. N. Is There a Role for Patent Medicine Vendors in Tuberculosis Control in Southern Nigeria? Journal of Health Population and Nutrition, 2010; 28(6): 567-577.
10. Okeibunor, J. C., Onyeneho, N., Chukwu, J. N., Post, E. Where do tuberculosis patients go for treatment before reporting to DOTS clinics in southern Nigeria. Health Research Bulletin, 2007; 9: 94-101.
11. Okeke, T.A. & Aguwa, E.N. Evaluation of the implementation of directly observed treatment short course by private medical practitioners in the management of tuberculosis in Enugu, Nigeria. Tanzania Health Research Bulletin, 2006; 8: 86-89.
12. Yamasaki-Nakagawa, M. Gender difference in delays to diagnosis and health care seeking behaviour in a rural area of Nepal. International Journal of Tuberculosis and Lung Disease, 2001; 5: 24-31.
13. Kingsley N Ukwaja, Isaac Alobu, Chibueze O Nweke and Ephraim C Onyenwe Healthcare-seeking behavior, treatment delays and its determinants among pulmonary tuberculosis patients in rural Nigeria: a cross-sectional study.BMC Health Services Research, 2013: 13: 25
14. Oladayo Biya, Saheed Gidado, Ajibola Abraham, Ndadilnasiya Waziri1, Patrick Nguku, Peter Nsubuga, Idris Suleman, Akin Oyemakinde, Abdulsalami Nasidi, Kabir Sabitu. Knowledge, care-seeking behavior, and factors associated with patient delay among newly-diagnosed pulmonary tuberculosis patients, Federal Capital Territory, 2010. Pan African Medical Journal, 2014; 18(1): 6.
15. Nkechi G. Onyeneho. Joseph N. Chukwu. Is There a Role for Patent Medicine Vendors in Tuberculosis Control in Southern Nigeria?, J HEALTH POPUL NUTR, 2010; 28(6): 567-577
16. Waisbord S . Behavioral barriers in tuberculosis control: A literature review. The CHANGE Project/Academy for Educational Development. USAID, 2007.
17. Nguyen Hoa, Anna Thorson, Vinod Diwan. Knowledge of tuberculosis and associated health-seeking behaviour among rural Vietnamese adults with a cough for at least three weeks. Scand J Public Health, 2003; 31(61): 59-65.
18. Wandwalo ER, Morkve O. Knowledge of disease and treatment among tuberculosis patients in Mwanza, Tanzania. Int J Tuberc Lung Dis., 2000; 4(11): 1041-1046.
19. Hashim DS, Al Kubaisy W, Al Dulayme A. Knowledge, attitudes and practices survey among health care workers and tuberculosis patients in Iraq. Eastern Mediterranean Health Journal, 2003; 9(4): 10.
20. Nair DM, George A, Chacko KT. Tuberculosis in Bombay: new insights from poor urban patients. Health Policy Plan, 1997; 12: 77-85.