



Evaluation of the Knowledge, Attitude and Practice of the Use of Insecticide- Treated Nets (ITNs) in Aba, Nigeria

O. R. Ezeigbo^{1*}, M. C. Osuagwu², Z. O. Ibegbulem³ and N. G. Agomoh¹

¹Department of Biology/Microbiology, Abia State Polytechnic, Aba, Nigeria.

²General Out-patient Department, Imo State University Teaching Hospital, Orlu, Nigeria.

³Department of Statistics, Abia State Polytechnic, Aba, Nigeria.

Authors' contributions

This work was carried out in collaboration between all authors. Author ORE designed the study, wrote the protocol and the first draft of the manuscript. Authors MCO and NGA managed the literature review and the analysis of the work. Author ZOI performed the statistical analysis. All authors read and approved the final manuscript.

Article Information

DOI:10.9734/BJMMR/2015/11510

Editor(s):

(1) Sinan INCE, Department of Pharmacology and Toxicology, University of Afyon Kocatepe, Turkey.

Reviewers:

(1) Dawit Getnet Ayele, School of Mathematics, Statistics and Computer Science, University of KwaZulu-Natal, South Africa.

(2) Anonymous, Mahatma Gandhi Institute of Medical Sciences Sevagram, India.

Peer review History: <http://www.sciencedomain.org/review-history.php?iid=644&id=12&aid=5944>

Original Research Article

Received 20th May 2014
Accepted 16th June 2014
Published 5th September 2014

ABSTRACT

Background: Over the past decade, significant gains have been made in the implementation of malaria preventive measures in sub-Saharan Africa, including the distribution of insecticide treated nets (ITNs). These have been shown to cause a reduction in the incidence of malaria and other mosquito borne diseases.

Methods: Knowledge, attitude and practices of the use of ITNs were critically evaluated in Aba, south eastern Nigeria from February to July, 2013. A cross-sectional study was conducted in four communities in Aba. A total of 500 household heads or their representatives were surveyed using a pre-tested structural questionnaire administered through house-to-house interview.

Results: Out of the 500 respondents interviewed, 460 (92.0%) associated malaria with mosquito bites. On home management practices used to prevent mosquito bites, 299 (59.8%) use ITNs, 100 (20.0%) use insecticide sprays, 45 (9.0%) use window/door nets while 32 (6.4%) use repellants. The use of ITNs based on age showed that people between ages 26 and above had the highest

*Corresponding author: Email: obyzeigbotxt1@yahoo.com;

percentage (51.8%), while ages 15-20 had the least (9.3%). Based on levels of education, 179 (66.5%) of those with tertiary education use ITNs, 65 (21.0%) of those with secondary education and only 3 (1.0%) of the illiterate group use ITNs.

Conclusion: Despite increased access to this intervention over time, the use of ITNs still remains low. There is a need therefore to create more awareness of the anti-malarial significance of ITNs, through intensified health education programmes. The main objective of this work is to evaluate the knowledge, attitude and practice of the use of insecticide-treated nets (ITNs) in Aba, south-east, Nigeria.

Keywords: Evaluation; knowledge; attitude; practice, malaria; ITNs.

1. INTRODUCTION

Malaria control still remains a challenge in Africa where 45 countries, including Nigeria, are endemic for malaria, and about 588 million people at risk [1]. The recent World Malaria Report, which indicated that Nigeria accounts for a quarter of all malaria cases in 45 malaria-endemic countries in Africa, clearly shows the challenge of malaria in Nigeria. While there are reports of up to 50% reduction in malaria episodes and deaths in some African countries between 2000 and 2006 [1], reports from Nigeria has not shown any significant reduction, especially with regards to malaria in pregnancy [2]. The reasons adduced for change in malaria prevalence in other countries were good surveillance and high intervention coverage [1]. The huge population and vast geographical area in Nigeria pose serious problems in the success of most malaria intervention programmes. However, the best hope lies with the newly developed long-lasting treated nets which may retain their insecticidal properties for 4-5 years (the life span of the net), thus making retreatment unnecessary. The Roll Back Malaria (RBM) global partnership promotes the use of Insecticide-treated bed nets (ITNs) for everyone at risk of malaria, especially children and pregnant women. Insecticide-treated bed nets (ITNs) reduce human-vector contact by physically excluding vector mosquitoes, killing them if they land on it or repelling them, thereby driving them from the vicinity of the sleeper. Because of the documented effect in several studies on reducing malaria-related illnesses and death [3], ITNs are being promoted for use through public and private sector outlets in African countries. In community-wide trials in several African settings, ITNs have been shown to reduce the death of children under five years from all causes by about 20% [4]. A study in an area of high malaria transmission in Kenya has shown that women protected by ITNs every night

during the first four pregnancies produced 25% fewer under-weight or premature babies [5].

The coverage and proper utilization of ITNs in the country is also limited due to lack of sustainable distribution and issues related to replacement of nets, seasonality of malaria, and poor knowledge of the community with regard to the link between mosquito and malaria [6]. The Roll Back Malaria (RBM) has identified under-five children as one of the highest risk groups for malaria, and one of the strategies set to fight malaria in this group is to increase the utilization of mosquito nets [7]. Fegan et al. [8] found that consistent use of ITNs can reduce malaria transmission by up to 90% and avert as much as 44% of all-cause mortality in their study of under-five children in Kenya. Occupational status of the household head and family size were among the factors affecting ownership of ITNs [9]. In one study in Ethiopia, 62.4% of the ITNs ownership was obtained and government employees and self-employed traders were less likely to own a net [10]. Similarly in Tanzania, a unit increase in family size increased the odds of ownership of a net more than twice [11]. In some other studies, women's and head of household education, head of household occupation, marital status, household size, household wealth, living in rural/urban residence and expenditure on other malaria preventive products were found to be associated with ITN ownership [12,13,14]. However, Eisele et al. [15] reported that greater malaria knowledge, education and wealth were not consistent determinants of net use. A strong association remained between using ITNs, owing a radio and living close to a health institution [16]. In addition, households' desire of mosquito avoidance and correct knowledge of malaria transmission were reported to be strong determinants of ITNs usage [17,18]. Several studies suggest that perceived malaria risk and malaria knowledge are important determinants of bed nets ownership and usage [13,19,20]. Cited reasons for non-use of ITNs, where one was

available were discomfort, heat, problem with hanging nets, inconveniences, lack of space, limited perceived benefits of ITNs, preference to use other malaria prevention and seasonal variation in the use of ITNs [12,21,22]. It is found that while net replacement remains important, the more education about use and care of the nets are likely to increase the use of nets by households [23]. It is also worth mentioning that even when knowledge is a predictor of ITN use; it may not assure protection from malaria unless there is proper use and strong adherence [9]. This study evaluates the knowledge, attitude and practice of the use of ITNs in Aba, Abia State in order to determine their compliance rate.

2. MATERIALS AND METHODS

2.1 Study Area

The study was conducted in four communities in Aba, Abia State, South Eastern Nigeria. Aba lies within the forest zone, along the west bank of the Aba River, at the intersection of roads from Port Harcourt in River State, Owerri in Imo State, Umuahia (the State Capital of Abia State), and Ikot Ekpene and Ikot Abasi in Akwa- Ibom State. The geographical co-ordinates for Aba are 5° 07' N latitude and 7° 22' E longitude and 205m (673ft) above sea level. Aba is a major settlement and commercial center in a region that is surrounded by small towns and villages. The indigenous people of Aba are the 'Ngwa' people. The people are predominantly traders, artisans, farmers and public/civil servants. Aba being a rainy zone is prone to malaria because of flooding during the rainy seasons and poor drainage system, resulting in the formation of temporary water bodies that promotes the breeding of mosquitoes, the vector for malaria parasites.

The study was conducted in four communities in Aba: Eziana in Aba North LGA, World Bank and Abayi in Osisioma- Ngwa LGA, and Ngwa Road in Aba South LGA. These communities were selected based on their dense population, the drainage system, educational levels and occupation of the people.

2.2 Research Ethics

Ethical review and clearance of the research protocol, research instruments and consent procedures were obtained from the Ethical Review Committee of the Department of Biology/Microbiology, Abia State Polytechnic Aba. Permission was sought from each of the

Local Government Chairmen. All subjects who consented and signed the consent form presented their identification data (name, age, sex, occupation etc).

2.3 Study Design and Data Collection

The study which was conducted between February and July, 2013, was design to evaluate the knowledge, attitude and practice of the use of insecticide-treated bed nets (ITNs) in Aba. Household distribution in Aba is 166,312 comprising of 24,803 for Aba North LGA, 92,437 for Aba South LGA and 49,072 for Osisioma Ngwa, based on 2006 census [24]. A multi-stage sampling was used to select the required number of households. The second stage was the simple random selection of 125 households in each of the selected communities. A pre-tested structural questionnaire was administered to the randomly selected 500 households. The information which was obtained from the household heads or their adult representative was presented in English language or interpreted in the local dialect. The information included such variables relating to socio-demographic characteristics, household knowledge of malaria, preventive measures, net possession and net utilization [25]. The sample size was estimated using Kreijcie and Morgan [26] formula for determining sample size: $S = \frac{X^2 NP (1-P)}{d^2 (N-1) + X^2 P (1-P)}$, $N=166,312$ giving a minimum sample size of 384.

2.4 Statistical Analysis

Statistical analysis was done using statistical package for social sciences (SPSS) version 20.0. Statistical significance tests included the use of *p-value* to assess the role of chance and χ^2 (Chi square) test to account for the association between different variables. In this study, *p-value* < 0.05 was used to disapprove the null hypothesis.

3. RESULTS

The results showed that 460 (92.0%) individuals out of 500 sampled have good knowledge of mosquito as the vector that transmits malaria. However, 20(4.0%) claimed malaria is caused by heat, while 16 (3.2%) claimed malaria is caused by oily food (Table 1).

The frequency of home management methods used in malaria prevention was shown in Table 2. Out of 500 individuals interviewed, 204 (40.8%) males and 296 (59.2%) females; 299 (59.8%) use ITNs, 100 (20.0%) use insecticide

spray, 45 (9.0%) use window/door nets, 7 (1.4%) use a combination of window/door nets plus insecticide spray while 17(3.4%) use none. Four hundred and eighty three persons (96.6%), out of 500 interviewed use one form of home management methods or the other; this comprises of 196 (40.6%) males and 287 (59.4%) females, while 17 (3.4%) use none of the preventive measures. Frequency of home management methods (HMMs) used in preventing mosquito bite is not significantly associated with sex.

Table 1. Knowledge of the respondents on the agent that transmits Malaria

Causative agent of Malaria	Number	Percentage
Mosquito bite	460	92.0
Heat	20	4.0
Oily food	16	3.2
Others	4	0.8
Total	500	100

The home management methods of preventing malaria according to the different communities (Table 3), revealed that 82(27.4%) of the individuals that use ITNs come from Ezianya, 79(26.4%) come from World Bank, 70 (23.4%) come from Abayi while 68 (22.7%) come from Ngwa Road. On the use of insecticide spray, 27(27.0%) come from Ezianya, 21 (21.0%) come from World Bank, 14 (14.0%) come from Abayi and 38 (38.0%) come from Ngwa Road. Out of 17 individual that do not use any preventive measures, 2 (11.8%) come from Ezianya, 1(5.9%) come from Word Bank, 12 (70.6%) come from Abayi and 2(11.8%) come from Ngwa Road. Frequency of use of home management methods of malaria prevention is significantly

associated with the communities of the respondents.

Table 4 shows the socio-demographic factors of the individuals that use ITNs. The results revealed that out of 299 individuals that use ITNs, 122 (40.8%) are males while 177 (59.2%) are females. Of this number that use ITNs (299), 155 (51.8%) fall within the ages of 26 and above, followed by ages 21-25 with 116 (38.8%) while the least is obtained from the age bracket 15-20 years with 28 (9.4%). On the levels of education, results revealed that education contributes significantly to the use of ITNs. One hundred and eighty nine individual (63.2%) out of 299 that use ITNs had tertiary education, 75 (25.1%) had secondary education, 32 (10.7%) had primary education while only 3 (1.0%) are illiterate. On the grounds of occupation, 102 (34.1%) students use ITNs, 80 (26.8%) are civil servants, 71 (23.7%) are artisans/traders while the least was farmers with 11 (3.7%). One hundred and fifty eight (52.8%) of those that use ITNs were married while 141 (47.2%) were single. The ownership of ITNs is significantly associated with sex, age, education and occupation, while marital status showed an insignificant association to ownership of ITNs.

The frequency of the use of ITNs is shown in Table 5. One hundred and fourteen (38.1%) claimed they use ITNs everyday, 105(35.1%) claimed often (at least 5 times a week), 62 (20.7%) said they use ITNs rarely (at most 2 times a week), While 18 (6.0%) claimed they have ITNs but hardly use it. The Chi-square analytical technique showed that usage of ITNs is significantly associated with the frequency of use.

Table 2. Frequency distribution of different home management methods (HMMs) used to prevent mosquito bites according to the communities

HMM	Number	Ezianya (Number and %)	World Bank (Number and %)	Abayi (Number and %)	Ngwa Road (Number and %)
ITNs	299	82 (27.4)	79 (23.4)	70 (23.4)	68 (22.7)
Insecticide spray	100	27 (27.0)	21 (21.0)	14 (14.0)	38 (38.0)
Repellant (mosquito coil)	32	1 (3.1)	15 (46.9)	14 (43.8)	2 (6.3)
Window/door net	45	8 (17.8)	9 (20.0)	13 (28.9)	15 (33.3)
Combined window/door net and insecticide spray	7	5 (71.8)	0	2 (28.6)	0
None	17	2 (11.8)	1 (5.9)	12 (70.6)	2 (11.8)
Total	500	125	125	125	125

$\chi^2 = 66.989, p\text{-value} < 0.0001$

Table 3. Effect of Socio-demographic factors on the ownership of ITNs

Factor		Number that use TNs	Percentage that use ITNs	χ^2	p-value
Sex	Male	122	40.8	10.117	0.001
	Female	177	59.2		
Age	15-20	28	9.4	84.930	0.000
	21-25	116	38.8		
	26 and above	155	51.8		
Education	Illiterate	3	1.0	267.943	0.000
	Primary	32	10.7		
	Secondary	75	25.1		
	Tertiary	189	63.2		
Marital status	Single	158	52.8	0.967	
	Married	141	47.2		
Occupation	Applicant	35	11.7	88.809	0.000
	Student	102	34.1		
	Farmer	11	3.7		
	Civil servant	80	26.8		
	artisan/trader	71	23.7		

Table 4. Frequency of the usage of ITNs

Frequency of use	Number that use ITNs	Percentage that use ITNs	χ^2	p-value
Every night	114	38.1	78.110	0.000
Often (At least 5 times a week)	105	35.1		
Rarely (At most 2 times a week)	62	20.7		
None	18	6.0		

Table 5. Reasons for non-compliance on the use ITNs

Reasons	Number	Percentage	χ^2	p-value
Discomfort	103	34.4	188.341	0.000
Heat	130	43.5		
Problem of hanging	21	7.0		
Problem of space	13	4.3		
No reason	32	10.7		

Based on reasons for non-compliance, 130 (43.5%) claimed it gives them heat, 103 (34.3%) claimed ITN gives them discomfort, 21 (7.0%) said they have problem of hanging, 13(4.3%) said they have no space, while 32 (10.7) said "no reason". The non-compliance to the use of ITNs is significantly associated with the reasons stated below.

4. DISCUSSION

This study evaluates the use of insecticide-treated bed nets (ITNs) in Aba, Abia State, Nigeria. This community-based study revealed that a good percentage (92.0%) of the respondents associated malaria with mosquito

bites. This finding collaborates with the results of [9] where 98.2% of the respondents correctly pointed out being bitten by mosquitoes as the cause of malaria. However, some respondents in this study have the misconception that malaria is caused by heat (4.0%) or oily food (3.4%). Such misconceptions should be corrected to frustrate the negative influence they might have on appropriate preventive methods. For instance, a person with such misconception might not see it necessary acquiring any preventive measures against malaria.

The use of preventive measures against malaria is high (96.6%). Only 3.4% lacked any form of preventive measures. Based on communities

sampled, there was significant difference on the use of preventive measures. However, among those that do not use any preventive measures, 70.6% come from Abayi community. The result also showed that 59.8% of the respondents indicated ownership of at least one ITNs. This is encouraging when compared to a study conducted in 2008 in the six geopolitical zones of Nigeria where household ownership of ITNs was 10.1%, but only 1.7% of children under age of five sleep under it [11]. This implies that ownership and use of ITNs need to be emphasized more in Nigeria to obtain a better coverage.

The present study showed that sex, occupation, education and age have significant effect on ITN ownership. However, marital status showed an insignificant association to ownership of ITNs. This correlation was also seen in the work of [27]. However, marital status showed an insignificant association to ownership of ITNs. It is expedient to advocate that every household should have two or more ITNs, as most individuals may not share their beds with others, and married couples will only share their beds with their partners. It is obvious that most of those who own the nets do not appreciate the usefulness of the nets. This is evidenced by the fact that only 38.1% indicated they use the net every night. Factors identified as barrier to adherence to ITN use were heat, discomfort, problem with hanging and space. These factors were also identified by [22,28]. An appreciable proportion of the non-compliers identified heat as the major reason for non-adherence. Hot weather and lack of electricity appeared to be a major hindrance to the use of ITNs among the individuals that own them. There is therefore a need for regular power supply in the country. Efforts should also be made to have ITNs in some forms aside from bed nets e.g. window and door nets; this will go a long way to reduce the effect of heat instead of bed nets.

5. CONCLUSION

Although there appears to be a decline in the burden of malaria incidence in Africa, reports from Nigeria indicates that there is a rise with a reported increased incidence of severe malaria. This fortunate decline in malaria incidence in parts of Africa has been attributed to a combination of interventions, such as the use of insecticide-treated bed nets (ITNs), artemisinin combination therapy (ACT) and indoor residual spraying. Because practice is the application of

knowledge, people should first have a good knowledge base on the available methods, and then they will make use of the methods based on what they know.

The present study revealed that despite the people's reasonable knowledge on malaria and its preventive measures, adherence to the preventive measures, particularly, as it concerns the insecticide-treated bed nets (ITNs) is not so encouraging. There is close association between ownership and usage of ITNs, and as such, serious awareness should be created to encourage ownership and usage of ITNs.

CONSENT

All authors declare that written informed consent was obtained from the participants for the publication of this case report.

ETHICAL APPROVAL

All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. WHO. World Malaria Report. World Health Organization, Geneva, Switzerland; 2008.
2. Agomo CO, Oyibo WA, Anorlu RI, Agomo PU. Prevalence of malaria in pregnant women in Lagos, South-West Nigeria. *Korean J Parasitol.* 2009;47(2):179-183.
3. WHO. Africa Malaria Report 2003. [Online]. Geneva: World Health Organization; 2003. Available: <http://rbm.who.int/amr2003/amr2003/ch1.htm>. Accessed Feb., 2013.
4. Center for Disease Control and Prevention (CDC). Insecticide-treated bed nets. *CDC 24/7: Saving Lives, Protecting people*; 2012.
5. Ter Kuile FO, Terlouw DJ, Phillips-Howard PA, Hawley WA, Friedman JF, Kariuki SK, Shi YP, Kolczak MS, Lal AA, Vulule JM, Nahlen BL. Reduction of malaria during

- pregnancy by permethrin-treated bed nets in an area of intense perennial malaria transmission in western Kenya. *Am J Trop Med Hyg.* 2003;68(4):50-60.
6. MOH. Proceedings of the National Workshops on the Review of the first five year (2001-2005) and Preparation of the second five year (2006-2010) National strategic plan for malaria prevention and control in Ethiopia, Federal Democratic Republic of Ethiopia Ministry of Health, Addis Ababa, Ethiopia; 2006.
 7. UNICEF, WHO, RBM and Measure Evaluation Guidelines for Core Population Coverage Indicators for Roll Back Malaria, UNICEF; 2004.
 8. Fegan GW, Noor AM, Akhwale WS, Cousens S, Snow RW. Effects of expanded insecticide-treated bed net coverage on child survival in rural Kenya: a longitudinal study. *Lancet.* 2007;370:1035-1039.
 9. Biadgilyn S, Ayalu R, Haji K. Determinants of ownership and utilization of insecticide-treated bed nets for malaria control in Eastern Ethiopia. *Journal of Tropical Medicine*; 2012. Article ID 235015, 7 pages. Available: <http://dx.doi.org/10.1155/2012/235015>.
 10. Haileselassie B, Ali A. Assessment of insecticide-treated nets coverage for malaria control in Kafta-humera district, Tigray: Possession versus use by high-risk groups. *The Ethiopian Journal of Health Development.* 2008;22:259-267.
 11. Oresanya OB, Hoshen M, Sofola OT. Utilization of insecticide-treated nets by under-five children in Nigeria: assessing progress towards the Abuja target. *Malaria Journal.* 2008;7. Article 145.
 12. Minja H, Schellenberg JA, Mukasa O, Nathan R, Abdulla S, Mponda H, Tanner M, Lengeler C, Obrist, B. Introducing insecticide-treated nets in the Kilombero Valley, Tanzania: The relevance of local knowledge and practice for an information, education and communication (IEC) campaign. *Trop Med Int Health.* 2001;6(8):614-623.
 13. Wiseman V, Scott A, McElroy B, Conteh L, Stevens W. Determinants of bed nets use in the Gambia: Implications for malaria control. *American Journal of Tropical Medicine and Hygiene.* 2007;76(5):830-836.
 14. Matovu F, Goodman C, Wiseman V, Mwenge W. How equitable is bednet ownership and utilization in Tanzania? A practical application of the principles of horizontal and vertical equity. *Malaria Journal.* 2009;8(1)article 8(1),article 109.
 15. Eisele TP, Keating J, Littrell M, Larsen D, Macinture K. Assessment of insecticide-treated bednet use among children and pregnant women across 15 countries using standardized national surveys. *American Journal of Tropical Medicine and Hygiene.* 2009;80(2):209-214.
 16. Paulander J, Olsson H, Lemma H, Getachew A, San Sebastian M. Knowledge, attitude and practice about malaria in rural Tigray, Ethiopia. *Global Health Action.* 2009;2:499-507.
 17. Binka FN, Adongo P. Acceptability and use of insecticide impregnated bednets in Northern Ghana. *Tropical Medicine and International Health.* 1997;2(5):499-507.
 18. Agyepong IA, Manderson I. Mosquito avoidance and bed net use in the greater Accra region, Ghana. *Journal of Biosocial Science.* 1999;31(1):79-92.
 19. Okrah J, Traore C, Pale A, Sommerfeld J, Muller O. Community factors associated with malaria prevention by mosquito nets: an exploratory study in rural Burkina Faso. *Tropicalmedicine and International Health.* 2002;7(3):240-248.
 20. Opiyo P, Mukabana WR, Kiche I, Mathenge E, Killeen GF, Fillinger U. An exploratory study of community factors relevant for participatory malaria control on Rusinga Island, Western Kenya. *Malaria Journal.* 2007;6. Article 48.
 21. Aluko JO, Oluwatosin AO. Utilization of insecticide –treated nets during pregnancy among postpartum women in Ibadan, Nigeria: A cross-sectional study. *BMC Pregnancy Childbirth,* 2012;12:12. DOI: 10.1186/1471-2393-12-21. Available: <http://www.biomedcentralCentral.com/1471-2393-12-21>.
 22. Singh M, Brown G, Rogerson SJ. Ownership and use of insecticide-treated bed nets during pregnancy insub-Saharan Africa: A review. *Malaria Journal.* 2013;12:268. DOI: 10.1186/1475-2875-12-26.
 23. Ngondi JM, Graves PM, Gebre T, Mosher AW, Shargie EB, Emerson PM, Richards FO. Which nets are being used: factors associated with mosquito net use in Amhara, Oromia and Southern Nations, Nationalities and Peoples' Regions of

- Ethiopia. Malaria Journal. 2011;10. Article 92. View at Publisher. View at Google Scholar. View at Scopus.
24. National Population Commission. Population and housing census of the federal republic of Nigeria. Proirity Table (LGA). Abuja. 2006;2.
25. Back Malaria. The Africa malaria; 2006. Available: <http://www.rbm.who.int/>.
26. Krejcie RV, Morgan DW. Determining sample size for research activities. Education and Psychological Measurement. 1970;30:607-610.
27. Njoroge FK, Kimani VN, Ongore D, Akwale WS. Use of insecticide treated bed nets among pregnant women in Kilifi district, Kenya. East Afr Med J. 2009;12:314-322.
28. Bandura A. Social cognitive Theory: An agentive perspective. Annual Review of Psychology. 2001;52(1-26).

© 2015 Ezeigbo et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<http://www.sciencedomain.org/review-history.php?iid=644&id=12&aid=5944>