

Knowledge, Attitude and Use of Clinical Preventive Services among Patients Attending the General Out-patient Clinic of a Tertiary Hospital in South-south Nigeria

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Abstract Non-communicable diseases are now very prevalent in Nigeria, but the uptake of clinical preventive services (CPS) that have been shown to be very effective in their control has been very poor. This study assessed the knowledge, attitude and use of the services among patients attending a general out-patient clinic, in a tertiary hospital in Port Harcourt, south-south Nigeria. A cross-sectional study design was used, and the data for the study was collected using a semi-structured, interviewer-administered questionnaire. A total of 422 questionnaires were administered and analyzed. The respondents had an average age of 36.04 ±1.99 years; majority had at least secondary school education (90.05%), were Christians of Pentecostal denomination (50.95%) and self employed (52.13%). Most (76.30%) of the respondents were aware of at least one form of CPS. All believed that CPS are effective in the prevention of non-communicable diseases, but only 18.25% believed that CPS alone would be enough to prevent the diseases. The religious denomination of the respondents significantly affected their conviction in the effectiveness of CPS (p-value = 0.000). The respondents that did not access the services gave reasons that include believe that the services are not very effective in preventing the diseases (39.31%) and the fear of positive test result (26.59%). The awareness of the respondents of CPS is high, but the uptake of the services is poor, due to factors that include religious denomination of the respondents. Deliberate effort is therefore required to increase the uptake of the services.

Keywords: non-communicable diseases, clinical preventive services, knowledge, attitude, use, south-south Nigeria

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1. Introduction

Non-communicable diseases are now a significant cause of morbidity and mortality in Nigeria. The prevalence of the common non-communicable diseases are approaching those of the developed countries [1,2], while the disability and the mortality that result from the diseases are significantly worse in Nigeria [3]. Non-communicable diseases currently constitute more than 60% of the patients admitted into the medical wards of the tertiary hospitals in Nigeria [4,5]; and are responsible for a significant proportion of the deaths recorded in the medical wards [6]. This is even as the monthly expenditure for the treatment of the diseases can be more than 60% of the household's monthly income [7].

The WHO estimates that the non-communicable diseases would increase by 60% by 2020, and are likely to triple in

Nigeria and other sub-Saharan African countries in the next 50 years. The WHO has also projected a three-fold increase in the next 50 years, in the number of the patients of the diseases that would require daily care in sub-Saharan Africa [8]. This is a clarion call for action, to ensure that the health system is not overwhelmed by the diseases.

Non-communicable diseases are caused by genetic, environmental and lifestyle related factors, and experiences in developed countries show that they are amenable to clinical preventive services [9]. Clinical preventive services are designed for healthy individuals, but are delivered in a clinical setting, by a health care professional. The services include immunization, disease screening, and behavioral counseling interventions that assist patients in adopting, changing, or maintaining behaviors known to affect health outcomes or health status [10].

Clinical preventive services are currently available in most Nigerian tertiary hospitals, but they are provided in

multiple service points, and by different specialist health professionals. The services are often poorly utilized, not only because of the lack of awareness, poor attitude towards the services [11], and the fact that the clients are used to accessing medical care only when they are sick [12]; but also because of the time and inconveniences of accessing the required services, at various service points in the hospitals [11].

There is therefore an urgent need to increase the uptake of clinical preventive services in Nigeria, at least in response to the WHO projections [8]; and social marketing has been shown to be effective with similar health products and services [13,14]. Social marketing has been defined as the application of commercial marketing technologies in the analysis, planning, execution and evaluation of programmes, and products designed to influence the voluntary behaviour of target audience, in order to improve their personal welfare and that of the society [13]. Social marketing places a lot of emphasis on the packaging, pricing and promotion of the product, to make it very attractive to clients [13]. The social marketing of clinical preventive services would require packaging the services into a single health product that is delivered in an integrated way; promoting it to encourage clients to patronize the service, even when they are healthy; and making the services available, as close as possible to where the clients live or work, and at a price most clients can afford.

The formative research for social marketing programmes seeks a better understanding of the clients, especially the knowledge, attitude and use of the product or service in the recipient communities [13,14]. This study is intended to provide these essential information, to help kick start a social marketing programme that would drive up the uptake of clinical preventive services in Nigeria.

2. Materials and Methods

The study was carried out in January 2013, in the University of Port Harcourt Teaching Hospital, one of the two tertiary health care institutions in Port Harcourt, the capital of Rivers State, south-south Nigeria. Although located in Port Harcourt, the hospital constantly draws patients from the neighboring States of the oil-rich Niger delta region; a catchment population that can be conservatively put at ten million people. The hospital is an 800-bed multi-specialist teaching hospital that offers not only tertiary health care services, but also secondary and primary health care, due to the near collapse of the other facilities in the State and region. The huge number of patients seen in the hospital greatly increased the waiting time of patients, such that it routinely takes more than five hours for a patient to access the desired care in the hospital.

A cross-sectional study design was used, with the data collected using a semi-structured, interviewer-administered questionnaire. The minimum sample size for the study was calculated using the formula for studying proportions in populations of more than 10, 000 persons. The degree of accuracy was set at 0.05, while the awareness of clinical preventive services (cervical cancer screening) in the study population was put at 52.0% [15]. The minimum required sample size for the study was thus determined to be 384, but made up to 422 to take care of non-responses.

The general out-patient clinic of the hospital sees a daily average of 250 undifferentiated patients. The respondents for the questionnaire were adult patients attending the out-patient clinic; chosen using the systematic sampling technique, with a sampling fraction of one in six patients, beginning from a randomly selected starting point.

The questionnaire was used to gather information on the socio-demographic characteristics of the respondents, their attitude towards clinical preventive services and their use of any of the services.

The collected data were cleaned and entered into a database, and analysed using SPSS. Summary measures were calculated for each outcome of interest; and bivariate analyses were carried out to explore the various relationships between socio-economic status and knowledge, attitude and use of the services by the respondents. The test of significance was conducted using chi-square tests at 95% confidence interval, with p-value of 0.05 or less considered statistically significant

The approval to undertake the study was sought and obtained from the relevant departments of the University of Port Harcourt Teaching Hospital, Port Harcourt; while informed consent was sought and obtained from all the study participants.

3. Results

A total of 422 questionnaires were administered, retrieved and analyzed. The respondents had an average age of 36.04 ± 1.99 years; majority had at least secondary school education (90.05%), were Christians of the Pentecostal denomination (50.95%) and self employed (52.13%) (Table 1).

Table 1. The socio-demographic characteristics of study participants

Variable	Frequency (%)
Educational status of respondents	
No formal education	5 (1.18%)
Primary	37 (8.77%)
Secondary	92 (21.80%)
Tertiary	288 (68.25%)
Total	422 (100.00%)
Occupation of respondents	
Self employed	220 (52.13%)
Civil servant	107 (25.36%)
Student	69 (16.35%)
Unemployed	26 (6.16%)
Total	422 (100.00%)
Religion	
Catholic	85 (20.14%)
Protestant	83 (19.67%)
Pentecostal	215 (50.95%)
African churches	21 (4.98%)
Traditional religion	5 (1.18%)
Islam	13 (3.08%)
Total	422 (100.00%)

Most 322 (76.30%) of the respondents were aware of at least one form of clinical preventive service; and they got the information mainly from health professionals (44.72%) and the mass media (40.37%), as shown in Table 2.

Table 2. Some characteristics of study participants

Variable	Frequency (%)
Source of information about clinical preventive service	
Health professionals	144 (44.72%)
Mass media	130 (40.37%)
Workplace	37 (11.49%)
Family members and friends	8 (2.48%)
School	3 (0.93%)
Total	322 (100.00%)
Type of clinical preventive services accessed	
Clinical examination	34 (22.82%)
Laboratory tests	53 (35.57%)
Blood pressure checks	58 (38.93%)
Immunization	4 (2.68%)
Total	149 (100.00%)
Reasons for accessing the clinical preventive services (N = 149)	
Symptoms	56 (37.58%)
Family history of disease	31 (20.81%)
Pressure from friends and relatives	49 (32.89%)
News report	13 (8.72%)
Total	149 (100.00%)
Reasons for not accessing a clinical preventive service	
Fear of positive test result	46 (26.59%)
Fear of the procedure	12 (6.94%)
Cost of the service	20 (11.56%)
Lack of time	27 (15.61%)
Not too effective	68 (39.31%)
Total	173 (100.00%)

All the respondents believed that clinical preventive services are effective in the prevention and control of non-communicable diseases, but only 77 (18.25%) of the respondents believed that clinical preventive services alone would be enough to prevent the diseases. Many 336 (79.62%) also believed in the efficacy of prayer, and the use of holy water and anointing oil; while 9 (0.83%) also believed in the services of traditional medicine practitioners. The religious denomination of the respondents significantly affected their conviction in the effectiveness of clinical preventive services (p -value = 0.000), as shown in Table 3. Respondents of the protestant denomination were more likely to believe in the complete effectiveness of the services, compared to the other respondents.

Table 3. Respondents' conviction on the effectiveness of clinical preventive services, according to their religious denomination

Variable	CPS only*	CPS plus**	p-value
Catholic	13	72	0.000
Protestant	39	44	
Pentecostal	23	192	
Spiritual	0	21	
Traditional religion	0	5	
Moslem	2	11	
CPS only* – Clinical preventive services only, CPS plus** – clinical preventive services in addition to prayer and use of anointing water and oil, and the services of native doctor.			

More than a third of the respondents 149 (35.31%) had accessed some form of clinical preventive services, resulting in the detection of 14 cases of hypertension and 8 cases of diabetes in the respondents. The services accessed by the respondents include laboratory tests 53 (35.57%),

blood pressure checks 58 (38.93%), clinical examinations 34 (22.82%), and immunization 4 (2.68%). Most of these services 135 (90.60%) were accessed in a hospital, while the remaining were accessed in a laboratory 10 (6.71%) or a pharmacy shop 4 (2.68%). Some 31 (7.35%) of the respondents smoke cigarette, out of whom 29 (93.55%) expressed a willingness to quit smoking.

The 149 respondents that accessed some forms of clinical preventive services did that for reasons presented in Table 2. These reasons include the symptoms felt by the clients 56 (37.58%) and the pressure put on them by friends and relatives 49 (32.89%). The respondents that were aware of clinical preventive services, but did not access any of the services gave reasons that include believe that the services are not too effective in preventing the diseases 68 (39.31%) and the fear of positive test result 46 (26.59%).

4. Discussion

The study showed that more than 75% of the respondents were awareness of a form of clinical preventive service. This is higher than the 52.0% awareness of the Pap smear test recorded among women attending an antenatal clinic in Port Harcourt [11], and a similar figure recorded in Ilorin, north-central Nigeria [15]. This high level of awareness is expected, considering the high educational level of the respondents in the study, as over 90% of them had at least a secondary school education.

The awareness for the clinical preventive services was created mostly by health professionals, and the mass media. These sources of information should be further exploited in the efforts to increase the uptake of the services. For instance, it is widely advocated that the cigarette smoking status of patients be considered a part of the vital signs, to ensure that an opportunity is created to offer the patient an opportunity for the appropriate preventive services [16].

The mass media played a vital role in the high uptake of clinical preventive services achieved in developed countries, especially in correcting attitudes and achieving behavioural change [17]. The mass media would therefore play an active part in changing the conviction of over 80% of the respondents of this study who believed that the clinical preventive services are not enough for the prevention and control of non-communicable diseases. This is especially as studies have showed that respondents with such beliefs are unlikely to access the services [18].

This study showed that the religious denomination of the respondents significantly affected their conviction on the effectiveness of clinical preventive services. This can be attributed to the ideologies of the religious denominations on disease causation and cure. Many religious groups in Nigeria believe that non-communicable diseases are the will of God, with minimal self efficacy in their prevention and control [19], while several others believe in miracle, and therefore the potency of prayers and other religious rituals. These beliefs have been shown to seriously affect the uptake of preventive services, and therefore need to be corrected [20]. Significant success can be achieved with a collaborative effort involving the leaders of the religious bodies [21].

Only a third of the respondents accessed any form of the services. This is higher than the 8.3% uptake of Pap smear test recorded in Port Harcourt [11], but significantly less than what is expected from a 76.30% level of awareness. This gives an insight into the amount of work that still needs to be done, to encourage the uptake of the services, as reflected in the stages of change theory [22]. The effort to improve the uptake of the clinical preventive services would leverage on the reasons given by the respondents for the patronage, while working to assuage the fears expressed by those that failed to access the services. For instance, over 65% of the respondents that accessed the services did that because of their symptoms, or the concerns shown by their friends or relatives. This shows that clients are still waiting for symptoms of ill health, before accessing the services, a finding also found in developed countries [23] that needs to be corrected, to boost the uptake of the services. This can be accomplished by promoting regular periodic health checks, as is common in developed countries [24,25].

About a third of the respondents that were aware of the clinical preventive services, but failed to access the services were afraid of a positive test result. This is a very real concern, as a positive test result easily pushes the patient into the diseased state, and into a life of morbidity and disability, resulting in a state of grief. Effort at improving the uptake of the services would work to remove this fear, by offering hope and support, by emphasizing the benefits of early diagnosis and treatment of the non-communicable diseases, and by ensuring the linkage of the clinical preventive services with therapeutic services, as is currently being done with HIV/AIDS [26].

The study also showed that more than 90% of the cigarette smoking respondents expressed their willingness to quit. These are patients who are likely to successfully quit smoking with the help of a smoking cessation programme [27]. They are however unlikely to access the service in Nigeria, because smoking cessation programme is virtually non-existent in Nigeria. A study conducted in 40 developing countries, including Nigeria showed that vital control programmes for non-communicable diseases are often non-existent, while the essential drugs for the management of the diseases are mostly unavailable [28]. The study showed that drugs for acute diseases were 33.9% more likely to be available in public hospitals in the study countries than the drugs for chronic diseases [28].

Efforts at controlling the non-communicable diseases should start immediately in Nigeria, and not wait until significant success is achieved with the prevailing high prevalence of communicable diseases. This is recommended by the WHO Consultative Group on Equity and Universal Health Coverage who advised that universal health coverage can be pursued, even for low- or medium-priority services, before the attainment of near-universal coverage for high-priority services [29].

5. Conclusion

The awareness of the respondents of clinical preventive services is high, but the uptake of the services is poor. Deliberate effort is therefore required to increase the uptake of the services.

References

- [1] Nigerian Heart Foundation, Federal Ministry of Health and Social Services. *Health behavior monitor among Nigerian adult population*. Lagos. Nigerian Heart Foundation, 2003.
- [2] Ordinioha B, Brisibe SF. The prevalence of hypertension and its modifiable risk factors amongst traditional chiefs of an oil bearing community in south-south Nigeria. *Sahel Medical Journal* 2013; 14: 24-27.
- [3] World Health Organization. *The global burden of disease: 2004 update*. Geneva: World Health Organization; 2008.
- [4] Unachukwu CN, Agomuoh DI, Alasia DD. Pattern of noncommunicable diseases among medical admissions in Port Harcourt, Nigeria. *Nigerian Journal of Clinical Practice* 2008; 11 (1): 14-17.
- [5] Odenigbo CU, Oguejiofor OC. Pattern of medical admissions at the Federal Medical center Asaba: a two year review. *Nigerian Journal of Clinical Practice* 2009; 12 (4): 395-397.
- [6] Olarinde OJ, Olatunji OY. Pattern of deaths in medical wards of a rurally situated tertiary health institution, Ido-Ekiti, Nigeria. *Nigerian Journal of Clinical Practice* 2014; 17: 237-240.
- [7] Goudge J, Gilson L, Russel S, Gumede T, Mills A. Affordability, availability and acceptability barriers to health care for the chronically ill: Longitudinal case studies from South Africa *BMC Health Services Research* 2009, 9:75.
- [8] World Health Organization. *Current and future long-term needs*. Geneva: World Health Organization, 2002.
- [9] Strong K, Mathers C, Leeder S, Beaglehole R. Preventing chronic diseases: how many lives can we save? *Lancet* 2005; 366: 1578-1582.
- [10] Salinsky E. Clinical preventive services: when is the juice worth the squeeze? *National Health Policy Forum Issue Brief* – No. 806. 2005.
- [11] Babatunde S, Ikimalo J. Uptake of cervical cancer screening: awareness, willingness and practice among antenatal clinic attendees in Port Harcourt, Nigeria. *Port Harcourt Medical Journal* 2010; 4: 149-154.
- [12] Woolf SH, Atkins D. The evolving role of prevention in health care: Contributions of the U.S. Preventive Services Task Force," *American World Journal of Preventive Medicine* 2001; 20, suppl. 3: 13-20.
- [13] Kotler P, Roberto EL. *Social marketing: Strategies for changing public behaviour*. New York. Free Press. 1989: 10-36.
- [14] Ordinioha B. Social marketing of insecticide-treated bed net for malaria control in a semi-urban community in South-South Nigeria. *Port Harcourt Med J* 2007; 1: 145-150.
- [15] Aboyeji PA, Ijaiya MA, Jimoh AA. Knowledge, attitude and practice of cervical smear as a screening procedure for cervical cancer in Ilorin, Nigeria. *Trop J Obstet Gynaecol* 2004; 21: 114-117.
- [16] Ahluwalia JI, Gibson CA, Kenney E, Wallace DD, Resnicow K. Smoking as a vital sign. *J Gen Intern Med* 1999; 14: 402-408.
- [17] Grilli R, Ramsay C, Minozzi S. Mass media interventions: effects on health services utilisation. *Cochrane Database Syst Rev*. 2002; (1): CD000389.
- [18] Norman P, Conner M: The role of social cognition models in predicting attendance at health checks. *Psychol Health* 1993, 8(6):447-462.
- [19] Adogame A: HIV/AIDS support and African pentecostalism: the case of the Redeemed Christian Church of God (RCCG). *J Health Psychol* 2007; 12(3):475-484.
- [20] Wanyama J, Castelnuovo B, Wandera B, Mwebaze P, Kambugu A, Bangsberg DR, Kamya MR: Belief in divine healing can be a barrier to antiretroviral therapy adherence in Uganda. *AIDS* 2007, 21(11):1486-1487.
- [21] Yanek LR, Becker DM, Moy TF, Gittelsohn J, Koffman DM. Project Joy: Faith Based Cardiovascular Health Promotion for African American Women. *Public Health Reports* 2001; 116: 68-81.
- [22] Zimmerman GL, Olsen CG, Bosworth MF. A 'stages of change' approach to helping patients change behavior. *Am Fam Physician*. 2000; 1; 61(5):1409-1416.
- [23] Norman P, Fitter M. Intention to attend a health screening appointment: some implications for general practice. *Counselling Psychology Quarterly* 1989, 2(3): 261-272.
- [24] Agency for Healthcare Research and Quality. *A step-by-step guide to delivering clinical preventive services: a systems approach*.

- Washington DC. Agency for Healthcare Research and Quality. 2002.
- [25] Canadian Task Force on the Periodic Healthy Examination, "The Periodic Health Examination," *Canadian Medical Association Journal* 1979; 121: 1193-1254.
- [26] World Health Organization/ UNAIDS. *UNAIDS/WHO policy statement on HIV testing*. WHO/UNAIDS; 2004.
- [27] Hughes JR. Motivating and helping smokers to stop smoking. *J Gen Intern Med* 2003; 18: 1053-1057.
- [28] Cameron A, Roubos I, Ewen M, Mantel-Teeuwisse AK, Leufkens HG, Laing RO. Differences in the availability of medicines for chronic and acute conditions in the public and private sectors of developing countries. *Bull World Health Organ* 2011; 89: 412-421.
- [29] Ottersen T, Norheim OF. Making fair choices on the path to universal health coverage. *Bull World Health Organ* 2014; 92: 389.