

Socio demographic factors associated with renunciation to oral care in côte d'ivoire

Abstract

Objectives: The aims of this study were to identify socio-demographic determinants associated with the renunciation to oral care in Côte d'Ivoire.

Study design: The study is in the perspective of decision support. The interest is to help decision makers to improve access to oral health care from evidence.

Methods: The design was a pilot cross-sectional survey conducted among adults in Côte d'Ivoire. A stratified sampling procedure with proportional allocation size was used. People were interviewed by a questionnaire and data collected at face to face interviews, using the method of itineraries. An association was sought between the main reasons for the renouncement of oral care and the socio-demographic variables of the study, using the chi-square test. Then, a logistic regression was carried out using the step-by-step method to eliminate possible confounding factors between the variables. The results were significant for $p < 5\%$.

Results: Women have more renounced to consult a traditional healer because of self medication (OR=2.11, CI_{95%}=[1.33-3.34]) and the lack of money (OR=2.34, CI_{95%}=[1.31-4.18]). Respondents located between 5 and 15 km from the dental office were more likely to renounce to modern care because of a failure to perceive their need (OR=2.17, CI_{95%}=[1.15-4.09]). People in the urban renounced more to traditional care (OR=1.97, CI_{95%}=[1.07-3.64]) and modern care (OR=2.19, CI_{95%}=[1.28-3.76]), than those in rural areas due to lack of financial resources.

Conclusion: This study showed that the main reasons for renouncing modern and traditional oral care in Côte d'Ivoire were self-medication, financial hardship and the lack of perception for a significant segment of the population of the seriousness of oral diseases. These reasons were related to the respondent's gender, age, habitat type and geographic location.

Keywords: côte d'ivoire, determinants, renunciation, socio-demographic oral health

Volume 6 Issue 1 - 2017

Abou Dramane SANGARE,¹ Mamadou SAMBA,¹ Jean Claude M. GUINAN,¹ Massamba JC, DIOUF,² Ramata M, BAKAYOKO-LY,³ Denis BOURGEOIS⁴

¹Professor in public health, Faculty of Odonto-Stomatology, Côte d'Ivoire

²Assistant professor in public health. Faculty of Medicine, Pharmacy and Dentistry, Senegal

³Professor in pediatric dentistry, Faculty of Odonto-Stomatology, Côte d'Ivoire

⁴Professor in public health, Faculty of Odontology University of Lyon, France

Correspondence: Abou Dramane SANGARE, Assistant professor in public health, Faculty of Odonto-Stomatology, Côte d'Ivoire, Tel 00 225 03 61 04 15, Email dioufmass78@yahoo.fr

Received: January 12, 2017 | **Published:** June 13, 2017

Introduction

Access to affordable and acceptable health care including access to oral health services is a basic and fundamental human right.¹ The technological advances from recent years have allowed to significantly improve oral health in developed countries. However, in developing countries, conditions such as tooth decay, periodontal disease and oral and facial cancers are still rife and they impact the quality of life of those affected.² This leaves a situation where the populations with the greatest health needs are those with less health care. This phenomenon, called "the law of reversed care,³ causes the degradation of oral health in the absence of appropriate care because of the socio-economic difficulties faced by the populations.⁴ The topic of accessibility to oral health care has been the subject of numerous studies. These highlighted the disparities between rural and urban areas and then between the poor and the rich in the same country.^{5,6} Thus, populations often give up care voluntarily or involuntarily. The concept of renunciation of care, which in addition to financial obstacles or the unavailability of care, is related to certain socio-cultural factors peculiar to the peoples.^{7,8} However, in Côte d'Ivoire, there is little data available on the socio-demographic factors of cessation of oral care as recommended by Vanobbergen et al.,⁹ for understanding health behaviors. Such data are essential for the definition of efficient health policies. This study, which conforms to this framework, aimed to determine the socio-demographic factors associated with the renunciation of oral health care in Côte d'Ivoire.

Method

The study took place in the department of Dabou, 50km from Abidjan, the economic capital of Côte d'Ivoire. The sample group included adults aged 18 years and over, residing in the department, who had experienced an oral health problem during the 12 months preceding the survey and had not consulted either a surgeon or a traditional healer, who were able to speak French or the local dialect (Adioukrou) and who agreed to participate. A questionnaire with multiple-response closed and semi-closed question was developed. Data were collected by four investigators previously calibrated and trained in the face-to-face interview method. The sampling technique, using proportional allocation to size, was based on four strata: residential area (urban/rural), type of residence (modern/traditional), the distance between the chosen locality and the dental clinic (<5km/5-15km/>15km) and finally, the presence of a health center in the locality. In urban areas, all localities were situated within 5 km of the dental clinic, and we noted the presence of a health centre in this range. So, the districts were divided into two groups: traditional residences, built using recycled materials (eight districts) and modern residences built with cement and bricks (twelve districts). Two districts were randomly selected from each group. Then, 60 people were interviewed in each of the four districts selected, thus giving 240 people. In rural areas, villages were divided into three groups according to the distance criterion. In each group, two other groups were formed according to the presence or absence of a health centre. Then, a village was randomly selected in

each of the six groups formed. In each of the six villages chosen, 120 people were interviewed amounting 60 persons per habitat type, thus giving 720 people in the rural area. Out of the 960 respondents, 33 files were unusable; the sample therefore includes 927 people. The survey was conducted in households using the itineraries method which is a purposive sampling in which, the interviewer started at a defined point and walked in a defined direction. Data were captured using Epidata (version 3.1), then processed with SPSS (Statistical Package for Social Sciences) version 16.0 and Excel for Windows. For the analysis, the three main reasons for renunciation of care delivered by the dentist or the traditional practitioner were identified. Then, a univariate analysis was carried out, an association between each of these reasons and the socio-demographic variables using the chi-square test. Statistical tests were carried out for a risk $\alpha=5\%$. Then, a logistic regression was carried out using the step-by-step method to eliminate possible confounding factors between the variables. The socio-demographic variables associated with a reason for the renunciation of care with a degree of significance less than 0.25 were introduced in the model. Subsequently, the remaining variables were forced into the model to account for the fact that each was potentially important for determining the factors influencing cessation of care according to the literature and the intervention context. The associations between the reasons for the renunciation and the socio-demographic variables were estimated by

the adjusted coefficient ratio and its confidence interval. The results were significant for $p<5\%$.

Results

Distribution of the sample according to socio-demographic characteristics

Parity between men and women was maintained. Respondents were mostly aged between 30 and 44 years and the level of primary study was dominant (44.6%). More than half of the respondents lived in modern dwellings and were located near a health center. About 75% of the participants lived in a rural area and half were located at least five kilometers from a dental office (Table 1).

Reasons for not seeking dental care

The main reasons for not seeking modern care were: lack of financial resources (44.3%), self-medication (35.1%), not perceiving a need for care (21.2%), fear of the dentist (10.1%). Traditional practitioners were not consulted for the following reasons: self-medication (41.1%), lack of financial resources (20.6%), not perceiving a need for care (20.6%), and the lack of effectiveness of traditional care (13.9%) (Table 2).

Table 1 Socio-demographic characteristics of adults who have not seek

	N=316 n(%)
Gender	
Male	158(50.0)
Female	158(50.0)
Age	
18-29years	112(35.4)
30-44years	176(55.7)
> 44years	28(8.9)
Level of Education	
Not schooled	94(29.7)
Primary education	141(44.6)
Secondary and more	81(25.6)
Area of residence	
Rural	236(74.7)
Urban	80(25.3)
Type of dwelling	
Modern	183(57.9)
Traditional	132(41.8)
Distance from the chosen locality and the dental clinic	
< 5km	158(50.0)
5- 15km	81(25.6)
> 15km	77(24.4)
Insurance	
Yes	6(1.9)
No	310(98.1)
Medical centre	
Yes	197(62.3)
No	119(37.7)

Relations between the reasons for not seeking care and socio-demographic variables (univariate analysis)

Not seeking traditional oral care because of self-medication or a lack of financial resources was significantly linked to gender. These two reasons were the most frequently cited by women (60.8% and 64.6%). The renunciation to traditional oral care due to the non-perception of the need for care, was linked to the gender and the geographic situation. Men were more likely not to seek care than women (67.7%; $p=0.001$) and, more respondents were close to a dental office, as well as a higher proportion of those who believed that they did not need care were important (41.5%; 40%; 18.5%) (Table 3). The renunciation of modern oral care, due to lack of financial resources was mentioned by most people in the rural areas (67.9% against 32.1%). But, there was no relation between renunciation to oral health care because of self-medication and socio-demographic variables. Not perceiving a need for care as a reason for renunciation to oral modern care was associated with gender and geographic situation. Men were more likely not to seek care than women (62.7% versus 37.3%) and more respondents were close to a dental office, as well as the proportion of those who believed that they did not need care were important (41.8%; 37.3%, 14%) (Table 4).

Socio-demographic determinants associated with the reasons for not seeking oral care (multivariate analysis)

Women were more likely not to seek care seeking traditional care because of self-medication than men ($OR=2.11$; $IC_{95\%}=[1.33 - 3.34]$). Also, people situated more than 15 km from a dental office were more likely not to seek traditional care than those located less than 5 km ($OR=1.80$; $IC_{95\%}=[1.03-3.16]$). Not seek traditional care because of the lack of financial reasons was linked to gender and place of residence. Women were more likely not to seek care than men

($OR=2.34$; $IC_{95\%}=[1.31 - 4.18]$). Adults living in an urban area were less likely to seek care than those living in a rural area ($OR=1.97$; $IC_{95\%}=[1.07-3.64]$) (Table 5). Regarding modern care, adults in urban areas were more likely to forego care because of a lack of financial resources than those living in rural areas ($OR=2.19$; $IC_{95\%}=[1.28 - 3.76]$). Also, adults between 5 and 15km of a dental office were more likely to forego care because of the non-perception of their need than those located less than 5km from a dental office ($OR=2.17$; $IC_{95\%}=[1.15 - 4.09]$) (Table 6).

Table 2 Distribution of adults who claimed not to have visited a dentist or a traditional healer during the last 12months for the following reasons*

Reasons not accessing dental care	Dentist N(%)	Traditional healer N(%)
Lack of money	140(44.3)	65(20.6)
No traditional healer nearby	-	32(10.1)
No dentist's office nearby	5(1.6)	-
Ineffective care	9(2.8)	44(13.9)
Condition did not need care	67(21.2)	65(20.6)
Fear of dental instruments	33(10.4)	-
Self-medication	111(35.1)	130(41.1)
Care is painful	13(4.1)	-
Lack of hygiene	-	12(3.8)
Other reasons	11(3.5)	11(3.5)

*; Several possible choices

Table 3 Association between the reasons for foregoing traditional oral care and socio demographic variables

	Self-medication		Lack of money		Condition did not need care	
	Yes(N=130)	p	Yes(N=65)	p	Yes(N=65)	p
	n(%)		n(%)		n(%)	
Gender		0,001		0,008		0,001
Male	51(39,2)		23(35,4)		44(67,7)	
Female	79(60,8)		42(64,6)		21(32,3)	
Age		0,563		0,839		0,284
18-29years	42(32,3)		21(32,3)		26(40,0)	
30-44years	77(59,2)		38(58,5)		31(47,7)	
> 44years	11(08,5)		06(09,2)		08(12,3)	
Level of education		0,673		0,224		0,650
No schooling	42(32,3)		25(38,5)		22(33,8)	
Primary education	57(43,8)		25(38,5)		26(40,0)	
Secondary and more	31(23,8)		15(23,1)		17(26,2)	
Locality of residence		0,120		0,076		0,154
Rural	103(69,6)		43(66,2)		53(81,5)	
Urban	27(20,8)		22(33,8)		12(18,5)	

Table Continued..

	Self-medication		Lack of money		Condition did not need care	
	Yes(N=130)	p	Yes(N=65)	p	Yes(N=65)	p
	n(%)		n(%)		n(%)	
Type of dwelling		0,944		0,811		0,422
Traditional	54(41,5)		28(43,1)		30(46,2)	
Modern	76(58,5)		37(56,9)		30(53,2)	
Distance from the locality and the dental clinic		0,099		0,279		0,011
< 5km	56(43,1)		38(58,5)		27(41,5)	
5-15 km	36(27,7)		15(23,0)		26(40,0)	
> 15km	38(29,2)		12(18,5)		12(18,5)	
Insurance		0,695		0,811		0,811
No	61(98,5)		64(98,5)		64(98,5)	
Yes	2(1,5)		1(1,5)		1(1,5)	
Medical centre		0,992		0,198		0,662
No	49(31,9)		20(30,8)		26(40,0)	
Yes	81(62,3)		45(69,2)		39(60,0)	

Table 4 Association between the reasons for giving up modern oral care and socio demographic variables

	Self-medication		Lack of money		Condition did not need care	
	Yes(N=111) n(%)	p	Yes(N=140) n(%)	p	Yes(N= 67) n(%)	p
Gender		0,077		0,365		0,019
Male	48(43,2)		66(47,1)		42(62,7)	
Female	63(56,8)		74(52,9)		25(37,3)	
Age		0,995		0,986		0,338
18-29years	39(35,1)		50(35,7)		28(41,8)	
30-44years	62(55,9)		78(55,7)		32(47,8)	
> 44years	10(9,0)		12(8,6)		07(10,4)	
Level of education		0,991		0,358		0,474
No schooling	33(29,7)		47(33,6)		19(28,4)	
Primary education	50(45,0)		61(43,6)		27(40,3)	
Secondary and more	28(25,2)		32(22,9)		21(31,3)	
Locality of residence		0,765		0,013		0,210
Rural	84(75,7)		95(67,9)		54(80,6)	
Urban	27(24,3)		45(32,1)		13(19,4)	
Type of dwelling		0,421		0,905		0,574
Traditional	43(38,7)		59(42,1)		30(44,8)	
Modern	68(61,3)		81(57,9)		37(55,2)	
Distance from the locality and the dental Clinic		0,242		0,078		0,048
<5km	53(47,7)		78(55,7)		28(41,8)	
5-15km	25(22,5)		36(25,7)		25(37,3)	
>15km	33(29,7)		26(18,6)		14(20,9)	
Insurance		0,926		0,169		0,463
No	109(98,2)		139(99,3)		65(97,0)	
Yes	2(1,8)		01(0,7)		02(03,0)	

Table Continued..

	Self-medication		Lack of money		Condition did not need care	
	Yes(N=111) n(%)	p	Yes(N=140) n(%)	p	Yes(N= 67) n(%)	p
Medical centre		0,098		0,687		0,948
No	35(31,5)		51(36,4)		25(37,3)	
Yes	76(68,5)		89(63,6)		42(62,7)	

Table 5 Multivariate analysis between the reasons for giving up modern oral care and sociodemographic variables

	Self-medication		Lack of money		Condition did not need care	
	OR	IC _{95%}	OR	IC _{95%}	OR	IC _{95%}
Gender						
Male	-		-		-	
Female	2,11	[1,33 - 3,34]*	2,34	[1,3 - 4,18]*	0,35	[0,19 - 0,64]*
Age						
18-29years	-		-		-	
30-44years	1,26	[0,76 - 2,10]	1,41	[0,74 - 2,69]	0,62	[0,33 - 1,16]
> 44years	1,18	[0,49 - 2,85]	1,41	[0,48 - 4,12]	0,96	[0,36 - 2,57]
Level of education						
No schooling	-		-		-	
Primary education	0,97	[0,55 - 1,70]	0,62	[0,33 - 1,19]	0,67	[0,33 - 1,36]
Secondary and more	1,28	[0,65 - 2,52]	0,66	[0,30 - 1,45]	0,74	[0,31 - 1,75]
Locality of residence						
Rural	-		-		-	
Urban	0,89	[0,44 - 1,81]	1,97	[1,07 - 3,64]*	0,52	[0,22 - 1,21]
Type of dwelling						
Traditional	-		-		-	
Modern	1,04	[0,62 - 1,74]	0,92	[0,49 - 1,70]	0,64	[0,35 - 1,18]
Distance from the locality and the dental clinic						
< 5km	-		-		-	
5-15km	1,43	[0,82 - 2,49]	0,81	[0,36 - 1,78]	1,86	[0,90 - 3,87]
> 15km	1,80	[1,03 - 3,16]*	0,67	[0,29 - 1,57]	0,56	[0,23 - 1,37]
Insurance						
No	-		-		-	
Yes	0,65	[0,11 - 3,96]	0,92	[0,09 - 9,03]	0,41	[0,04 - 4,70]
Medical centre						
No	-		-		-	
Yes	1,14	[0,70 - 1,86]	1,30	[0,66 - 2,56]	1,22	[0,63 - 2,36]

* , p< 0,05

Table 6 Multivariate analysis between the reasons for giving up traditional oral care and socio demographic variables

	Lack of money		Condition did not need care	
	OR	IC _{95%}	OR	IC _{95%}
Gender				
Male	-		-	
Female	1,17	[0,73 - 1,89]	0,50	[0,29 - 0,87]*

Table Continued..

	Lack of money		Condition did not need care	
	OR	IC _{95%}	OR	IC _{95%}
Age				
18-29years	-		-	
30-44years	1,02	[0,61 - 1,71]	0,61	[0,33 - 1,10]
> 44years	0,99	[0,40 - 2,44]	0,78	[0,29 - 2,10]
Level of education				
No schooling	-		-	
Primary education	0,73	[0,43 - 1,24]	0,90	[0,44 - 1,82]
Secondary and more	0,72	[0,27 - 0,98]	1,38	[0,61 - 3,13]
Locality of residence				
Rural	-		-	
Urban	2,19	[1,28 - 3,76]*	0,64	[0,28 - 1,44]
Type of dwelling				
Traditional	-		-	
Modern	1,06	[0,64 - 1,75]	0,75	[0,41 - 1,36]
Distance from the locality and the dental clinic				
< 5km	-		-	
5-15km	1	[0,54 - 1,88]	2,17	[1,15 - 4,09]*
> 15km	0,62	[0,32 - 1,20]	1,04	[0,51 - 2,12]
Insurance				
No	-		-	
Yes	0,29	[0,03 - 2,61]	1,28	[0,18 - 9,24]
Medical centre				
No	-		-	
Yes	0,85	[0,50 - 1,44]	1,33	[0,70 - 2,2]

*, p < 0,05

Discussion

Reasons for not seeking care

The health situation in most sub-Saharan countries is marked by several different types of care in where, traditional medicine and conventional medicine exist alongside one another.¹⁰ This study showed that the reasons for not seeking care were identical for both types of care but with some differences on the importance of each variable. Self-medication occupied an important place in the choice not to seek traditional care. This situation could be explained by the existence in African families of people who tend to know about plant healing. As such, at the first stage of illness, the remedies are researched in the surrounding area. In general, the population has recourse to modern medicine for medical complications and they consult a traditional practitioner when there is a suspicion of a supernatural cause of the affection.¹⁰ The lack of financial resources advanced as one of the reasons for not seeking traditional care can be surprising. However, it seems justified by the fact that the benefits of traditional practitioners are not free. In certain cases, the sums disbursed which can be in cash are very high as highlighted by Meula et al.¹¹ Furthermore, the serious socio-political crisis that occurred in

Côte d'Ivoire during the past decade increased the poverty rate. With regard to modern care, the principal reason for not seeking care was of a financial nature. The lack of financial resources constituted indeed a major obstacle to access to health care in sub-Saharan Africa. Studies on the renunciation of oral health care in 2003 in Côte d'Ivoire, then in 2010 in Senegal had underlined this reality.^{7,12} The situation is further worsened since the establishment of fee-for-service care in several countries. Thus we have noted that in Tanzania there was a reduction in the rate of attendance for dental services of 33% since the establishment of this measure.¹³ Indeed, long waiting lines, poor service, racketeering and clientelism are evils that harm numerous African health systems and keep patients away from health centers. The study led by Jaffré and Sardan¹⁴ in five West African capitals is evocative.¹⁴ The results of studies carried out on the reasons for not seeking oral care corroborate for the most part with the results of our study. Thus, self-medication, fear of dental care, and the absence of pain were significantly linked to not seeking dental care in Koweit.¹⁵ In Tanzania, the main reasons for not seeking care were: financial constraints, self-medication, not perceiving the seriousness of the problem, fear of pain during the treatment, the long distance between residence of the respondent and the dental office at the use of traditional practitioners.¹⁶ In Uganda, Okullo et al.,¹⁷ had found a

positive association between city living and low attendance of dental offices. This situation was related to the increase in the poverty level in African cities and in other part a change in the nutritional regime of citizens.

Socio-demographic determinants associated with the renunciation to oral care

Gender seems to be an important factor to renounce to oral care. Women were more likely to not seeking care due to self-medication or the absence of financial resources. The practice of self-medication could be explained by the financial difficulties encountered by populations and the relative ease of obtaining certain traditional remedies. The lack of financial resources was also invoked by residents of urban areas to justify not seeking traditional care. This is to be compared with the growing poverty in cities and corroborates the view of Ntabaye et al.,¹⁸ for whom, the financial barrier remained an obstacle to access to care, both traditional and modern. However, not seeking care because of not perceiving its need was more important among men. This attitude reflects the importance of women's oral health. For Kiwilu et al.,¹⁶ not seeking care because one did not perceive the seriousness of the ailment is the result of a lack of information on oral care within populations. Pohiola et al.,¹⁹ had established what people with a lower education level were more likely to not seeking care because of fear and the non-perception of their need. Adults living in an urban area were more likely to forego modern care because of financial difficulties than those living in a rural area. These results corroborate the results of a study done in Tanzania, in which a link had been established between the place of residence and not seeking care.²⁰ Indeed, the distance from a dental office was proportional to the important of not seeking modern care. This same conclusion was made by Tanzanian adults who were 2.8times more likely not to seek care than young adults for reasons of distance from health centers.¹⁶ However in Burkina Faso, no relationship was established between distance and use of care.²¹ The result of our study shows the necessity of undertaking awareness campaigns and promoting oral care in areas far removed from urban centers where the populations have a strong tendency to practice self-medication.

Conclusion

Our study showed that the main reasons for renouncing modern and traditional oral care were self-medication, financial hardship and the lack of perception for a significant segment of the population of the seriousness of oral diseases. These reasons were related to the respondent's gender, age, habitat type and geographic location. Financial barriers related to access to care are more of a concern to women and are more prevalent in urban areas. Thus, the feeling of non-perception of the need for care is more developed in men. This emphasizes the importance of sensitizing and informing populations to better express health needs. This study therefore suggests that the problem of the renunciation of oral care is multifactorial in Côte d'Ivoire. Efforts to improve people's access to care should be based on a holistic approach that takes into account the social determinants of health.

Authors statements

The data collected with no confidentiality, ethics committee approval was not required according to the regulations of the Ivory Coast. However, the agreement of the administrative and traditional authorities as well as the respondents was obtained before any data

collection. The study was funded entirely by its authors and has therefore received no external funding.

Acknowledgements

None.

Conflict of interest

Author declares that there is no conflict of interest.

References

1. Kuijken NM, Naaldenberg J, Nijhuis-van der Sanden MW, et al. Healthy living according to adults with intellectual disabilities: towards tailoring health promotion initiatives. *J Intellect Disabil Res.* 2016;60(3):228–241.
2. Petersen PE. Global policy for improvement of oral health in the 21st century – implication to oral health research of World Health Assembly 2007, World Health Organization. *Community Dent Oral Epidemiol.* 2009;37(1):1–8.
3. Hart JT. The inverse care law. *The Lancet.* 1971;297(7696):405–412.
4. Lasser KE, Himmelstein DU, Woolhandler S. Access to care, health status, and health disparities in the United States and Canada: results of a cross-national population-based survey. *Am J Public Health.* 2006;96(7):1300–1307.
5. Hamano T, Takeda M, Tominaga K, et al. Is accessibility to dental care facilities in rural areas associated with number of teeth in elderly residents? *Int J Environ Res Public Health.* 2017;14(3):327.
6. Boccolini CS, De Souza Junior PR. Inequities in health care utilization: results of the Brazilian National Health Survey. *Int J Equity Health.* 2016;15(1):150.
7. Samba M, Kouadio NGA, Guinan JC, et al. Le renoncement aux soins bucco-dentaires à Abidjan. *Rev Col Odonto-Stomatol Afr Chir Maxillo-fac.* 2003;10:52–57.
8. Naidu RS, Gobin I, Newton JT. Perceptions and use of dental quacks (unqualified dental practitioners) and self-rated oral health in Trinidad. *Int Dent J.* 2003;53(6):447–454.
9. Vanobbergen J, De Visschere L, Daems M, et al. Socio demographic determinants for oral health risk profiles. *Int J Dent.* 2010.
10. Van der Geest S. Is there a role for traditional medicine in basic health services in Africa? A plea for a community perspective. *Trop Med Int Health.* 1997;2(9):903–911.
11. Muela SH, Mushi AK, Ribera JM. The paradox of the cost and affordability of traditional and government health services in Tanzania. *Health Policy Plan.* 2000;15(3):296–302.
12. Lo CM, Cissé D, Faye D, et al. Facteurs associés au renoncement aux soins bucco-dentaires au Sénégal. *Lettre de Santé Publique bucco-dentaire.* 2010;1:8–11.
13. Matee IM, Simon EN. Utilization of dental services in Tanzania before and after the introduction of cost sharing. *Int Dent J.* 2000;50(2):69–72.
14. Jaffré Y, Olivier de Sardan JP (dir). An inhospitable medicine. *The difficult relationship between carers and cared for in five West African capital.* Karthala Paris; 2003.
15. Al-Shammari KF, Al-Ansari JM, Al-Khabbaz AK, et al. Barriers to seeking preventive dental care by Kuwaiti adults. *Med Princ Pract.* 2007;16(6):413–419.
16. Kikwilu EN, Kahabuka FK, Masalu JR, et al. Satisfaction with urgent oral care among adult Tanzanians. *J Oral Sci.* 2009;51(1):47–54.

17. Okullo I, Astrom AN, Haugejorden O. Social inequalities in oral health and use of oral health care services among adolescents in Uganda. *Int J Paediatr Dent.* 2004;14:326-335.
18. Ntabaye MK, Scheurtz F, Poulsen S. Household survey of access to and utilisation of emergency oral health care services in rural Tanzania. *East Afr Med J.* 1998;75(11):649-653.
19. Pohjola V, Lahti S, Vehkalahti MM, et al. Association between dental fear and dental attendance among adults in Finland. *Acta Odontol Scand.* 2007;65(4):224-230.
20. Kikwilu EN, Masalu JR, Kahabuka FK, et al. Prevalence of oral pain and barriers to use emergency oral care facilities among adult Tanzanians. *BMC Oral Health.* 2008;8:28.
21. Develay A, Sauerborn R, Diesfeld HJ. Utilization of health care in an African urban area: results from a household survey in Ouagadougou, Burkina Faso. *Soc Sci Med.* 1996;43(11):1611-1619.