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Short Communication

Socio-economic and geographic differences in acceptability of community-based health insurance

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This study investigated the level of acceptability of community-based health insurance (CBHI) among different population groups. The main focus of CBHI is capturing the majority of the population that depend on out-of-pocket spending for healthcare payment, which is a major hindrance to the use of health services.[1–4] There has been rapid growth in CBHI among urban and rural self-employed informal sector workers.[5,6] However, it is important that developed CBHI schemes are acceptable to all beneficiaries,[5,7] irrespective of socio-economic status (SES) or geographical location.

This study was conducted in urban, semi-urban and rural communities in Enugu and Anambra states, South-east Nigeria to gain a broad picture of the acceptability of CBHI in different settings. The study sites in Anambra state were Awka (urban), Amawbia (semi-urban) and Amansea (rural). The study sites in Enugu state were Uwani (urban), Iji-Nike (semi-urban) and Amokwe (rural). Based on the existing CBHI premium of 500 Naira/month/person in some communities in Anambra state where CBHI is already operational, the monthly premium will represent less than 2% of monthly household expenditure in the study area.

A pre-tested interviewer-administered questionnaire was used to collect information from 3070 households selected at random. The sample size was determined using a power of 80%, 95% confidence levels, and assumed utilization rate of health facilities of 20%. A minimum sample of 500 households was drawn from each community using a simple random sampling technique.

The head of the household or the most senior member of the household was interviewed. Respondents were given a brief explanation of CBHI and its attributes before determining their perceptions on the acceptability of the scheme. The respondents scored the acceptability of CBHI on a scale of 1–10 (1 = least preferred, 10 = most preferred). The willingness of respondents to enrol in a CBHI scheme (elicited as a binary 'yes' or 'no' variable) was also used as a proxy of acceptability. Data were also collected on the demographic and socio-economic characteristics of the population.

Data were examined for links between key dependent variables and SES and geographic location of the respondents. An SES index, computed using principal component analysis, was developed from information on household ownership of assets and per-capita weekly food expenditure. Asset holdings were combined with per-capita weekly food expenditure in order to derive a composite index that could differentiate

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Table 1 – Acceptability and willingness to be enrolled in a community-based health insurance (CBHI) scheme by socio-economic status.

Variables	Q1 (poorest) *n* (%)	Q2 (very poor) *n* (%)	Q3 (poor) *n* (%)	Q4 (least poor) *n* (%)	χ^2 (*P*-value)
CBHI is acceptable to the respondent	749 (99.1)	744 (98.4)	742 (98.2)	736 (97.4)	6.7 (>0.05)
CBHI will improve access to good-quality health services	749 (99.1)	746 (98.7)	744 (98.4)	744 (98.4)	1.2 (>0.05)
Willing to be enrolled in a CBHI scheme	748 (98.9)	745 (98.6)	743 (98.3)	741 (98.0)	2.8 (>0.05)
Will personally enrol in a CBHI scheme	743 (98.3)	742 (98.2)	725 (95.9)	719 (95.1)	15.0 (<0.05)
Will enrol other household members in a CBHI scheme	716 (94.7)	714 (94.4)	693 (91.7)	707 (93.5)	6.1 (>0.05)

between different SES classes, and was not concerned with where CBHI payments would be made from. The SES index was used to divide the households into quartiles: Q1 (poorest); Q2 (very poor); Q3 (poor) and Q4 (least poor). Bivariate analysis and logistic analysis of willingness to enrol in a CBHI scheme were undertaken. In addition, an ordinary least squares analysis of acceptability scores was used to explore socio-economic and other determinants of the acceptability of CBHI.

Of the 3070 households, most respondents were male heads of households (61.7%), were in their 40s, were the main income earners (83%) and were the main decision makers about household expenditures (84.7%). The majority of respondents had some formal education. The rural communities of Amansea and Amokwe had the fewest years of formal schooling (average 9 years). Educational attainment was lower in rural communities compared with urban communities.

Of the 3018 (98.3%) respondents who reported that the scheme was acceptable as a means of paying for health, 32%, 35% and 33% were from urban, semi-urban and rural areas, respectively. Of the 2972 respondents who stated that they will personally enrol in a CBHI scheme, 32%, 35% and 33% were from urban, semi-urban and rural areas, respectively. Finally, of the 2870 respondents who were willing to enrol other household members in a CBHI scheme, 31%, 35% and 34% were from urban, peri-urban and rural areas, respectively.

Table 1 shows that CBHI was equally acceptable to all SES groups, and all groups thought that CBHI would improve their access to good-quality health services. In multiple regression analysis, the level of acceptability was positively related to geographic location and SES status of the respondent ($P < 0.05$).

CBHI was acceptable to most of the respondents, suggesting that a well-implemented scheme is likely to succeed. These findings are similar to those of an earlier study,[8] and may be because respondents feel that their level of access to good-quality health services will improve. The level of acceptability of CBHI and the perception that the scheme will ensure access to good-quality health services was similar across various SES groups. This finding is potentially an expression of equal need by all groups, and although it does not indicate potential for equality of access, it may be a major denominator in evaluating equity issues when the scheme is actually implemented.

It was interesting to note that the poorest households were more willing to enrol in CBHI schemes than the less poor households, suggesting that as income increases, people may be less willing to enrol. The less poor groups may be more aware of inconsistencies in implementation of acceptable and well-planned programmes, which are common in low-income countries,[9,10] and may therefore be more likely to express distrust and cynicism about the success of the scheme.

Future studies could include qualitative enquiry to achieve better understanding of factors that explain the acceptability of CBHI. Also, future studies should explore the influence of many variables on the acceptability of CBHI more comprehensively, and possibly use discriminate function analysis for more sensitive data analysis.

Ethical approval

University of Nigeria Ethics Committee.

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Competing interests

None declared.

REFERENCES

1. Palmer N, Mueller D, Gilson L, Mills A, Haines A. Health financing to promote access in low-income settings – how much do we know? *Lancet* 2004;**364**:1365–70.
2. Ichoku HE, Fonta W. *The distributive effect of health care financing in Nigeria. PEP working paper, No. 2006-17*. Canada, Quebec City: University of Laval; 2006.
3. Meessen B, Zhenzhong Z, Van Damme W, Devadesan N, Criel B, Bloom G. Latrogenic poverty. *Trop Med Int Health* 2003;**8**:581–4.
4. Kirigia JM, Prever A, Carrin G, Mwikisa C, Diarra-Nama AJ. An overview of health financing patterns and the way forward in the WHO African Region. *East Afr Med J* 2006;**83**:S1–28.
5. Poletti T, Balabanova D, Ghazaryan O, Kamal-Yann M, Kocharyan H, Arekelyan K, Hakobyan M. *Options for scaling up community-based health insurance for rural communities of Armenia. Health system development programme*. London: London School of Hygiene and Tropical Medicine; 2007.
6. Wiesmann D, Jutting J. The emerging movement of community based health insurance in sub-Saharan Africa: experience and lessons learned. *Africa Spectrum J* 2000;**35**:193–210.
7. Dong H, Kouyate B, Cairns J, Sauerborn R. Differential willingness of household heads to pay community-based

insurance premia for themselves and other household members. *Health Policy Plann* 2004;**19**:120–6.
8. Bennett S, Kelley AG, Silvers B, Gadhia R, Salamata L. *21 questions on CBHF: an overview of community-based health financing*. Bethesda, MD: Abt Associates, Partners for Health Reformplus (PHRplus); 2004.
9. Gilson L. Acceptability, trust and equity. In: McIntyre D, Gavin M, editors. *The economics of health equity*. London: Cambridge University Press; 2007.
10. Preker A. *Voluntary health insurance in development: review of role in Africa region and other selected developing country experiences*. Washington, DC: World Bank; 2004.