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ORIGINAL RESEARCH

Pattern of population coverage of a social health insurance scheme in a Southwest Nigeria State: A 3-year post implementation evaluation

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Abstract

Aims: Social health insurance scheme is capable of minimizing inequity of access to health services, and thereby enhance an improvement in population health outcomes. Recently the National Health Insurance Scheme (NHIS) of Nigeria decentralized its management to the sub-national levels, thus the emergence of State Health Insurance Schemes (SHIS). The SHIS of Oyo State Nigeria started operations about three years ago (June 2017). There is limited/sparse evidence on the performance of the scheme since its inception. Therefore, the aim of this study was to assess the scheme's level of population coverage in the first three years of implementation. The findings will also provide an evidence base to inform the repositioning of the scheme for improved performance and enable it achieve the purpose of its establishment.
Methods: Service data from the server of Oyo SHIS were downloaded, collated and analyzed with excel software. Data extraction, cleaning and analysis covered a period of three months (September – October, 2020). Descriptive statistics were used to summarise the data. Population coverage distributions were expressed as frequency and percentages. Frequency tables and graphs were generated to disaggregate the findings.
Results: Since inception, the population coverage of the scheme has remained low at less than 1% of the total population of the state over the past three years. This trend is depicted across the various sociodemographic sections of the population.
Conclusion: Stakeholders in the Oyo State SHIS need to re-strategize to reposition the scheme for an accelerated population coverage as a proxy for performance assessment.

Keywords: *beneficiaries, coverage, National Health Insurance Scheme, Oyo State, population coverage, state supported social health insurance programme.*

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Authors' contributions:
David Adewole conceived and designed the study. Wuraola Ladepo and Temitope Ilori did data collection and analysis. Adewole, Owolabi and Akande contributed equally to the manuscript write up. All authors read through the manuscript draft the second time. All authors agreed to the final manuscript.

Conflict of interests: None declared.

Introduction

Different countries the world over had attained Universal Health Coverage (UHC) within different time duration (1). While it has taken countries like Germany and some other Western European countries about a century to achieve UHC, some other countries in recent times especially in the Asian blocks have done tremendously achieving same within a period of a few decades (1,2). Encouraging reports about the speed of achieving UHC were also documented in many Latin American countries especially Brazil, Costa Rica, Cuba, and Argentina among others (3). Similar achievements have been reported in some African countries like Rwanda (4-6) and Ghana (4,7). For reasons of equity of access to available health care services and to accelerate the achievement of UHC, some countries in Africa, Asia and Latin America have made significant strides towards achieving UHC. These countries have engaged all levels of health care delivery especially the primary health care level facilities as service providers in their health system reforms especially the social health insurance schemes (3). Challenges with social health insurance schemes in many of the SSA countries include poverty, low level of awareness, superstitious belief, poor technical skills of the personnel in the industry (8), and inability to differentiate it from other pre-existing microfinance schemes among others (9). Uptake of health insurance have been found to be more likely among those who are more likely to need health care services more such as married individuals, the elderly and those with chronic illnesses (10). The poor population health indices common in developing countries is majorly as a result of inequity of access to available health care (11-13). However, when it is efficiently managed, social health insurance scheme is capable of minimizing inequity of access to health services, and thereby enhance an improvement in population health outcomes (3,4,8,14). Following almost two decades of efforts to achieve universal health coverage (UHC) through the National Health Insurance Scheme (NHIS) of Nigeria (15), and not satisfied with the achievement made by the NHIS in terms of population coverage so far, the National Council on Health (NCH) and other stakeholders in the health system of Nigeria approved the establishment of the State Supported Social Health Insurance Programme (SSHIP) in the year 2015. This is a form of decentralization of the NHIS to the sub-national governments, that is, the states. It was the belief that this reform will bring about the necessary sense of ownership and commitment to the prepayment system for health among stakeholders in these states and thus enhance a steady progress of the scheme to achieving UHC (16). Stakeholders were optimistic that decentralization of prepayment scheme will provide the necessary impetus for the state stakeholders to design a sustainable prepayment scheme. With this, the sub-national levels of government, that is, the 36 states (including the Federal Capital Territory, FCT) were empowered to design, implement and manage a form of social health insurance scheme for people in the respective states of the country. Statutorily, the NHIS provides technical and some level of financial support to the states operating their own SSHIP.

Findings from a commissioned Report on the scheme shows that Oyo (State) SSHIP commenced operations in the year 2017, following the recommendation of a planning and design committee whose membership consisted of stakeholders from the state ministry of health, the NHIS, private and public health care providers (including pharmacists and laboratory scientists), academics, and the health maintenance organizations. The Report further shows that just before the commencement of its operations, a public hearing on it held whereby members of the public and committee on health of the house

of representatives of Oyo State held a town hall meeting with the purpose of having contributions from all stakeholders. The meeting aimed to social market and enhance the acceptance of the scheme among potential beneficiaries (17). The SSHIP aimed to achieve UHC through a state-wide implementation strategy partnering with both the public and private health care facilities in all the LGAs of the state. The bill that established OYSHIA was signed into law 2016, however, implementation of the scheme commenced in 2017 (18). Generally, with a lower level of awareness (19) and poor financial capacity to pay premiums (8), social health insurance schemes have been reported to favour the rich majorly (20), while the informal sector population tends to be poorly represented (21). There was no comprehensive assessment of the performance of the scheme since inception. The only information about the scheme was a one year post-implementation report. The Report only assessed the level of awareness of the populace about the scheme and as well as available service providers (17)**.** Prior this study, there was no report on the performance and coverage of the scheme among socio-demographic and geo-graphical divides.

This study was conducted as a means of assessing the level of and implementation mechanisms of the scheme. Findings will assist in identifying gaps and areas of success. This information will assist in taking appropriate steps where and when necessary to ensure the scheme is kept on track to achieving its objectives. It will also be useful to similar settings making efforts to achieve universal health coverage for their populations.

Methods

Study design/area

This is a descriptive cross-sectional study. It was carried out in Oyo State, one of the 6 states in the Southwest geo-political zone of Nigeria. The capital of the state is Ibadan, a city of about 150km northeast of Lagos, the former capital of Nigeria. Currently, the estimated population of the state is 7.6 million people, with male to female ratio almost of equal proportion. The state has 33 Local Government Areas (LGAs), with varying population sizes. Typical of developing country, the state has a much larger informal population compared with those in the formal or organized private sector. More of the people lives in the rural areas (22).

Data collection and analysis

With the permission of OYSHIA, data on monthly enrolment in the State's health insurance scheme were downloaded from the Scheme's website. The Agency's data bank on enrolees is built as information on new enrolees is collected at registration. This is a continuous process across all designated registration points in the state. Data collected are uploaded into the Agency's website as and when due. Collected data were analysed to suite the purpose of the study. Downloading of data from the website and subsequent analyses were accomplished over a period of three months (May-July, 2020). Data were used to plot a graph-displaying pattern of enrolment in the scheme by month over a period 36 months (July 2017 – June 2020) (Fig. 1). Other relevant charts were produced from the data. A map of Oyo State showing all the LGAs and the proportion of enrolees in the scheme by LGA was also produced. The data were publicly available online. There was no need for ethical approval for this study because secondary data of all enrolees in the health insurance scheme of the State were used. There were no exclusion criteria.

Results

Figure 1 below shows the pattern of enrolment in the health insurance scheme over a period of three years since inception (June 2017 – July 2020) with a common pattern of periods of increased enrolment followed by decline in enrolment in the scheme. This pattern is uniform for the three-year period.

Figure 1. Secular trend of enrolment in OYSHI Scheme in first 3 years of operation

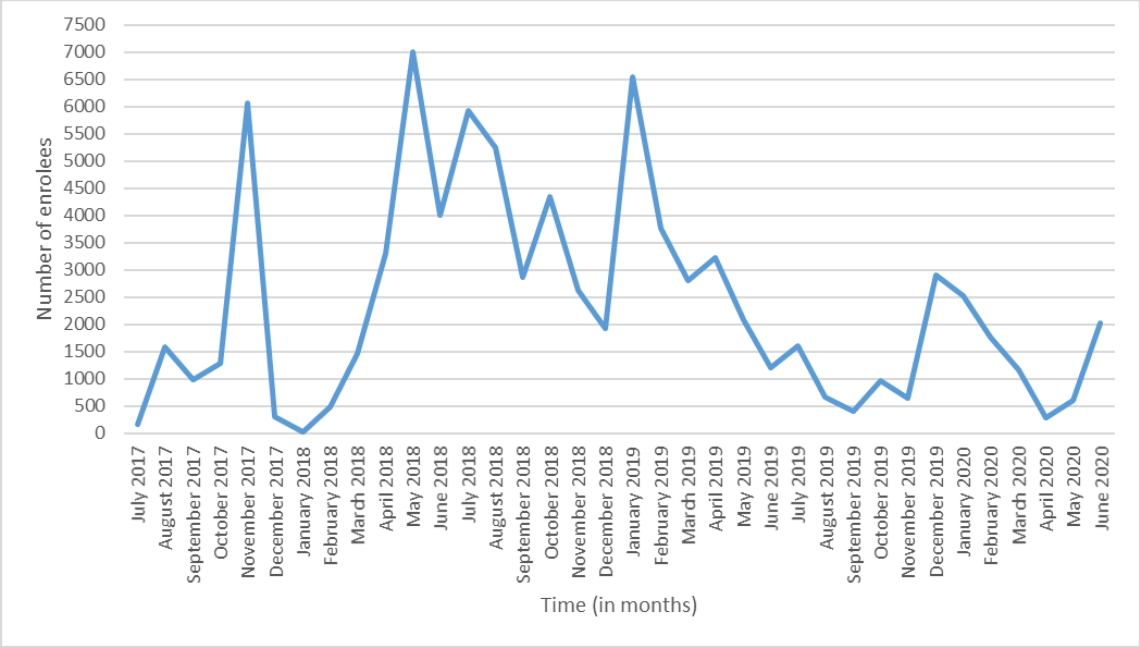


Figure 2 (and Appendix 1) shows the spatial distribution of the LGAs in the state and the proportion of uptake of health insurance against the total population is as displayed in the map. The highest proportion of those who enrolled in the scheme in any of the LGAs was found in two LGAs (Ibadan Northwest and Lagelu) and were not higher than 2% of the total population in each of these two LGAs. In total, less than 1% of the current total population of Oyo State was covered, only two LGAs, Ibarapa North 8 (0.04%) and Olorunsogo 71 (0.14%) recorded an increase in the total number of enrolees over the three-year period, while 29,726 (35.0%) of the total population ever registered in the state had dropped out of the scheme.

Figure 2. Geographical pattern of enrolment in OYSHI Scheme by LGA

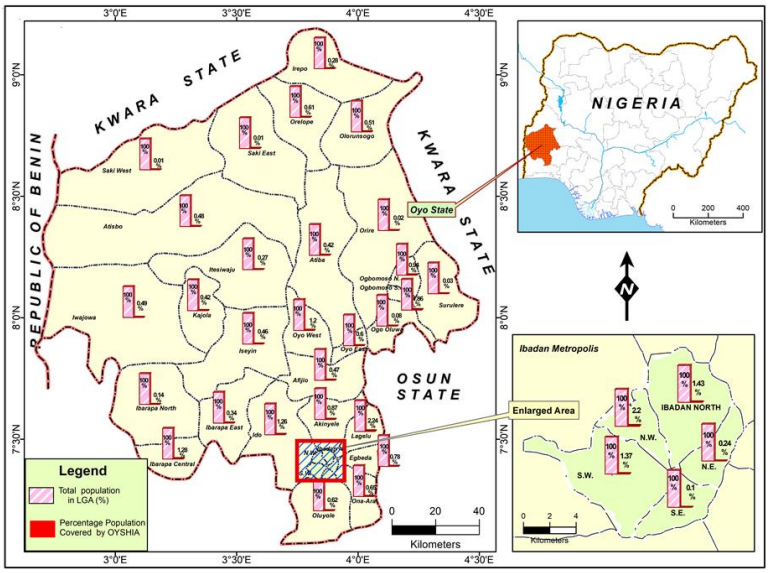


Figure 3 below shows the pattern of enrolment by age group. Enrolees in the age group between 20 and 59 years had the highest proportion of those currently registered 55,119 (100%). Of this age group, those in the 40-59 years were more, 40,010 (72.6%) compared with those between 20 and 39 years 12,774 (23.2%). Individuals who were 80 years and above 25(0.05%) were the least group represented.

Figure 3. Pattern of enrolment in OYSH Scheme by age group

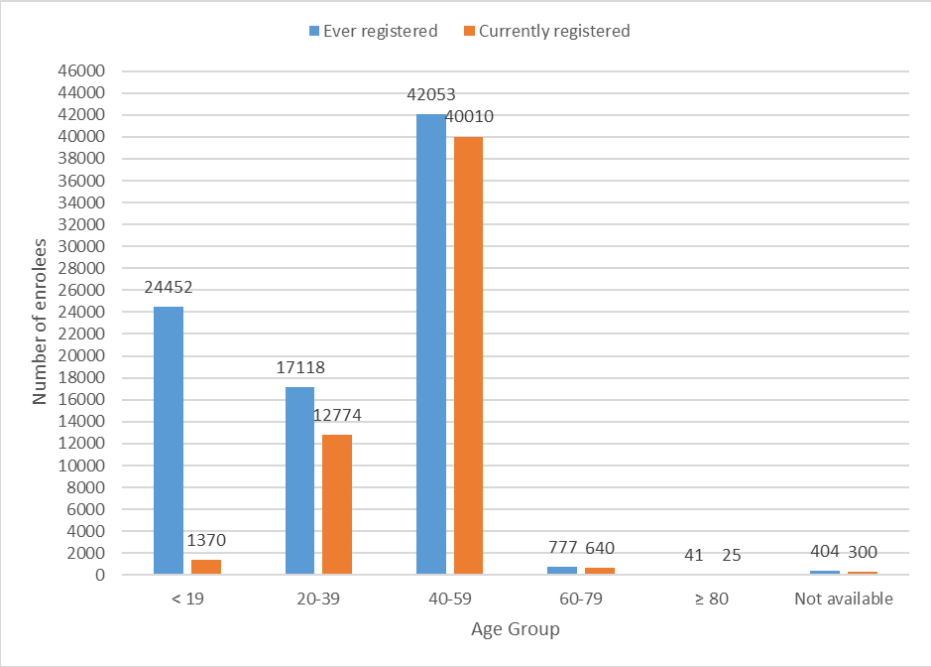
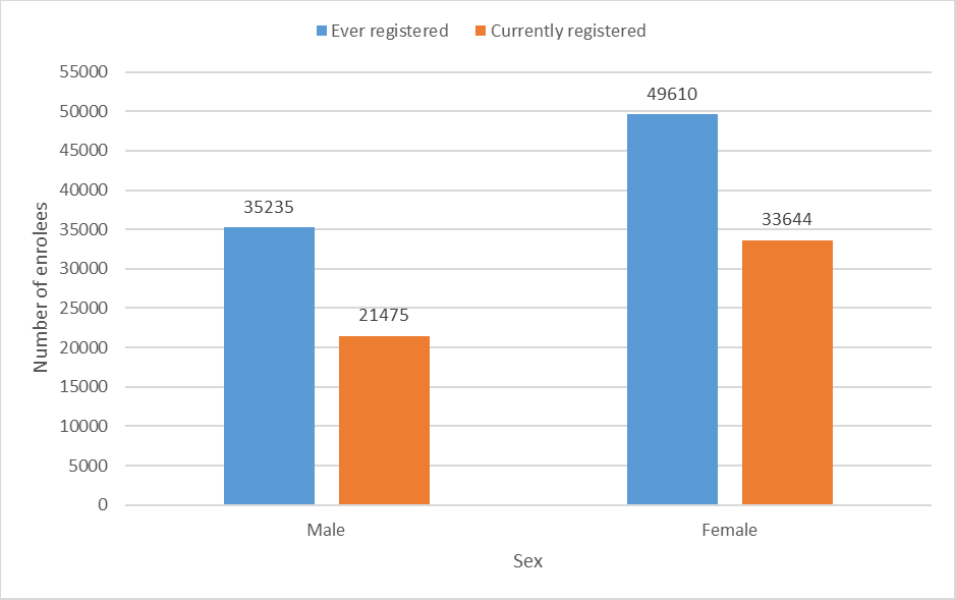


Figure 4 below shows that almost two-thirds 33,644 (61.0%) of the total currently enrolled individuals were females compared to males 21,475 (38.9%).

Figure 4. Pattern of enrolment in OYSH Scheme by sex



Almost all enrolees reported been married individuals, 51,098 (92.7%) compared with singles who were much less in number 3,960 (7.2%) (Appendix II).

In the three-year period of the scheme, 84,845 individuals have ever registered. However, as at the end of the first three years (June 2020), the number of enrolees on the scheme was 55,119. Thus, individuals who have dropped out of the scheme was 29,726 (35.0%) (Appendix III).

Of the total enrolees, individuals from the civil service of Oyo State had the highest number 51,585 (93.5%). The least was among the organized private sector, 809 (1.5%) (Appendix IV).

Discussion

The state social health insurance scheme having enrolment service points in all the LGAs in the state is an encouraging development. However, the population coverage in the last three years has remained extremely low at less than one percent of the total population. The scenario is worsened by a drop out at over one-third of the original enrolment figure. An encouraging development in the scheme is having enrolment centres in all the LGAs which have provided equal opportunity for the citizens in the state to enjoy the benefit associated with membership of the scheme. This pattern of start-up is also capable of an accelerated population coverage with the foci of enrolment eventually coalescing with time. It would also avoid the political insinuation that some LGAs were better favoured than others which could arise if some LGAs were selected as pilot sites. It has also avoided unnecessary schism in existing cooperation needed for growth and development in the state.

However, it should be noted that generally, the rate of enrolment in the scheme across the LGAS and the state as a whole was quite slow. Studies have shown different periods of achieving universal health coverage (UHC) in different countries (1,2). In western European countries such as Germany and other developed economies where prepayment schemes for health are well established, it has been reported that attainment of UHC took an average of a century in countries like Belgium and Germany, (1). However, some other countries especially in Latin America such as Costa Rica and Brazil (3) and as well as Japan and Republic of Korea in Asia (1) were able to achieve UHC in less than half of a century. It has been reported that the average period to attain between 60-80% population coverage is 9 years post implementation of a social health insurance scheme (2). In this study, and using available data, the rate of population coverage is estimated at 18,373 per year. Assuming a static population, it would take more than four centuries to cover the present population of Oyo State [7,690,472]. Nevertheless, the population will not remain static. This analysis should be a startling reality and for the stakeholders in the state's health insurance industry as well as actors in relevant other sectors, to re-strategize for the achievement of UHC in reasonably good period.

Awareness creation, education about the mechanisms of operation of a social health insurance scheme has been found to improve uptake in some other settings (19). Other efforts to overcome the common challenges in the uptake of a social health insurance scheme in developing countries of the SAA has been suggested (23). However, it is certain that the solution should be a multi-pronged approach.

This study shows that the working age population group had the highest representation in the scheme. This may not be farfetched as the scheme is mandatory for civil servants. Again, the lower proportion of other age groups who were obviously not likely to be employees of the government would be more of the difficulty to enrol those who are in the informal sector as there was no register for those outside of the formal government employment for reason of retirement or for any other reason. Capturing population group in the informal

sector for mandatory health insurance is one of the common challenges faced by prepayment schemes in developing countries (8). It should also be noted that the lower proportion of those in the twenties and late thirties may have to do with the current present prevailing age structure in the civil service of Oyo State. However, further studies are necessary to clarify this observation. The same explanation goes for the higher proportion of females than males in the study.

Individuals who are more likely to need health care services such as married, the elderly, women and those who are chronically ill have been identified to have better disposition to register in a health insurance scheme (10). This may suffice to explain the higher proportion of married people and women in this study. However, the lower proportion of elderly people as against the observed norm could be due to other reasons such as inability to pay premium, lack of an efficient platform to pay premium, poor understanding of the mechanisms of operation of the scheme or lack of awareness of the existence of the scheme. This study could not establish any of the suggested reasons. It would require further research efforts, particularly qualitative studies to clarify.

This study also observed that more than one-third of the total number of enrolees have dropped out of the scheme. This should be a cause for concern. Factors of disincentive in a health insurance scheme have been linked to what could breach the trust of people such as poor attitude of health care personnel in the facilities, lack of drugs, equipment and personnel and other factors that could cause dissatisfaction in health care (24). None of these factors could be proven in this study because secondary data were used. It is desirable to know for certainty what could have been the reasons for this observation. Studies to unravel the cause(s) will go a long way in the efforts to achieving UHC for the scheme.

This study attempts to assess the performance of a state health insurance scheme using the extent of population coverage as a proxy. It has chosen to make use of the enrolment pattern across the sectors of the civil service, organized private sector and the informal population group. Based on available data on these three sectors, it could, with caution, conclude that the performance of the scheme is generally very low for the following reasons. First, the scheme is compulsory for civil servants, thus the high proportion of this group could not be said to be because of civil servants' satisfaction with the scheme but rather is more like a compulsion. Secondly, informal sector population is known to be the larger sector than any other sector in developing countries (8). Therefore, a smaller proportion of the informal sector in the enrolment status under this scheme is a point to the fact of the scheme's low performance than otherwise. Stakeholders in the health insurance industry in Oyo State definitely have a big task to make the scheme achieve a UHC in the state. Concerted efforts and re-strategizing are needed.

Limitation/recommendation

This study made use of secondary data. Therefore, individuals could not be interviewed to enable an in-depth knowledge of the factors that may have contributed to or caused the study findings. This is a call for further studies that will need primary data and involve individual as study participants to enable a more robust assessment of the scheme.

In conclusion, this study has shown that the population coverage of the present social health insurance scheme in Oyo State is poor and as it is presently, it is not likely to reduce inequity of access to health care. Strategies for achieving sustainable UHC in Oyo State and in similar other settings in the African Region must target specific population groups such as the elderly and those in the informal sector. Associated

challenges that serve as barriers with enrolment in prepayment schemes and access to available health services under it should be appropriately and specifically addressed.

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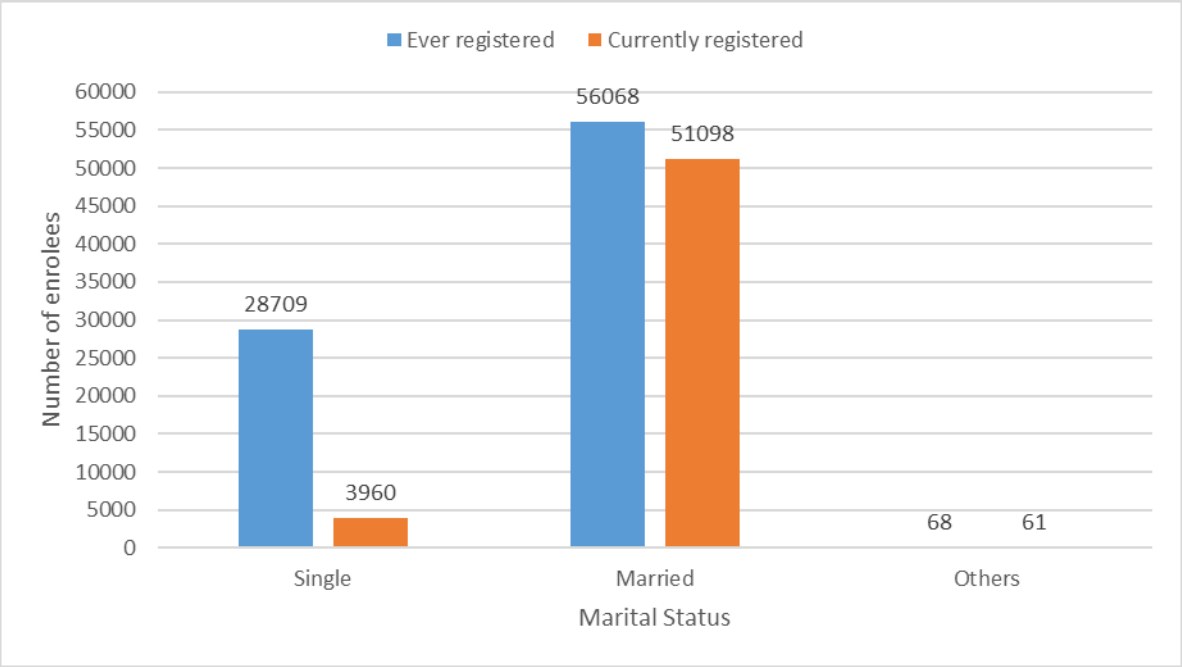
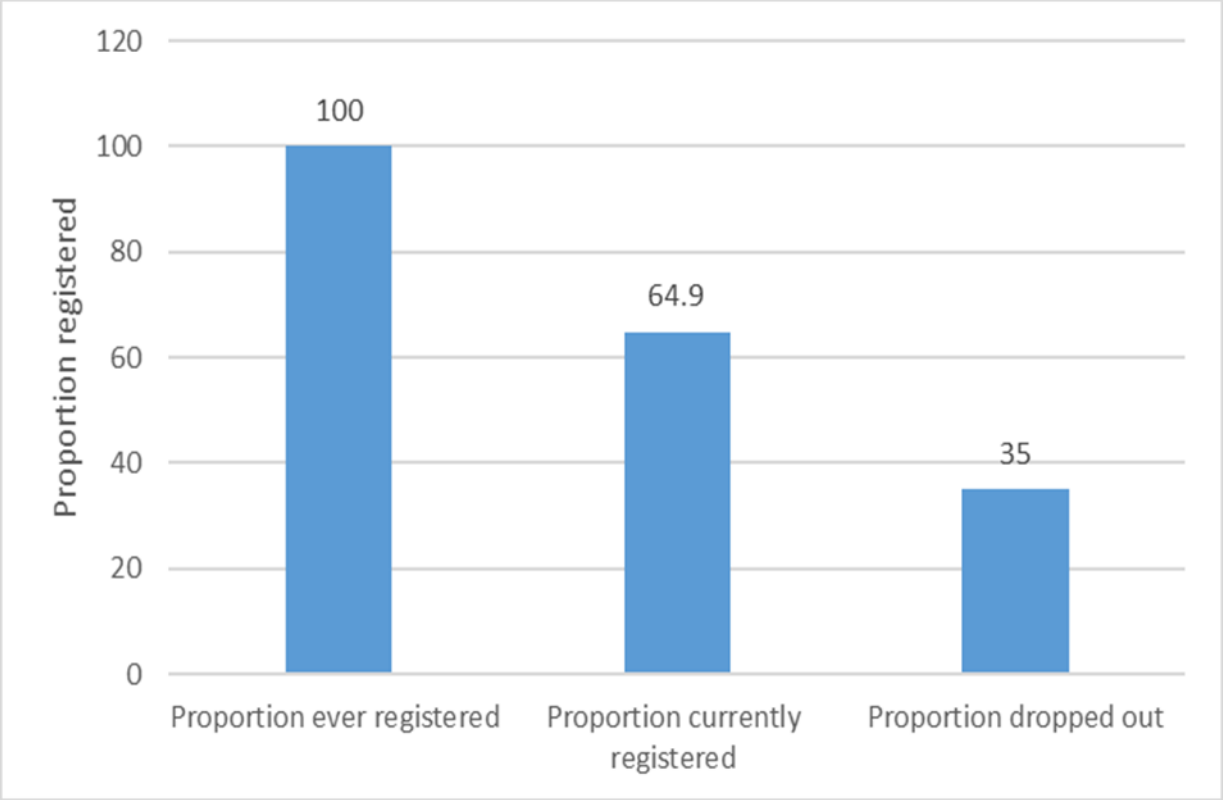
Appendix 1. Pattern of enrolment and drop out in the scheme by LGA

LGA	Number Ever registered in scheme	Current population coverage	Projected pop @ 2.7% annual increase	% current pop. covered	% dropped out of ever registered
Afijio	856	847	182,150	0.465001	9 (0.011)
Akinyele	5,855	2,529	291,876	0.866464	3326 (0.56)
Atiba	1,963	968	231,843	0.417524	995 (0.50)
Atisbo	737	727	151,532	0.479767	10 (0.014)
Egbeda	4,470	3,064	390,860	0.783912	1406 (0.31)
Ibadan North East	3,083	1,105	456,730	0.241937	1978 (0.64)
Ibadan North	7,839	6,088	424,588	1.433861	1751 (0.22)
Ibadan North West	10,878	4,663	212,252	2.196917	6215 (0.57)
Ibadan South East	2,505	369	367,178	0.100496	2136 (0.85)
Ibadan South West	8,282	5,354	390,109	1.372437	2928 (0.35)
Ibarapa Central	1,889	1,820	142,269	1.279267	69 (0.04)
Ibarapa East	566	549	161,477	0.339986	17(0.03)
Ibarapa North	184	192	138,204	0.138925	8(0.04)
Ido	3,674	1,805	143,432	1.258436	1869 (0.50)
Irepo	542	467	167,069	0.279525	75 (0.14)
Iseyin	1,753	1,615	352,243	0.45849	138 (0.08)
Itesiwaju	478	470	175,545	0.267738	8 (0.02)
Iwajowa	692	691	141,723	0.487571	1 (0.001)
Kajola	1,166	1,152	276,328	0.416896	14 (0.01)
Lagelu	7,313	4,576	204,127	2.241742	2737 (0.37)
Ogbomoso North	2,876	2,580	274,028	0.94151	296 (0.10)
Ogbomoso South	3,032	2,571	138,322	1.858706	461 (0.15)
Ogooluwa	96	69	89,843	0.076801	27 (0.28)
Olorunsogo	499	570	112,085	0.508543	71(0.14)
Oluyole	3,503	1,736	280,369	0.619184	1767 (0.5))
Onaara	3,606	2,381	365,957	0.650623	1225 (0.33)
Orelope	902	875	143,318	0.61053	27 (0.02)
Oriire	51	38	205,884	0.018457	13 (0.25)
Oyo East	1,148	1,030	171,003	0.602329	118 (0.10)
Oyo West	2,310	2,251	188,038	1.197098	59 (0.02)
Saki East	1,549	1,510	150,143	1.005708	39 (0.02)
Saki West	439	394	376,563	0.104631	45 (0.10)
Surulere	109	63	193,387	0.032577	46(0.42)
Total	**84845**	**55119**	**7,690,472**	**0.716718**	**29,726(35.0)**
	Total ever registered	Total currently registered	Total population Oyo State	Proportion currently of registered in Oyo State	

Appendix II. Pattern of enrolment in OYSH Scheme by marital status



Appendix III. Discontinuity with membership of OYSHI Scheme among enrolees



Appendix IV. Enrolment pattern in the OYSHI Scheme by sector