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RESEARCH ARTICLE

Awareness, Knowledge and Perception of The National Health Insurance Scheme (NHIS) Among Health Professionals in Mthatha General Hospital, Eastern Cape, South Africa

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Abstract:

Objective:

This Eastern Cape study assessed the awareness, knowledge and perceptions of the healthcare professionals in Mthatha General Hospital on National Health Insurance Scheme (NHIS).

Method:

A descriptive cross-sectional study was conducted among health professionals at Mthatha General Hospital. A simple random sample of 100 participants drawn across the various categories of health professionals responded to a validated questionnaire on awareness, purpose and challenges of implementation of NHIS.

Results:

Of the total (N=100), 86 health professionals returned the questionnaire (response rate=87%); 54 female (63%) and 32 male (37%). The majority of the respondents were nurses (67%) and doctors (28%). Others were radiographers (n=2) and clinical associates (2). The majority of the respondents (89.5%) were aware of NHIS and their sources of information on NHIS were: seminars and meetings (n=32), television and radio (n=26), friends and family members (n=14), newspapers (n=10) and internet (n=4). Good understanding of the objectives of NHIS was demonstrated by 81.3% (n=70) of the respondents. The poor state of health facilities and inadequate staffing across the country were reported as the major impediments to the implementation of NHIS. However, the majority of the respondents (n=64) expected that the quality of healthcare service delivery would improve by increasing the staff strength in the various health facilities.

Conclusion:

The majority of the health professionals in this setting were aware of NHIS. Both the infrastructure and staff strength require the attention of the health authorities in order to effectively implement the scheme in the district.

Keywords: National Health Insurance Scheme, Universal Health Coverage, Perception, Awareness, Challenges, Radiographers, Infrastructure.

1. BACKGROUND

Inequality of access to health care services remains a threat to the poor and underprivileged individuals worldwide. As such, about 400 million people cannot access quality health care services and another 150 million individuals are

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plunged into financial woes annually due to the debt incurred from health spending worldwide [1]. The universal health coverage (UHC), aimed at bridging the gap of inequality of access to healthcare, was recommended by the World Health Organization [2]. This strategy would hopefully narrow the gaps in access to healthcare between the rich and the poor in both developed and resource poor countries. Countries such as United Kingdom, Sweden, Turkey, Finland, Norway and Brazil have adopted the UHC [3]. These countries have documented significant successes in the reduction of under-five and maternal mortality [4]. Significant reduction in maternal, under five, infant and neonatal mortality ratio were observed following the introduction of UHC in Thailand [5], Brazil [6] and Turkey [7]. Conversely, poor people of countries with non-existent UHC still have limited access to quality healthcare [8].

However, full implementation of UHC is a daunting task in many low and middle income countries, including South Africa. The South African healthcare system is made up of the private and public service providers. The public healthcare system, funded by the government, provides free healthcare to the majority of South Africans. However, the public healthcare system has always been known for its high patient volumes, poor funding and poor patient management [4]. On the other hand, the private sector serves a small proportion of the population who opts for a medical scheme or Pay Out-Of-Pocket (OOP).

There is a great disparity between fund allocations between the two sectors in South Africa with an estimated 48% of the expenditure on health in the public sector which serves about 40 million populations. The remaining 52% of the expenditure was spent in the private sector to serve only 7 million people in 2015/16 [4]. This discrepancy in the distribution of funding has also influenced the distribution of healthcare providers with more than 50% of the country's doctors and specialists in private sectors [3]. These discrepancies in distribution of financial and human resources between the sectors contradict the fundamental rights of individuals regarding their health as enshrined in the constitution [9].

In a bid to tackle these challenges in the health sector, a National Health Insurance scheme (NHIS) (Green Paper in 2011) was formulated in 2011 [10]. This scheme focused on reorganizing the current two-tiered (private and public healthcare) system in such a way as to allow access to quality and affordable health care services for all South Africans based on their health needs, irrespective of their socio-economic status [10]. A pilot study on the implementation of NHIS was conducted in some selected districts across the country. Surender *et al.*, (2016) in Tshwane district reveals a strong support for NHIS by the general practitioners [11]. However, a lack of appropriate infrastructure and shortage of equipment in NHI facilities were raised as major impediments to the implementation of the scheme.

The perceptions of the healthcare professionals on NHIS are informed by an awareness of the objectives as well as the implementation processes. A good understanding of the NHIS by the stakeholders may be a precursor of successful implementation of the scheme [8]. There are mixed reports on the healthcare professionals' perceptions of NHIS in South Africa [12, 13]. As such, this study was conducted to examine the level of awareness and perception of healthcare professionals in Mthatha General Hospital in OR Tambo district, one of the pilot sites for NHIS in the country.

2. MATERIALS AND METHODS

2.1. Study Area and Design

A cross-sectional survey was conducted among health care professionals working at Mthatha General Hospital, a district hospital in the OR Tambo district, Eastern Cape, South Africa. The study was conducted from September to November 2012.

2.2. Study Population and Sampling

Healthcare professionals were the study population and 100 representative random sampling of participants were drawn from the various categories of healthcare professionals.

The estimated total number of healthcare professionals working at Mthatha General Hospital was 380 and more than 70% of them were nurses. Healthcare professionals were stratified into different categories (Medical doctors, Nurses, Clinical associates and Radiographers). A stratified random sample was utilised to select the respondents from the list of healthcare professionals working at the hospital at the time of the study.

2.3. Study Instrument

The structured questionnaire consisted of 25 items on the NHIS allowing for both open- and closed responses.

These questions were categorized based on the study objectives into the following sections: demographic profile, awareness and source of information, understanding and perception of NHIS. Close and open-ended questions were used to probe the healthcare professionals' perceptions on the NHIS. The questionnaire was piloted among 10 healthcare professionals at the locale OR location and adjustment was made using the feedback from the respondents. Data from the pilot study was not included in the final analysis.

2.4. Data Collection

The investigators hand-delivered the questionnaire to the selected healthcare professionals. Questionnaires were collected within two weeks of distribution. A total of 100 questionnaires were administered of which 86 were received (Response rate= 86%). Overall, 14 participants did not return the questionnaire.

2.5. Ethical Consideration

Ethical approval was obtained from the Management College of South African Ethics Committee. The management of Mthatha General Hospital, Eastern Cape gave permission for the implementation of the study. Each participant signed an informed consent for the voluntary participation in the study.

2.6. Statistical Analysis

Data was analysed using simple descriptive statistics. Knowledge of objectives and concept of the NHIS were graded and scored. Responses were categorized into positive and negative perceptions. The positive perceptions included strongly agreed and agreed responses, while negative perceptions included the strongly disagreed and disagreed responses. Categorical variables were presented in frequency (n) and proportions in percentages (%).

3. RESULTS

Of the 86 respondents, the majority were female (62.8%), within the age group (20-40 years) (61.6%), nurses (67%) and had maximum of five years' work experience (59.3%) (Table 1).

Table 1. Baseline characteristics of participants.

Variables	Frequency	Percentage (%)
Gender		
Male	32	37.2
Female	54	62.8
Age		
20-30	30	34.9
31-40	23	26.7
41-50	25	29.1
51-60	8	9.3
Category of health profession		
Doctor	24	27.9
Nurses	58	67.4
Clinical Associate	2	2.3
Radiographer	2	2.3
Year of experience		
Less than 1 year	17	19.8
1 – 5 years	34	39.5
6 – 10 years	11	12.8
More than 10 years	22	25.6
Missing	2	2.3

3.1. Awareness of NHIS

The majority of the respondents (n=77) were aware of NHIS. The media especially the radio, television and presenters at seminars had provided information on NHIS to the respondents (Table 2).

Table 2. Respondents' awareness of the Nation Health Insurance Scheme.

Variables	Frequency	Percentage (%)
Awareness of NHIS		
Heard of NHIS	77	89.5
Not heard NHIS	7	8.1
Missing data	2	2.3
Source of information		
Newspaper	10	11.6
Radio/Television	32	37.2
Seminars/meetings	26	30.2
Friends and family members	14	16.2
Internet	4	4.7

Table (3) shows that 70 respondents (81.4%) knew the objectives as well as the benefits of NHIS. However, about a quarter of the respondents (27.9%) were aware of the NHIS green paper. A good understanding of the objectives of the NHIS were demonstrated by most of the respondents, namely 70 of them (81.4%). About 60% of the respondents agreed that NHIS could guarantee equal access to standard healthcare in the country.

Table 3. Health care professions knowledge of various aspects of NHIS.

Aspect of NHIS	Frequency	Percentage (%)
Existence of the NHIS Green paper		
Aware	24	27.9
Not aware	62	72
Objectives of NHIS		
Good	70	81.4
Poor	16	18.6
Funding		
Taxation	4	5
Employee	17	20
Employer	13	15
Joint	52	60
Readiness of Mthatha General Hospital for the implementation of NHIS		
Healthcare professionals		
Adequate	28	32.4
Not adequate	58	67.6
Infrastructures and health facilities		
Adequate	19	21.9
Not adequate	61	71.1

While the majority of respondents believed that both the government and the employees would contribute to the funding of the implementation of NHIS, others believed that the government would increase tax to fund the scheme (16%). Poor state of healthcare facilities and shortage of healthcare professionals were considered as the major impediment to the successful implementation of NHIS in South Africa.

The majority of respondents believed that the implementation of NHIS would lead to overall improvement in both human and infrastructural development; strengthening of medical staff (74.6%) and improvement in healthcare delivery (60.5%). A large proportion of the respondents supported the implementation and were willing to participate in the scheme; 68 (79.1%) and 63 (73.3%), respectively.

However, some respondents (n=38) believed that private health facilities might be at risk of bankruptcy. Also, some believed a reduction in the salary of health professionals was inevitable (n=40) (Table 4).

Table 4. Perception of respondents towards NHIS.

Perceptions of the consequence of implementation of NHIS on the public health facilities		
Health professionals' availability	Frequency	Percentage (%)
Increase availability of staff	64	74.6
Decrease availability of staff	22	25.4
Improving healthcare delivery		
Yes	52	60.5
No	34	39.5
Perception of the consequence of implementation of NHIS on the private health facilities		
Bankruptcy		
Yes	38	44
No	48	56
Perception of the consequence of implementation on health professionals' salary		
Decrease salary	40	47
Increase salary	19	22
No effect	27	31
Willingness to participate		
Yes	63	73.3
No	23	26.7
Support for the implementation		
Support the implementation	68	79.1
Do not support the implementation	18	20.9

4. DISCUSSION

This study investigated the awareness and perception of healthcare professionals in Mthatha General Hospital (MGH), OR Tambo district, one of the pilot sites for the NHIS in South Africa. Our study revealed that larger number of the respondents were women (62.8%), which could be a reflection of higher numbers of women in the nursing profession in South African public health services [14]. This finding is consistent with reports from Sabitu and James (2005) in Nigeria which showed 60.4% of the respondents were women [15]. The author attributed this to higher proportions of respondents being nurses (74.1%), which is a profession dominated by the female gender in the country. The majority of the respondents had maximum of five years' work experience (59.3%). This finding is consistent with similar studies in South Africa that reported a higher number of female nurses among their healthcare professionals [16].

The level of awareness of NHIS was very high amongst health professionals in this study (89%). This is similar to previous reports from EThekweni Metro and Ugu districts in Kwazulu-Natal province, which documented 91% level of awareness among health professionals [12]. Our setting, being one of the pilot sites for NHIS, might have created a high level of awareness among the health professionals. This was a good step in the right direction because a high level of awareness regarding NHIS has a significant association with support for the scheme by the healthcare professionals [15]. However our study was conducted in a large district hospital so the findings of this study may not necessarily reflect the overall awareness of health professionals in the entire district of OR Tambo in Eastern Cape. Also, it is unclear whether the level of awareness among health professionals differs significantly between NHIS pilot sites and non-pilot sites. In this study, radio and television (37.2%), seminars and meetings (30.2%), friends and family members (16.2%), newspapers (11.6%) and internet (4.7%) were the main source of awareness-raising.

The majority of the health professionals reported hearing about the proposed NHIS concept from mass media. Christina *et al.*, (2014) study in Lagos also reported mass media (radio/TV 35.0% and newspaper 45.6%) as the main sources of awareness among respondents [17]. The mass media campaigns were effective ways to influence people's perception regarding health programmes [18] and they had been pivotal in disseminating information about NHIS in the country. The mass media such as the radio was an effective platform to [18] disseminate information on health programs and has the ability to reach people in a diverse range of settings. In-service training in the form of seminars and meetings was also reported by 30.2% respondents as raising awareness in our study.

A good understanding of the objective of NHIS might influence a positive perception and hence, guarantee support from the healthcare professionals [12]. The main objective of NHIS, the provision of quality and affordable healthcare

services to all residents in South Africa irrespective of their social status [10], was explored among the participants. Most of the respondents (81.4%) demonstrated good knowledge of the primary objectives of the scheme. These findings agreed with the findings Kwa-Zulu-Natal study, where 92% of the respondents had good or satisfactory knowledge of the scheme [12]. On the contrary Bezuidenhout's (2014) study in Ga-Rankuwa, South Africa, revealed that 45% of the respondents were not knowledgeable about the objectives of NHIS [13]. Limited knowledge of the NHIS objectives was also reported in a similar study in Nigeria where a significant number (70%) of the respondents had poor knowledge of the objectives of NHIS [19].

The majority of respondents believed that the implementation of NHIS would lead to an overall improvement in the number of available medical staff (74.6%) and an improvement in healthcare delivery (60.5%) for all South Africans. This result was consistent with Okaro' *et al.*, (2010) findings in South East Nigeria where 65% of the healthcare professionals believed that NHIS would improve healthcare delivery [19]. The opinion expressed by the respondents in our study was in tandem with the principle of operation of NHIS which entails contracting general practitioners from private sector to public sector to address the shortage of doctors in the later. About 40% were of the opinion that the scheme is not capable of improving the challenges in the South Africa's health system. This finding is more than the findings reported in a Nigeria study (Osuorji, 2006), where less than 10% were of the opinion that the scheme is unable to improve the healthcare delivery in the country [20].

About half of the respondents expressed the concern that the scheme might lead to a decrease in their salaries because of increased taxation to fund the program. However, 60% of respondents believed that NHIS would be funded by the government and the employee. This finding was lower than the findings of Christina *et al.*, (2014) where 68.1% respondents demonstrated good knowledge of NHIS funding [17]. There might be need for further education of the healthcare professionals on NHIS funding as well as the impact of the scheme on their salaries.

In term of the consequence of implementation of NHIS on the private health sector, 44% of respondents believed that private health facilities might be at risk of bankruptcy. This finding was contrary to the finding of another South African study in Ga-Rankuwa where only 5.49% respondents felt NHIS would destroy the private sector [16].

Our study shows that the majority of the respondents (79.1%) supported the implementation of the NHIS. The finding of 79.1% support was above 50% reported among private healthcare professionals in KwaZulu-Natal [12]. The wide margin could be attributed to the initial disapproval of NHIS by the South African Private Practitioner Forum (SAPPF) [21]. The majority of the respondents expressed willingness to participate in the scheme if it were to be implemented in the country.

The poor state of healthcare facilities and the shortage of healthcare professionals were considered as the major impediments to the successful implementation of NHIS in South Africa by 71.1% of the respondents. The poor state of infrastructure might be the major impediment towards achieving successful implementation of NHIS in the district. This finding was consistent with the reported 2% health facilities in OR Tambo district having necessary facilities to provide the full package of primary healthcare services [22]. There was a need for government to critically assess the state of available facilities in the district and institute interventions to upgrade the primary healthcare facilities in the district.

4.1. Limitation

This study was conducted in one public hospital and, as such, might not reflect the opinions of other healthcare professionals in other hospitals in South Africa. Perhaps, the high level of awareness may have reflected the ongoing pilot study in OR Tambo district. A multi-centre study that includes both private and public healthcare professionals might provide a broader view of healthcare professionals in South Africa.

CONCLUSION

Our study found a high level of awareness on NHIS among the health professionals and that mass media had played significant role. The majority of the respondents expressed their reservations about the level of preparedness of the government with regards to the shortage of human resources as well as the poor state of infrastructure to support the full implementation. In order to effectively implement NHIS across the country, re-engineering of the public health sector through staff strengthening and infrastructural development would be very crucial.

AUTHORS' CONTRIBUTIONS

All authors gave intellectual inputs to the study protocol and drafting of the manuscript. Data collection and analysis were conducted by OO and AAA. All authors approved the final draft of the manuscript for submission.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical approval was obtained from the Management College of South African Ethics Committee. The management of Mthatha General Hospital, Eastern Cape gave permission for the implementation of the study. Each participant signed an informed consent for the voluntary participation in the study.

CONSENT FOR PUBLICATION

Not applicable.

HUMAN AND ANIMAL RIGHTS

No Animals/Humans were used for studies that are base of this research.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest and no funding was received towards the implementation of the project.

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REFERENCES

- [1] World Health Organization. Universal health coverage (UHC) WHO Fact sheet 2016. Available from: <http://www.who.int/mediacentre/factsheets/fs395/en>.
- [2] Health Information Booklet. Ministry of Health, Brunei Darussalam <http://ghdx.healthdata.org/record/brunei-darussalam-health-information-booklet-2012> 2012.
- [3] Republic of South Africa. NATIONAL HEALTH INSURANCE FOR SOUTH AFRICA - BHF. National Health Insurance for South Africa: Towards Universal Health Coverage (The White Paper), 2015. Available from: http://www.gov.za/sites/www.gov.za/files/National_Health_Insurance_White_Paper_10Dec2015.pdf. 2012. Accessed on 2017/03/24
- [4] Department of Health Republic of South Africa (2012) National Health Insurance. 2012. Available from: <http://www.doh.gov.za>. Accessed on 2016/12/03.
- [5] Gruber J, Hendren N, Townsend RM. The great equalizer: Health care access and infant mortality in Thailand. *Am. Econ. J.: Appl Econ.* 2014 6(1): 91-107.
- [6] Paim J, Travassos C, Almeida C, Bahia L, Macinko J. The Brazilian health system: history, advances, and challenges. *Lancet* 2011; 377(9779): 1778-97. [[http://dx.doi.org/10.1016/S0140-6736\(11\)60054-8](http://dx.doi.org/10.1016/S0140-6736(11)60054-8)] [PMID: 21561655]
- [7] Atun R, Aydin S, Chakraborty S, *et al.* Universal health coverage in Turkey: Enhancement of equity. *Lancet* 2013; 82(9886): 65-99. [[http://dx.doi.org/10.1016/S0140-6736\(13\)61051-X](http://dx.doi.org/10.1016/S0140-6736(13)61051-X)] [PMID: 23810020]
- [8] Moreno-Serra R, Smith PC. Does progress towards universal health coverage improve population health? *Lancet* 2012; 380(9845): 917-23. [[http://dx.doi.org/10.1016/S0140-6736\(12\)61039-3](http://dx.doi.org/10.1016/S0140-6736(12)61039-3)] [PMID: 22959388]
- [9] Department of Health. National Health Act (61/2003): Establishment the National Health Insurance Advisory Committee. *Government Gazette.* 2009
- [10] Republic of South Africa. National Health Insurance in South Africa: Policy Paper, 2011. <http://www.gov.za/sites/www.gov.za/files/nationalhealthinsurance.pdf> Accessed on 2017/03/24
- [11] Surender R, Van Niekerk R, Alfors L, Nxumalo N, Nkosi M. Is South Africa advancing towards National Health Insurance? The perspectives of general practitioners in one pilot site. *SAMJ: S Afr Med J* 2016; 106(11): 1092-5. [PMID: 20128271]
- [12] Latiff-Khamissa S, Naidoo P. Knowledge, awareness and readiness of private sector doctors practising in the Ethekweni and Ugu districts of KwaZulu-Natal province for the implementation of the National Health Insurance. *S Afr Fam Pract* 2015; 10: 1-6.
- [13] Bezuidenhout S, Matlala M. Assessment of the knowledge of healthcare workers at Dr George Mukhari Academic Hospital, Ga-Rankuwa, South Africa regarding the South African National Health Insurance Scheme: Understanding the National Health Insurance Scheme. *Afr J Phy Health Educ Recr Dance* 2014; 20(1): 234-43.

- [14] Reddy PS. A Strategic Frame should be a work for Gender Equality within the Public Service (2006-2015): A consultation document. Pretoria: Department of Public Service and Administration 2006.
- [15] Sabitu K, James E. Knowledge, attitudes and opinions of health care providers in Minna town towards the national health insurance scheme (NHIS). *Ann Niger Med* 2005; (2): 9-13.
- [16] Bezuidenhout S, Matlala M. Assessment of the knowledge of healthcare workers at Dr George Mukhari Academic Hospital, Ga-Rankuwa, South Africa regarding the South African National Health Insurance Scheme: understanding the National Health Insurance Scheme. *Afr J Phy Health Educ Recr Dance* 2014; 234-43.
- [17] Christina CP, Latifat TT, Collins NF, Olatunbosun AT. National health insurance scheme: How receptive are the private healthcare practitioners in a local government area of Lagos state. *Niger med j* 2014; (5): 6-512.
- [18] Wakefield MA, Loken B, Hornik RC. Use of mass media campaigns to change health behaviour. *Lancet* 2010; 376(9748): 1261-71. [[http://dx.doi.org/10.1016/S0140-6736\(10\)60809-4](http://dx.doi.org/10.1016/S0140-6736(10)60809-4)] [PMID: 20933263]
- [19] Okaro AO, Ohagwu CC, Njoku J. Awareness and perception of national health insurance scheme (NHIS) among radiographers in South East Nigeria. *Am J Sci Res* 2010; 8: 18-25.
- [20] Osuorji EC. NHIS: Recurring Health Care Delivery Journal of the University of Nigeria Medical Student. *Medikka* 2006.
- [21] Archer C. Let's talk about this revolution *Mail & Guardian*, 2014; 10:40. 7 February <http://mg.co.za/article/2014-02-06-lets-talk-about-this-revolution> Accessed on 2017/04/15
- [22] Fusheini A, Eyles J. Achieving universal health coverage in South Africa through a district health system approach: Conflicting ideologies of health care provision. *BMC Health Serv Res* 2016; 16(1): 558. [<http://dx.doi.org/10.1186/s12913-016-1797-4>] [PMID: 27717353]

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