


Research Article

Knowledge, Attitude, and Perception of the National Health Insurance among Primary Healthcare Providers in the Qassim Region, Saudi Arabia

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Citation

 Pasha, S.A. (2026). Knowledge, attitude and perception of the national health insurance among primary healthcare providers in the Qassim region, Saudi Arabia. *Administrative and Management Sciences Journal*, 4(2), 96-105

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ABSTRACT

National Health Insurance (NHI) is a significant step towards ensuring sustainable healthcare in Saudi Arabia, and healthcare providers' behaviors and attitudes play a crucial role in its effective implementation. This descriptive cross-sectional study assessed knowledge, attitudes, and perceptions of NHI among 140 primary healthcare providers in the Qassim region between 17 October and 30 November 2024. Data were collected using a self-administered questionnaire, and associations between demographic factors and attitudes were analyzed using chi-square tests and multivariate logistic regression. Overall, 76.42% of participants had heard of NHI, most commonly through social media (37%). Only 32.3% believed the government aims to ensure equitable healthcare through NHI. Nearly half (47.1%) thought NHI services would be available through both the Ministry of Health and private hospitals, and 57.4% expected it to improve care quality. About 21.3% anticipated increased personal financial contributions, while 45.2% felt the community was optimistic about NHI. Most participants (63.2%) viewed social media as an effective tool for government-led public education on NHI. The findings highlight the need for proactive governmental efforts to raise awareness and address concerns surrounding NHI in Saudi Arabia.

KEYWORDS: Knowledge, Attitude, Perception, National Health Insurance, Primary Healthcare Providers

1 | INTRODUCTION

The healthcare system in the Kingdom of Saudi Arabia (KSA) expanded significantly, improving access to healthcare services across the country. Major government investment over recent decades has strengthened healthcare infrastructure, including the development of the health workforce (Rahman, 2019; Nair et al, 2024). The government plays a major role in financing and delivering health services, and it currently spends about 70% of total health expenditure (KSA, 2024). All Saudi nationals and expatriates who are engaged in the public sector (together with their dependents) are provided with free health services at government healthcare facilities. Saudi citizens and public-sector expatriates receive free care at government facilities, while private-sector workers are insured through the Cooperative Employer-Based Health Insurance (CEBHI) scheme. The Ministry of Health is the largest provider, delivering roughly 60% of services through its network of primary, secondary, and tertiary facilities (MOH,2023). In recent years, Saudi Arabia has been facing several challenges in financing free health services to its citizens. On the one hand, the government is dependent on the revenue from oil resources to finance all public services, including healthcare. Fluctuations in oil prices internationally affect its GDP, government revenue, and health budgets. On the other hand, the country is confronting several challenges, such as rapid demographic challenges, an increasing ageing population, increasing medical costs, an increasing number of non-communicable diseases, and high expectations of the population (Gurajala, 2023; Waltson et al, 2008; Alharbi & Bair, 2022; Alhanawi et al, 2022; Nair et al, 2024; Nair & Mughal, 2025). These challenges make the current

healthcare financing system unsustainable in the long run (Almalki et al, 2011; KSA, 2016; Nair et al, 2024; Nair & Mughal, 2025a). Hence, under the framework of Saudi Vision-2030, the government has prioritized several health financing reforms, including the implementation of a National Health Insurance (NHI) system in Saudi Arabia (Alasiri & Mohammed, 2022).

NHI is a significant step towards ensuring sustainable healthcare for the population in Saudi Arabia. NHI aims to introduce a contributory insurance scheme where citizens make regular contributions similar to insurance contributions. This model will be like CEBHI for workers in the private sector and is expected to relieve the financial burden of the government, improve access and quality of health services. Past studies have shown that most respondents were willing to contribute towards NHI (Alharbi, 2022; Al Mustanyir et al, 2022). However, the amount willing to pay is influenced by socio-economic and demographic variables of the population. To implement the scheme, the government has established a National Health Insurance Center, which will purchase health services on behalf of the insured population. The beneficiaries will receive a range of health services, including specialized care for chronic diseases and critical care services. NHI will be implemented through licensed insurance companies with the involvement of accredited public and private providers. Healthcare providers are central to the Saudi healthcare system, and the success of NHI implementation depends heavily on their understanding of its key features, their perceptions of the system, and their role in supporting its effective rollout (Okafar, 2016; Govendr & Mahomed, 2020; Amani et al, 2023). Review of existing literature on this theme has shown that no studies have been conducted in Saudi Arabia on the knowledge, attitude, and perception of the proposed NHI amongst primary healthcare providers. Primary health providers, as front-line workers, can be either a barrier to or a catalyst for the adoption of the proposed health insurance plan. Hence, this is one of the first attempts to assess knowledge, attitude, and perception of the NHI among primary health providers in the country. This research aims to assess the knowledge, attitude, and perception of the NHI amongst health providers in the Qassim region, Saudi Arabia.

2 | LITERATURE REVIEW

Literature search showed that there are few studies that have been conducted in these areas, mostly in African countries with respect to NHI. A study in South Africa by Govender & Mahomed (2020) among healthcare workers revealed that about 96% of them were knowledgeable about NHI, and there was a strong correlation found between age and knowledge of NHI. About 78% of respondents showed a favorable attitude towards NHI by expressing their willingness to adhere to its requirements. Okafor (2016), in a study in Lagos State among community pharmacists, revealed that over 80% of them had a limited understanding of the main guidelines and activities in the health insurance scheme. The main obstacles to participation were a lack of collaboration, the absence of prescriptions from hospitals, the requirement of extensive data, insufficient funding and training, and the absence of capitation. A similar study by Komomo Egbe and Okpe (2017) in Nigeria found that those with sufficient knowledge (81.4%), had a favorable attitude (75.7%), and a positive perception (70%) were more likely to participate in NHI. Every participant (100%) knew about the presence of NHIS, with 72 % understanding the aspects of the program and its operational processes. A study by Hezekiah et al (2021) in Lagos state health insurance indicated that more secondary and tertiary healthcare centers, compared to primary facilities, took part in insurance. The providers were driven to participate in insurance due to a rise in patient volume and revenue. Mabuza et al (2018) assessed the knowledge of healthcare workers regarding the NHI in the pilot Tshwane region of South Africa. The research showed that about 59% of providers did not know about the goals of the NHI program. Oladimeji et al (2017) revealed that most of the participants (89.5%) knew about NHIS, and they learned about it through seminars, television, friends, newspapers, and the internet.

Research on healthcare providers' knowledge, attitudes, and perceptions of health insurance in Saudi Arabia is limited (Nair, 2025b). One earlier study among physicians in two major hospitals explored their views on health insurance and its implications for the Saudi health system (Alnaif, 2006). The study indicated that about 75% of the participants believed that insurance would improve access to care, though accessibility involves more than recognizing need—it requires organizing services to meet societal demands. The study emphasized that building a national health system depends on collaboration rather than market competition. Some argued that markets are more effective at delivering services than financing them, often prioritizing technology over social outcomes. They suggested that cooperative health insurance could help address current challenges in the Saudi healthcare system, provided it maintains a cooperative rather than competitive approach.

3 | MATERIALS AND METHODS

3.1 | Study Area

This study was conducted in the Qassim region of Saudi Arabia

3.2 | Study Design

This study used a descriptive cross-sectional study design.

3.3 | Study Population

The study population includes primary health providers in the Qassim region.

3.4 | Sampling Technique

Health providers were selected from 20 randomly selected Primary Health Care Centers (PHCCs) in the Qassim region. Within the selected PHCCs, a convenient sampling technique was used to choose the study participants. A total of 140 participants were selected from these PHCCs for the study. The participants include physicians, nurses, health center managers, pharmacists, and allied health workers.

3.5 | Study Instruments

The study was based on a self-administered questionnaire developed by the researcher. The questionnaire covers closed-ended questions, which facilitates explanations from the respondents wherever expected. The questionnaire was prepared based on available studies and modified to suit the Saudi context. The questionnaire consists of four sections: the first section covered socio-demographic characteristics of respondents with 5 questions; the second section focused on the understanding of NHI with 7 questions; the third section explored the perception of NHI with 4 questions, and the fourth section on the attitude towards NHI among health providers with 5 questions, respectively.

3.6 | Pilot study

A pilot study was performed among 18 participants to pre-test the questionnaire and to confirm the suitability of the questions, and to check whether the questions were in alignment with the objectives of the study. These participants were not included in the study. The feedback received in the pilot study was used to modify and finalize the study questionnaire.

3.7 | Data Collection

The primary data was collected from the selected healthcare providers, who include physicians, nurses, hospital managers, pharmacists, and allied health workers from the selected PHCCs. Data collection was conducted from 17 October to 30 November 2024. The questionnaire was anonymous, and before collecting responses from the respondents, they were provided with information about the study and that the information collected from them would be used for research purposes only, and the information would be treated as confidential. Instructions were also given to the respondents to choose the answer that is most suitable for them.

3.8 | Data Management and Data Analysis

All data collected from respondents were coded and entered into a database for statistical analysis. The collected data were analyzed using SPSS software. Descriptive statistics were used to define the socio-economic characteristics of the study population; mean and median were used for continuous variables. Proportions were used for discrete variables, and frequency distribution tables were used for categorical variables. The chi-square test was used to examine the relationship between attitude and perception of NHI and various independent categorical variables such as job experience, age, gender, region, and education. The measures of association were assessed

using odds ratios, and the confidence intervals for these ratios were determined. The questionnaires were administered anonymously to the selected respondents, ensuring confidentiality and privacy. The researcher ensured that participation was voluntary, and they could refuse if they wanted.

4 | STUDY FINDINGS

4.1 | Socio-demographic characteristics of the participants

The analysis showed that 64.3% of participants had more than 10 years of experience. Most respondents (91.4%) lived in urban areas, while 8.6% resided in rural parts of the Qassim region. The majority (82.8%) were between 20 and 45 years old, and 16.8% were between 46 and 65 years. Males comprised 76.4% of the sample. Regarding marital status, 78.6% were married, 16.4% were single, and 5.0% were separated or divorced. In terms of education, 47.1% held a bachelor's degree, 29.3% a master's degree, and 23.6% had a diploma in various specializations.

4.2 | Respondents' knowledge about NHI

The following section provides the results of the participants' knowledge about the NHI. They were asked to report on their knowledge of NHI, the source from which they heard, and various features of NHI. The study showed that out of 140 health providers in the study, 107 participants (76.42%) of them heard of NHI, while 33 of them (23.57%) never heard about the scheme. Table (1) shows that 48.60% heard about NHI at the first time from social media, 28% heard about NHI from their health facilities or from colleagues, 13% of them from friends, and 9.34% of them heard about NHI from television.

Table 1
Participants' source of knowledge about NHI (n=107)

Source	No. of participants	Percentage
Health facility/ Colleagues	30	28.03
Social media	52	48.60
Friend	14	13.08
Television	10	9.34
Radio	1	0.93

4.3 | Knowledge about NHI Features

The participants were asked to respond to various features of NHI, based on the knowledge they gained from various sources. Table 2 provides the details of information received from the participants

Table 2
Participants' knowledge about the NHI scheme

S#	Knowledge	Number*	Percentage
1	The government aims to provide equitable healthcare for every citizen through NHI	50	32.3%
2	NHI will ensure that citizens get treated at a clinical level effectively	4	2.6%
3	All citizen has to contribute towards NHI, depending on their earnings	2	1.3%
4	NHI stands for National Health Insurance	29	18.7%
5	The private health sector will be a major healthcare provider as part of the NHI	4	2.6%
6	NHI will expand public clinics and General Practitioners' clinics so that everyone has a health provider next to them	10	6.5%
7	NHI is a government initiative	7	4.5%
8	NHI offers that citizens need not pay when treated in a private facility	4	2.6%
9	NHI has not started in public health facilities	4	2.6%
10	NHI is now in a pilot phase	3	1.9%

Note: Total number exceeds 107 due to multiple responses

Table 2 reveals that 32.3% of the study population said that the government wants to provide equitable health care for every Saudi citizen through NHI, and 18.7% said NHI is a national health insurance. However, it is surprising to note that most of the participants were not knowledgeable about further details of NHI.

4.4 | Services Availability

47.1% of the study participants informed that services under NHI will be obtained from both government and private hospitals, 19.4% of the participants said the services will be availed from the government hospitals only, whereas 2.6% of the participants said it will be provided by the private hospitals. However, 7.1% of them did not know who would provide services under the proposed scheme. The study found that 35% of the participants discussed with someone the features and benefits of the proposed scheme. Out of those who discussed with others, 81.4% of them had discussions with their friends, 11.4% discussed with their family members, 7% to their colleagues, and the rest of them talked to their classmates, employers, and doctors.

4.5 | Perception of the Participants

The study showed that 83.17% of the participants who were aware of NHI said that NHI will provide them with good quality care, and 42.9% said the scheme will be able to reduce households' out-of-pocket health expenditures. While 7.47% told the scheme will be a successful program in the county, and 1.86% of them said the scheme will not help the beneficiaries.

Table 3

Participants' perception about NHI

Sl.no	Opinion	Number*	Percentage
1	It will provide us with good quality care	89	83.17%
2	It will reduce out-of-pocket spending	46	42.9%
3	It will not be a successful program	8	7.47%
4	It will not help the beneficiaries	2	1.86%

Note : *Multiple responses

While 34.2% of the study population felt that it had been communicated well by the government about the NHI, 33.3% believed the government did not communicate well about the program to the community. However, 35.5% of them were not aware of the communication from the government side. While 60.6% of the study participants feel that the NHI scheme will benefit them, only 7.7 said it will not benefit them. However, 31.6% of the study population did not give any response. 21.3% of the participants think they will have to pay more money because of NHI, 43.9% think they do not pay any premium to NHI, whereas 34.8% of them had no idea about the payment of premiums.

4.6 | Attitude about NHI

The study showed that 63.9% of the participants heard other people saying that NHI would help us a lot, whereas 16.8% heard them saying that the scheme is not at all successful, and 12.3% said it would not help us in availing treatment for illnesses. 89.0% of the participants will be going to adhere to all the requirements of NHI that may be required from them. On what method they would prefer for the government to educate them and address the concerns that they and their community have with NHI, 63.2% of the participants said that social media is the method they would prefer for the government to educate them and address the concerns that they and their community have with NHI (Table 4).

Table 4: Participants attitude about NHI

Attitude-related questions	Responses	Number	Percentage
What do you hear other people saying about NHI?	It won't be a success	26	16.8%
	It will help us a lot	99	63.9%
	It won't help us at all	19	12.3%

	It will finish our money	11	7.1%
Are you going to adhere to all the requirements of NHI that may be required of you?	No	17	11.0%
	Yes	138	89.0%
What is the attitude of your community and the people near you towards the proposed NHI?	I don't know	58	37.4%
	They are optimistic about it	70	45.2%
	They are pessimistic about it	27	17.4%
Which approach would you prefer the government use to educate you and address the concerns that you and your community have about NHI	Regular meetings with CNHI	32	20.6%
	Social media	98	63.2%
	TV broadcast	16	10.3%
	Others	9	5.8%
Who do you think has the responsibility to make NHI a success?	I don't know	10	6.5%
	Everyone	97	62.6%
	Government	31	20.0%
	Health providers	17	11.0%

While 20.6% of participants preferred meetings with community health personnel, 10.3% preferred TV channels, and 5.8% preferred other methods. When asked who should be responsible for ensuring the success of NHI, 62.6% believed it should be a shared responsibility, 20% felt it was the government's role, 11% assigned responsibility to healthcare providers, and 6.5% did not respond.

4.7 | Association between Participants socio-demographics factors and attitude and perception towards NHI

The association between socio-demographic factors and attitudes and perceptions of the study participants was determined, and the results are shown in the following tables.

Table 5

Relation between attitude and socio-demographic variables

variable	categories	Attitudes					
		Bivariate Analysis			Multivariate Analysis		
		Unadjusted OR	95% CI		adjusted OR	95% CI	
		Lower	Upper	Lower	Upper		
Category of healthcare professional	Nurses versus others	1.250	.150	1.417	.800	.096	6.667
Years of working experience	>10 years versus < 10 years	.733	.244	2.202	1.364	.454	4.095
Region	Urban versus rural	1.539	.311	7.616	.650	.131	3.214
Age	<45 years versus >45 years	1.622	.484	5.439	.616	.184	2.067
Gender	Female versus Male	.981	.299	3.220	1.019	.311	3.345
Marital status	Single versus others	3.368	.426	6.632	.297	.038	2.347
Education	Postgraduate vs others	1.310	.471	3.639	.764	.275	2.122

Table 5 shows that nurses (Odd Ratio (OR) 1.250; 95% CI 0.150 – 1.417), who live in urban area (OR 1.539; 95% CI .0.311-7.616, participants whose age lower than 45 years (OR 1.622; 95% CI 0.484-5.439), single (OR 3.368; 95% CI 0.426-6.632), and who were post graduates (OR 1.310; 95% CI 0.471-3.639) are likely to have better attitude towards the NHI compared to other categories. However, none of these variables were found to be statistically significant. The results of multivariate analysis showed that participants who have lower than 10 years of job experience (OR 1.364; 95% CI., 0.454 -4.095), and females (OR 3.220; 95% CI 0.311– 3.345) have increased

odds of having a better attitude towards the NHI, but these results are not statistically significant.

Table 6
Relation between perception and socio-demographic variables

variable	categories	Perception			Multivariate Analysis		
		Bivariate Analysis Unadjusted OR	95% CI Lower	95% CI Upper	adjusted OR	95% CI Lower	95% CI Upper
Category of health professional	Nurses versus others	1.798	.458	2.064	.556	.142	2.184
Years of working experience	>10 years versus < 10 years	.729	.368	1.443	1.372	.693	2.717
Region	Urban versus rural	.663	.195	2.255	1.509	.443	5.135
Age	<45 years versus >45 years	1.159	.493	2.724	.863	.367	2.029
Gender	Female versus Male	1.950	.863	4.404	.513	.227	1.158
Marital status	Single versus others	4.099*	1.332	2.614	.244*	.079	.751
Education	Postgraduate versus others	1.346	.704	2.576	.743	.388	1.421

Table 6 shows that participants who are nurses (Odd Ratio (OR) 1.798; 95% CI 0.458 -2.064), who have less than 45 years of age (OR 1.159;95% CI .0.493-2.724) female participants (OR1.950, 95% CI 0.863-4.404), who are single (OR 4.009; 95% CI.1.332-2.614), and who post graduate degree (OR 1.346;95% CI.0.704-2.576) are likely to have more perception about the NHI compared to other categories. However, except for one factor i.e marital status, other variables are not statistically significant. The results show that participants who are single are more likely to have a greater perception of the NHI. The OR of this variable is statistically significant. The results of multivariate analysis showed that participants who have lower than 10 years of job experience (OR 1.32; 95% CI., 0.693-2.717), and who live in an urban area (OR 1.509; 95% CI 0.443 – 5.13) were likely to have a greater perception about the NHI.

5 | DISCUSSION

The characteristics of participants in the study show that a majority of them have more than 10 years of experience, are male, and most belong to the 20-45 years age group, living in urban areas, married, having a bachelor's degree, and mostly working in the public health sector, particularly from the health facilities managed by the MOH. The results of the study show that 69% of the participants heard about the proposed NHI, and among them, only two-thirds of the participants were knowledgeable about the fundamental idea of NHI. While 37% learning about NHI from social media, 23.2% knew about NHI from their colleagues in hospitals. This suggests that providing more details on NHI through social media platforms and basic training or seminars on NHI in the health facilities may be useful in improving awareness about NHI among hospital staff.

Similar findings were shown by previous studies in other countries. A cross-sectional study of health care staff in a tertiary hospital in Limpopo found that while 64% were familiar with NHI, 48% were unaware of its policy content (Setswe et al, 2014). Similarly, a cross-sectional survey in Tshwane among health providers revealed that 58% were unaware of the objectives of NHI, which aligns with previous findings (Oladimeji et al, 2017). Conversely, a study in three KZN NHI pilot districts showed that 93% of health workers had good knowledge of NHI, and 81% of respondents at Mtata General Hospital knew the objectives of NHI (Mthembu, 2012).

About four-fifths of participants who were aware of NHI said that NHI will provide them with good quality care, and one-half of them said the scheme will be able to reduce households' out-of-pocket health expenditures. Almost one-half of the participants thought the government did not effectively communicate about NHI; however, a

majority of the participants continued to have faith that the proposed scheme would greatly assist them and lead to them reaping benefits from it. In Mthatha General Hospital, a study found that 79% of health care staff supported the implementation of NHI, despite over half thinking they would face higher contributions towards the scheme (Mthembu, 2012). This reflects the positive attitudes towards NHI among staff at the hospitals. A study of health providers in the private sector revealed mixed perceptions, with only 21% of respondents having a positive view of NHI. The reason for the negative perception was said to be the insufficient clarity and control measures for risks (Latiff-Khamissa & Naidoo, 2016).

Most of the participants in the study viewed NHI positively and thought it would benefit them. In the same way, research on health care workers in Limpopo found that just 40 percent believed their facility was prepared to introduce NHI because of inadequate resources. Despite only a few studies examining perceptions of NHI, health care staff have diverse views on their perception of NHI. Nevertheless, unfavourable beliefs can impede progress. Conversely, a solid understanding of the goals of the proposed NHI could lead to a positive outlook and thus effective execution.

The research revealed that the majority of participants (89%) were willing to follow all the regulations of NHI, and over half of them thought NHI would greatly benefit them. Likewise, a study in Nigeria on health providers' knowledge and attitude towards the NHI found that health workers viewed the NHI positively. Conversely, Latiff-Khamissa & Naidoo (2016), found that fewer than half of the private sector participants expressed readiness to adopt NHI due to resource constraints. Likewise, the absence of adequate personnel and facilities was identified as an obstacle to executing NHI. The present study also showed that most of the participants (62.5%) believed the success of the proposed NHI is the responsibility of every citizen in the country.

The findings of this study indicate a clear need to improve healthcare providers' awareness of the proposed NHI and its benefits for the wider community. A similar study among students at a major Saudi university found poor knowledge of basic and universal health coverage policies, with medical students reporting the lowest levels of understanding compared to peers in other colleges (Alkodaymi et al, 2020). Therefore, this is the right time to create awareness of NHI among every citizen in the country through social media, which is considered the effective platform to educate the community. It is also necessary to improve the knowledge, attitude, and perception of NHI among all health functionaries in both public and private sectors in the Kingdom through organizing training and workshops.

6 | LIMITATIONS OF THE STUDY

The research is constrained by a generally small sample size. Choosing a higher number of participants would have been a better option. The study lacked sufficient power to detect relationships between socio-demographic variables and the outcome variable (attitude and perception) due to the small sample size. Due to the cross-sectional study design, the researcher was unable to establish causality. Additionally, due to constraints in time, budget, and resources, a larger sample size was not possible. Another constraint is the absence of sufficient representation from the private healthcare sector despite multiple efforts to reach out to providers. Future research might focus on a more comprehensive dataset that includes sufficient participation from the private health sector, which will play a significant role in the execution of the NHI in Saudi Arabia.

6 | CONCLUSION

This study showed limited awareness among primary healthcare providers about NHI and its potential benefits. Many were unaware that NHI is a government initiative aimed at improving access to quality healthcare. No strong associations were observed between participants' socioeconomic characteristics and their attitudes or perceptions of NHI. These findings highlight the need to strengthen awareness efforts through social media, training sessions, and workshops to better inform healthcare providers about the proposed NHI.

Declaration Statement: The author declares that there is no competing interest.

Funding Statement: This research received no specific grant or funding from any public, commercial, or not-for-profit funding agency.

Data Availability Statement: The data supporting the findings of this study are available from the corresponding author upon reasonable request.

REFERENCES

- Al Mustanyir, S., Turner, B., Mulcahy, M. (2022). The population of Saudi Arabia's willingness to pay for improved level of access to healthcare services: A contingent valuation study. *Health Sci Rep.* Apr 14;5(3):e577
- Alasiri, A. A., & Mohammed, V. (2022). Healthcare transformation in Saudi Arabia: An overview since the launch of Vision 2030. *Health Services Insights*, 15: 1-7. <https://doi.org/10.1177/11786329221121214>
- Al-Hanawi, M. K., Alsharqi, O., Almazrou, S., Vaidya, K. (2018). Healthcare finance in the Kingdom of Saudi Arabia: a qualitative study of householders' attitudes. *Appl. Health Econ. Health Pol.* 16 (1), 55–64.
- Alharbi, A. (2022). Willingness to pay for a national health insurance (NHI) in Saudi Arabia: a cross-sectional study. *BMC Public Health.* 12; 22(1):951. doi: 10.1186/s12889-022-13353-z.
- Alharbi, M.F., Nair, K.S. (2022). Healthcare financing in Saudi Arabia: Recent trend and future challenges. *Online J Health Allied Scs.* 21(2):4. <https://www.ojhas.org/issue82/2022-2-4.htm>.
- Alkodaymi, M.S., Shaar, B.A., Fawzy, N.A., Alhabbbash, R., Senjab, A., AlSaoud, R. (2020). Knowledge, perception, and attitudes of Universal Health Coverage policies among Alfaisal University students in Saudi Arabia. *J Educ Health Promot.* 29; 9:348. doi: 10.4103/jehp.jehp_767_20.
- Almalki, M., Fitzgerald, G., Clark, M. (2011). Health care system in Saudi Arabia: an overview. *East Mediterr Health J.*17(10): 784-793.
- Alnaif, M.S. (2006). Physicians' perception of health insurance in Saudi Arabia. *Saudi Med J.* 27(5):693-9.
- Amani, P.J., Sebastian, M.S., Hurtig, A.K. et al. (2023). Healthcare workers' experiences and perceptions of the provision of health insurance benefits to the elderly in rural Tanzania: an explorative qualitative study. *BMC Public Health.* 23:459. <https://doi.org/10.1186/s12889-023-15297-4>.
- Govender, N., Mahomed, O. (2020). Knowledge, attitude and perception of the National Health Insurance amongst health workers in Ugu District, Kwa-Zulu Natal, South Africa in 2017. *The Open Public Health Journal.* 3(1):763-770.
- Gurajala, S. (2023). Healthcare system in the Kingdom of Saudi Arabia: An expat doctor's perspective. *Cureus.*15(5):e38806. doi: 10.7759/cureus.38806
- Kingdom of Saudi Arabia. Saudi Arabia's Vision 2030. <http://www.vosion2030.gov.sa/en/ntp> (Accessed 18 August, 2025).
- Komomo, A., Egbe, Okpe, A.P. (2017). Knowledge, attitude and perception of pharmacists as Consumers of National Health Insurance Scheme (NHIS) in Calabar Metropolis, Cross River State, Nigeria. *International Journal of Humanities and Social Science.* 7 (8).
- Latiff-Khamissa, S., Naidoo, P. (2016). Knowledge, awareness and readiness of private sector doctors practicing in the Ethekweni and Ugu districts of KwaZulu-Natal province for the implementation of the National Health Insurance. *South African Family Practice,* 58: 18-23.
- Mabuza, L., Ogunbanjo, G., Hlabyago, K, et al. (2018). Awareness of health care practitioners about the National Health Insurance in Tshwane District, South Africa. *Open Public Health J.* 11: 93-103.
- Ministry of Health, Statistical Yearbook 2023. Riyadh. Ministry of Health. Kingdom of Saudi Arabia.
- Mndzebele, S., Matsi, M. (2016). Perspectives and experiences of healthcare workers on the National Health Insurance at tertiary hospitals in the Limpopo Province, South Africa Pula: *Botswana. J Afr Stud.* 30: 123-30.
- Mthembu, N.N. (2012). An analysis of the nurse managers' interpretation of the National Health Insurance Policy, its implications for implementation in healthcare facilities in the eThekweni district, 2012.
- Nair, K.S., & Mughal, Y.H. (2025a). Factors Influencing Support for National Health Insurance: Evidence from Qassim Region, Saudi Arabia. *Sustainability* 17:9570
- Nair, K.S., Mughal, Y.H., Albejaidi, F., Alharbi, A.H. (2024). Healthcare financing in Saudi Arabia: a comprehensive review. *Healthcare,* 12 (24):2544
- Nair, K.S. (2025b). Health Insurance Knowledge among the Expatriate Workers: A Study in the Qassim Region, Saudi Arabia. *Open Access Organization & Management Review,*4 (1):1-9.
- Okafor, U.G. (2016). Assessment of knowledge attitude perception and practice of health insurance scheme among community pharmacies in Lagos State Texila. *International Journal of Public Health.* 4 (4).
- Oladimeji, O., Alabi, A., Adeniyi, O.V. (2017). Awareness, knowledge and perception of the national health insurance scheme (NHIS) among health providers in Mthatha General hospital, eastern cape, South Africa. *Open Public Health J.* 10(1).
- Rahman, R., Alsharqi ,O.Z. (2019). What drove the health system reforms in the Kingdom of Saudi Arabia? An analysis. *Int J Health Plann Manag.* 34(1):100–110.
- Saudi Health Council. National Health Accounts-2022-23. Kingdom of Saudi Arabia.
- Setswe, G., Nyasulu, P., Witthuhn, J. (2014). Do South Africans really understand the National Health Insurance

scheme? A survey of adults in three provinces: understanding the National Health Insurance Scheme. 20(1): 234-43.

Shobiye, H.O., Dada, I., Ndili, N., Zamba, E., Feeley, F., De, Wit, T.R. (2021) Determinants and perception of health insurance participation among healthcare providers in Nigeria: A mixed-methods study. *Plos One* 16(8): e0255206. <https://doi.org/10.1371/journal.pone.0255206>.

Walston, S., Al-Harbi, Y., Al-Omar, B. (2008). The changing face of healthcare in Saudi Arabia. *Ann Saudi Med.* 2008 Jul-Aug;28(4):243-50. doi: 10.5144/0256-4947.2008.243