



Health Insurance Knowledge among the Expatriate Workers: A Study in the Qassim Region, Saudi Arabia

Original Article

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Abstract

This study aimed to assess the level of health insurance knowledge among low-income expatriate workers in Saudi Arabia and to determine the socioeconomic factors associated with health insurance knowledge among them. A survey of 316 workers in the Qassim region was conducted from 10 October to 25 December 2024. A convenience sampling method was used to recruit participants from various locations in the region, including construction sites, markets, and industrial sites. Statistical analysis, including bivariate analysis and logistic regression, was used to identify the key factors associated with health insurance knowledge among these workers. The study found that 62.3% of the participants had knowledge about cooperative health insurance. Analysis revealed that education, marital status, and family size were significant predictors of health insurance knowledge, with educated, married individuals, and those with smaller families having more knowledge of health insurance ($p \leq 0.05$). In conclusion, this study identified education and monthly income as key factors that influence workers' understanding of health insurance. The findings of this study can inform policymakers in designing targeted campaigns and strategies to increase health insurance knowledge among workers, a vulnerable population that urgently needs better access to healthcare protection.

Keywords: Health Insurance, Knowledge, Expatriate Workers, Socio-economic Characteristics, Saudi Arabia.



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Introduction

Saudi Arabia traditionally provided free healthcare to citizens and government sector employees. However, with a growing expatriate population and increasing healthcare demands, the government recognized the need for reforms in the health system (Alharbi & Nair, 2022; Albejaidi & Nair, 2019). To ensure sustainable healthcare, Saudi Arabia transitioned to a National Health Insurance model, starting with the Cooperative Health Insurance (CHI) scheme in 2002, which mandates private sector employers to cover healthcare costs for employees (Alzahrani *et al.*, 2025). This shift aims to alleviate the financial burden on the public sector and promote private healthcare services. Healthcare services provided under the CHI encompass a range of medical services, including hospital care, primary care, dental services, and more, provided by healthcare professionals to promote health and well-being (Alzahrani *et al.*, 2025). The CHI mandated health insurance for expatriates employed in the private sector and later extended coverage to dependents and Saudi nationals. The Council of Cooperative Health Insurance (CCHI) oversees the system, which has improved healthcare access and quality while reducing out-of-pocket costs (Alharbi & Nair, 2022). Despite progress, the studies have pointed out that increased government support and public awareness are crucial for further progress (Aljohani *et al.*, 2024).

Understanding people's knowledge of health insurance is crucial for effective healthcare delivery. Various studies have explored this topic using different assessment methods, focusing on specific demographics, such as unorganized sector workers and low-income individuals. The knowledge of health insurance among workers is a crucial area of research, reflecting the challenges faced by them in accessing healthcare services. In Saudi Arabia, a significant proportion of private sector employees are expatriates, highlighting the need to assess their understanding of health insurance benefits. Most expatriate workers hold low-skilled or labourer positions and have limited education, which may contribute to their lack of understanding about health insurance benefits (Alkhamis, 2018). This knowledge gap raises concerns about their ability to access healthcare services effectively. The CCHI regulates health insurance, mandating employers to cover premiums and defining standardized benefit packages, which include various medical services and treatments. Employers are required by law to participate in the scheme, with penalties for non-compliance. However, despite this regulation, some expatriates have complained about subpar healthcare services due to employers' reluctance to provide adequate health insurance coverage, citing high premium costs. This paper aims to assess the level of health insurance knowledge among expatriate workers in the Qassim region of Saudi Arabia and to determine the socioeconomic factors associated with health insurance knowledge among them.

Literature Review

Studies have shown that socioeconomic factors significantly influence health insurance knowledge, particularly in low- and middle-income countries. Households with higher socioeconomic status tend to have a better understanding and utilization of health insurance benefits (AlNemer, 2018). A study by Indumathi *et al.* (2021) found that awareness about health insurance schemes is significantly low among low-income workers. Only 23% of the respondents had any form of health insurance, and most of them did not understand the terms and conditions of their policies. Research conducted by Kusuma *et al.* (2018) highlighted that socioeconomic status plays a critical role in the knowledge and uptake of health insurance. Workers with higher education levels and income were more likely to have health insurance compared to their less educated counterparts. Ozawa *et al.* (2016) identified household size as a potential obstacle to enrolling in community-based health insurance. Dunghana *et al.* (2021) showed that education and occupation influence the level of awareness and perception of health insurance. Yego *et al.* (2023) in Kenya showed that secondary education, marital status, younger age group, and higher income are the primary factors influencing the use of health insurance.

A qualitative study by Sharma *et al.* (2021) identified several barriers to health insurance uptake, including a lack of trust in insurance providers, complicated documentation processes, and inadequate financial literacy among unorganized workers. Indumati *et al.* (2021) showed that education and other socio-economic factors have an influence on health insurance awareness among the population. The study by Patel *et al.* (2022) evaluated the impact of government schemes on the knowledge and coverage of health insurance among unorganized workers, finding that while awareness increased, actual enrolment remained low due to various systemic issues. A study by Reshmi *et al.*

(2021) explored the effectiveness of educational interventions in improving the knowledge of health insurance among unorganized workers, showing significant improvement post-intervention. These studies illustrate the critical gap in knowledge and accessibility of health insurance among low-income workers, pointing to the need for targeted interventions and policies to enhance awareness and coverage.

In Saudi Arabia, expatriates' understanding of their health insurance relies on effective communication from insurance companies. However, research by AlNemer (2015) found that policyholders receive inadequate information, resulting in limited knowledge about their insurance policy's core principles. A study by Alkhamis (2018) also suggests that private sector workers, particularly expatriates, have limited knowledge about health insurance benefits and features.

Methods and Materials

Study Design and Sampling

A cross-sectional survey was conducted among 316 expatriate workers from 10 October to 25 December 2024. A convenience random sampling method was used to recruit participants from various locations in the Qassim region, including construction sites, markets, and industrial areas. The study population consisted of workers engaged in construction, manufacturing, and service sectors.

Data Collection

A pre-tested, expert-validated questionnaire was used to collect data from the respondents. The questionnaire consisted of sections on socio-demographic characteristics and knowledge of cooperative health insurance among participants. The knowledge questions were scored as 1 point for correct answers and 0 point for incorrect answers. The total knowledge score was calculated by summing up the number of correct answers, based on current literature. The knowledge questions covered aspects such as benefits included in the scheme- inpatient treatment, outpatient treatment, surgery, dental care, prescription drugs, copayment, etc. The questionnaire was administered to 342 workers, however, only 316 were found to be completed in all respects and were included in the analysis.

Study Variables

Independent variables included age, gender, marital status, education level, family size, and family monthly income. Dependent variables were knowledge about health insurance, both categorized as binary variables (yes/no).

Statistical Analysis

Descriptive data was used to present the socioeconomic characteristics of the participants. Bivariate analysis and logistic regression were used to examine the association between socio-economic and demographic characteristics and knowledge of health insurance. Multivariable logistic regression was performed to assess the association between these characteristics and the uptake of health insurance. Data was analysed using IBM SPSS version 25 software, with $p \leq 0.05$ considered statistically significant.

Results and Analysis

Table 1 presents the socio-economic profile of the study participants. Most respondents belonged to the age group of 36 and above (71.84%). Most of them were married (89.56%), with a family size of up to 5 members (54.11%). Most participants earned SAR 2000 or less per month (80.38%). While most of the respondents attended secondary schools or higher secondary (46.20%), 12.97% of them had elementary education.

Table 1

Socio-economic Characteristics of the Participants (N=316)

Variable	Category	Number	Percentage
Age	18 – 35 years	89	28.16
	36 and above	227	71.84
Gender	Male	289	91.46
	Female	27	8.54
Education	Elementary	41	12.97
	Secondary	102	32.28
	Senior secondary	146	46.20
	Above 12 th Class	27	8.54
Marital status	Married (at least once)	283	89.56
	Unmarried	33	10.44
Family size	Up to 4	171	54.11
	4 & above	145	45.89
Monthly income	Up to SAR 2000	254	80.38
	Above SAR 2000	62	19.62

Table 2 shows the results of the analysis of the bivariate association between the health insurance knowledge of respondents and the socio-economic characteristics of 316 participants in the study. The analysis showed that 62.3% of the respondents had knowledge about health insurance. The health insurance knowledge was significantly associated with the participants' education level and family size ($p \leq 0.05$). Of the participants having elementary education, 61% had incomplete knowledge of cooperative health insurance. The knowledge of health insurance increased with the education level of the participants. Of the participants with fewer than 4 family members, 69% had health insurance knowledge, whereas out of those with more than 4 family members, approximately 55% had health insurance knowledge. The study showed no significant association of health insurance knowledge with age and gender of the participants. However, the marital status and family income of the participants showed a marginally significant association with health insurance knowledge ($p \leq 0.10$).

Table 2

Bivariate Associational Analysis Between Knowledge About CEBHI and Socio-Economic Characteristics of Study Participants (N=316)

Characteristics	Knowledge about Health Insurance		p-value	Chi-square value
	No n=119	Yes n=197		
Age (in years)				
18-35	36 (40.4%)	53 (59.6%)	0.521	0.411
36 and above	83 (36.6%)	144 (63.4%)		
Gender				
Male	112 (38.8%)	177 (61.2%)	0.188	1.731
Female	7 (25.9%)	20 (74.0%)		
Highest education				
Elementary	25 (61.0%)	16 (39.0%)	0.001**	17.400
Secondary	45 (44.1%)	57 (55.8%)		
Senior secondary	45 (30.8%)	101 (69.2%)		
Above 12 th Class	4 (14.8%)	23 (85.2%)		
Marital status				
Married (at least once)	102 (36.0%)	181 (64.0%)	0.083*	3.014

Unmarried	17 (51.5%)	16 (48.5%)		
Family size				
Up to 4	53 (31.0%)	118 (69.0%)	0.008**	7.049
4 & above	66 (45.5%)	79 (54.5 %)		
Monthly Income				
Up to SAR 2000	101 (39.8%)	153 (60.2%)	0.118*	2.445
Above SAR 2000	18 (29.0%)	44 (71.0%)		

** $p \leq 0.05$ = statistically significant and * $p \leq 0.10$ =marginally significant

Table 3 presents the results of a multivariable logistic regression analysis on the relationship between socio-economic characteristics and the health insurance knowledge of participants. The logistic regression analysis reveals that compared to the participants having elementary education, other education groups, such as secondary, senior secondary, and above senior secondary, show statistical significance ($p < 0.05$). The participants having secondary, senior secondary, and above senior secondary have 2.4, 4.1, and 12.3 times more knowledge of health insurance than the elementary education group. The analysis also showed that unmarried respondents have a lower odd of having knowledge about cooperative health insurance than the married respondents, with an adjusted odds ratio of 0.351 (CI = 0.177-0.786) ($p=.011$). Furthermore, respondents with more than 4 family members, as opposed to those with less than 4 family members, established significantly lower odds of possessing health insurance knowledge, with an adjusted odds ratio of 0.627 (CI = 0.383 – 1.024) ($p = 0.002$).

Table 3

Multivariable Logistic Regression Analysis of the Socio-Economic and Demographic Characteristics with Health Insurance Knowledge Among Study Participants (N=316).

Variables	Knowledge about health insurance			
	Unadjusted		Adjusted	
	OR [Confidence Interval]	p-value	OR [Confidence Interval]	p-value
Age (in years)				
18-35	Ref		Ref	
36 and above	1.178 [0.713, 1.947]	0.522	1.410 [0.773, 2.573]	0.263
Gender				
Male	Ref		Ref	
Female	1.808 [0.740, 4.414]	0.194	2.237 [0.839, 5.959]	0.093
Highest education				
Elementary	Ref		Ref	
Secondary	2.153 [1.032, 4.492]	0.041*	2.490 [1.147, 5.407]	0.021**
Senior secondary	3.437 [1.674, 7.060]	0.001*	4.112 [1.882, 8.983]	0.000**
Above 12 th Class	7.812 [2.253, 27.090]	0.001*	12.332 [3.218, 47.265]	0.000**
Marital status				
Married (at least once)	Ref		Ref	
Unmarried	0.530 [0.257, 1.095]	0.086	0.351 [0.157, 0.786]	0.011*
Family size				
Up to 4	Ref		Ref	
4 & above	0.538	0.008*	0.627	0.002*

	[0.339, 0.852]		[0.383, 1.024]	
Monthly Income				
Up to SAR 2000	Ref		Ref	
SAR 2000 & above	1.465	0.200	1.636	0.135
	[0.817, 2.629]		[0.858, 3.118]	

** statistically significant ($p \leq 0.05$)

Discussion

The present study showed that 62.3% of the respondents had some knowledge about cooperative health insurance in the Qassim region. This study's findings were also supported by other studies conducted in Saudi Arabia. A cross-sectional study in Saudi Arabia showed that 87% of the participants reported health insurance covers outpatient care, 62% for inpatient admissions, 86% for prescription drugs, and 62% for dental services (Alkhamis, 2017). This finding contrasts with a few studies conducted in the African region. For instance, Elegbede *et al.* (2022) showed that about a fifth of the respondents (18.3%) had good knowledge of community-based health insurance. Significant factors and predictors of knowledge in this study include female gender, tertiary level of education, higher family income, and higher frequency of illness. A study in Nigeria showed that only 37.8% of respondents were aware of the community-based health insurance scheme (Abubaker *et al.*, 2021).

The results of multivariate logistic regression analysis revealed that education, marital status, and family size are significant predictors of health insurance knowledge among workers. Specifically, individuals with more years of schooling tend to have a better understanding and awareness of health insurance. The study participants with more years of schooling, ranging from elementary to senior secondary or above, demonstrated significantly greater knowledge of health insurance. These findings are consistent with previous research. A study in Kenya showed that secondary education, marital status, younger age group, and higher income are the primary factors influencing the use of health insurance (Yego *et al.*, 2023). A study in Nepal (Dunghana *et al.*, 2021) showed that education and occupation influence the level of awareness and perception of health insurance. A study in Nigeria highlighted the positive impact of secondary or higher education on health insurance coverage (Adewale *et al.*, 2017). Overall, education appears to play a significant role in enhancing awareness and uptake of health insurance.

The results of a multivariate logistic regression analysis also revealed that marital status and family size were significant factors influencing health insurance knowledge. The findings of the present study align with earlier studies. Conversely, participants with larger family sizes were less likely to take up health insurance, likely due to the financial burden of insuring multiple family members. This finding is consistent with a previous study conducted in Cambodia, which identified household size as a potential obstacle to enrolling in community-based health insurance (Ozawa *et al.*, 2016). Unlike earlier studies, no association was found between health insurance knowledge and age, gender, or family income. Studies have shown that individuals with higher family incomes demonstrated greater knowledge of health insurance, likely because increased income facilitates access to education, thereby enhancing health insurance literacy, and that individuals with lower incomes are more likely to lack understanding of health insurance concepts and confidence in using health insurance (AlNemer, 2018; Indumathi *et al.*, 2016). Overall, the study's findings align with existing literature on the factors influencing health insurance uptake.

Conclusion

This study identified higher education and monthly income as key factors influencing health insurance knowledge among low-income expatriate workers. Given the significant financial risk protection offered through employer-based health insurance to all workers in the private sector, these findings can inform policymakers' strategies to boost health insurance knowledge and its coverage. Regular awareness campaigns streamlined enrollment procedures, and community-level education initiatives using micro-insurance agents can help increase health insurance uptake among workers in the unorganized sector.

Study Lmplications

This study has several limitations. One major limitation is that the study used convenience sampling, which may not accurately represent the expatriate workers, limiting the findings' generalizability. The study was based on a limited sample of workers; therefore, the study findings cannot be generalized. Additionally, the cross-sectional design of this study only identified associations between socioeconomic factors and health insurance knowledge, without establishing causality. The study also failed to find a link between gender and health insurance knowledge, likely due to the predominance of male respondents. Finally, the self-reported nature of the data may have introduced recall and social desirability biases, limiting the generalizability of the findings.

Policy Recommendations

Despite various limitations, this study has several strengths. Notably, it addresses a knowledge gap in health insurance among expatriate workers. The study provides valuable insights into the relationship between socio-economic factors and health insurance knowledge among expatriate workers in the Qassim region. The study's results emphasize the importance of increasing knowledge about health insurance benefits to enhance coverage among expatriate workers. This, in turn, can reduce out-of-pocket expenditure and protect against impoverishment. Policymakers should focus on raising awareness about the benefits of health insurance schemes and encourage the utilization of healthcare facilities provided to them under the employer-contributed health insurance program in Saudi Arabia. Regular evaluations and targeted interventions are necessary to address gaps in health insurance knowledge among low-income expatriate workers.

Future Research Directions

Future studies could explore how health insurance coverage affects expatriates' use of healthcare services, including preventive care, chronic disease management, and emergency services. These studies should identify the barriers that expatriates face in accessing healthcare services, including a lack of health insurance, financial constraints, and cultural or linguistic barriers. Further, it is paramount to evaluate the effectiveness of health insurance policies in reducing out-of-pocket expenditures and improving health outcomes among expatriates. By exploring these areas, future studies can contribute to a better understanding of the complex issues surrounding health insurance knowledge among expatriates in Saudi Arabia and inform policy decisions to improve healthcare access and outcomes for this population.

Declarations

Ethical Approval and Consent to Participate: This study strictly adhered to the Declaration of Helsinki and relevant national and institutional ethical guidelines. Informed consent was obtained. All procedures performed in this study were by the ethical standards of the Helsinki Declaration.

Consent for Publication: Not Applicable.

Availability of Data and Material: Data for this study will be made available upon a request from the corresponding author.

Competing Interest: The author declares that there is no competing interest.

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Authors' Contribution: The author has actively contributed from conception of the idea to conduct of study, writing and until the submission for publication.

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References

- Abubakar, S.S., & Saleh, J.E.A. (2021). Awareness and willingness to pay for community-based health insurance scheme among patients: a case study of the orthopaedic unit of Murtala Mohammed Specialist Hospital Kano, Northwest Nigeria. *Open Access Library Journal*, 8, e7149. <https://doi.org/10.4236/oalib.1107149>
- Adewole DA., Akanbi, S. A., Osungbade, K.O., & Bello S (2017). Expanding health insurance scheme in the informal sector in Nigeria: awareness as a potential demand-side tool, *Pan African Medical Journal*, 27 (52) doi: 10.11604/pamj.2017.27.52.11092.
- Albejaidi, F., Nair, K.S (2019). Building the health workforce: Saudi Arabia's challenges in achieving Vision 2030. *International Journal of Health Planning and Management*, 34, e1405–e1416.
- Alharbi, M.F., Nair, K.S. (2022). Healthcare financing in Saudi Arabia: recent trends and future challenges. *Online Journal of Health & Allied Sciences*. Available online: <https://www.ojhas.org/issue82/2022-2-4.html>.
- AlJohani, BA., Bugis, BA (2024). Advantages and challenges of implementation and strategies for health insurance in Saudi Arabia: a systemic review. *Inquiry*, 61, 469580241233447. doi: 10.1177/00469580241233447.
- Alkhamis, A.A. (2017). Knowledge of health insurance benefits among male expatriates in Saudi Arabia, *Saudi Medical Journal*, 38 (6), 642-653.
- Alkhamis, AA. (2018). The association between insured male expatriates' knowledge of health insurance benefits and lack of access to health care in Saudi Arabia. *BMC Public Health*, Dec; 18(1), 354
- AlNemer, A. H. (2018). Perception of the benefits and features of health insurance policies offered by the employers: empirical findings from Saudi Arabia, *International Journal of Business and Management*, 13(6), 214-224.
- AlNemer, H (2015). Participants' knowledge and educational background about Takaful products & services: an empirical study on Saudi Arabia. *International Journal of Business, Economics and Law*, 7(1).
- Alzahrani, AA., Pavlova, M., Alsubahi N., Ahmad A., Groot W (2025). Impact of the cooperative health insurance system in Saudi Arabia on universal health coverage systematic literature review. *Healthcare (Basel)*, 13(1), 60. doi: 10.3390/healthcare13010060.
- Dhungana BR., Giri SS., Kushwaha S.P, Khanal DK., Yadav, BK. (2021). Awareness and perception regarding health insurance among community people in a municipality: a cross-sectional study. *Journal of Medicine and Medical Sciences*, 1(1), 76-82.
- Elegbede, O. E., Durowade, Kabir Adekunle., Sanni, Taofeek Adedayo., Ipinimo, Tope Michael., Alabi Ayo Kamal (2022). Knowledge of community-based health insurance and associated factors among artisans in a selected community of Ekiti State. *Nigerian Journal of Medicine*, 31(5), 509-514.
- Indumathi, K., Hajira, SI., Gopi, A., & Subramanian M (2016). Awareness of health insurance in a rural population of Bangalore, India. *International Journal of Medical Science and Public Health*, 5, 2162-2167.
- Kusuma YS, Pal M, Babu BV. Health Insurance: Awareness, Utilization, and its Determinants among the Urban Poor in Delhi, India. *J Epidemiol Glob Health*, 8(1-2), 69-76.
- Nair, K.S., Mughal, Y.H., Albejaidi, F., Alharbi, A.H (2024). Healthcare financing in Saudi Arabia: a comprehensive review. *Healthcare*, 12, 2544. <https://doi.org/10.3390/healthcare12242544>.
- Ozawa, S., Grewal, S., & Bridges, JFP. (2016). Household size and the decision to purchase health insurance in Cambodia: results of a discrete-choice experiment with scale adjustment', *Appl Health Econ Health Policy*, vol. 14, pp. 195–204, 2016, doi: 10.1007/s40258-016-0222-9.
- Reshmi, B., Unnikrishnan, B., Parsekar, S.S., Rajwar, E., Vijayamma, R., & Venkatesh BT. (2021). Health insurance awareness and its uptake in India: a systematic review protocol. *BMJ Open*, 15;11(4), e043122. doi: 10.1136/bmjopen-2020-043122
- Sharma, D., Basnet, P., & Kafle R. (2021). Awareness, enrolment, and utilization of health insurance among adults of Pokhara. *JCMS Nepal*, 17(2), 109-16.
- Yego, N.K.K., Nkurunziza, J., & Kasozi, J. (2023). Predicting health insurance uptake in Kenya using Random Forest: An analysis of socio-economic and demographic factors. *PLoS ONE*, 18(11), e0294166. <https://doi.org/10.1371/journal.pone.0294166>



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