

Community Health Needs Assessment In Makkah, Saudi Arabia 2025: A Cross-Sectional Study

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Abstract

Background: Saudi Arabia's Vision 2030 emphasizes preventive care and the effective management of chronic diseases, necessitating evidence-based strategies to enhance healthcare delivery. Community Health Needs Assessments (CHNAs) are crucial in identifying population-specific health priorities, service gaps, and areas for policy and system improvement. **Objective:** **This study aimed** to assess the health needs of Makkah residents through a community-based approach, identifying prevalent health conditions, service delivery gaps, and community concerns to inform targeted health interventions. **Methods:** A cross-sectional study was conducted from January to March 2025 across ten hospitals within the Makkah healthcare cluster. Using a convenience sampling method, 2,479 residents aged 18 and above participated by completing a digital questionnaire covering socio demographics, community health assets, health concerns, and healthcare service perceptions. Data were analyzed using descriptive statistics. **Results:** Among participants, 63% were male and 94.5% were Arab, with most aged between 35 and 64. Chronic disease prevalence was highest in the Al-Shara'e sector (43.5%). Diabetes mellitus was most prevalent in the Khoules sector (28.8%), and hypertension was common in Al-Jamum (25.8%). The community expressed major concerns about healthcare provider availability (48.6%) and specialist access (39.8%). Youth prioritized obesity (43.9%) and smoking, while the elderly cited access to home health services and the ability to meet daily needs as top concerns. Key service gaps included specialist clinics, timely appointment availability, and mental health services. **Conclusion:** The CHNA highlights significant disparities in chronic disease burden and healthcare accessibility across Makkah's regions. Findings underscore the need for tailored, community-driven health initiatives focused on chronic disease prevention, provider availability, and improved service delivery. These results provide a foundation for future health planning and policy efforts aligned with national health goals.

Key Words: Community, Health, Needs, Assessment, Makkah, Saudi Arabia .

Introduction

In Saudi Arabia, the healthcare system has transformed, incorporating advanced technologies and expanding access to services in urban and rural areas, all while emphasizing preventive care and health education. (Al Asmri et al., 2020). In recent years, Saudi Arabia has made considerable strides in improving its healthcare system, focusing on enhancing the quality of care and addressing the diverse health needs of its population. (Sajjad & Qureshi, 2020). Despite considerable progress in healthcare infrastructure and services, challenges such as the rising prevalence of chronic diseases, healthcare access disparities, and variations in health outcomes persist across regions (Rahman, 2020).

One of Saudi Arabia's 2030 visions is to promote a healthier society through comprehensive health initiatives that prioritize prevention, early detection, and effective management of diseases. (Chowdhury et al., 2021).

Community health needs assessments are essential tools that help identify and prioritize the health needs of communities. These assessments gather valuable data on health status, access to services, and social determinants of health, ultimately guiding the development of strategies that foster community well-being and resilience enabling policymakers to allocate resources effectively and implement targeted interventions. (Suarez-Balcazar, 2018) (Salam, 2022).

This proactive approach empowers communities and strengthens the overall healthcare infrastructure, ensuring that all individuals receive the necessary support and resources to lead healthier lives. (Alharbi & Alzahrani, 2023)

This research aims

To assess the health needs of Makkah residents, offering insights into the current state of the community by engaging community members and health professionals. It will help identify service delivery gaps and highlight areas where improvements can be made to enhance access to care and preventive services. In addition, the study will be a foundation for future research initiatives to address the unique health disparities faced by various populations within Makkah, ultimately contributing to a more robust and responsive healthcare system.

Material and Methods

1. Study design and participants: This cross-sectional study included participants who attended Makkah cluster hospitals from January to March 2025. Participants were selected through convenience sampling from all 10 hospitals within the cluster to ensure a diverse representation of the community. Inclusion criteria were participants aged 18 and above who lived in Makkah, excluding those who came for Umrah and temporary visits. The sample size was calculated by Open Epi using a sample size for proportion with 50% anticipated frequency (p), 5% absolute precision, and a 99.9% confidence level. The sample design effect was set at 2. The calculated sample size is 2165; considering a 10% non-response rate, the final sample size is 2382.

1. Questionnaire

The digital questionnaire consisted of four sections. **The first** comprised questions regarding socio-demographic characteristics such as age, education, and income level. **The second** included questions on health assets such as available resources and activities. **The third** section focused on community interests and concerns. **The fourth** aimed to assess the healthcare delivery. A validated Arabic translation was used (Arabic CHNA summary with Tools with Disclaimer. Pdf, n.d.)

1. Data Collection

The data was collected through an online platform (Sharek forms); participants at the hospital were instructed to scan the QR code. Consent was given by participants entering an email address to be sent the link to the survey.

1. Ethics

The ethics committee of the Research and Study Department of Makkah Health Affairs approved this study (Approval number H-02-J-002). Participants received a complete explanation about the aim and nature of the study, and each participant signed a written informed consent.

1. Data Entry and Statistical Analysis

The results of our web-based survey were analyzed via descriptive statistics using the same platform of the data collection.

Results

Table 1. The characteristics of participants

Characteristics of the participants	Male n(%) 1561 (63)	Female n(%) 918 (37)	Total n(%) 2479
Age			
<18 years	24 (1.53)	23 (2.5)	47 (1.9)
18–24 years	132 (8.4)	67 (7.3)	199 (8)
25–34 years	282 (18)	206 (22.4)	488 (19.6)
35–44 years	368 (23.5)	184 (20)	552 (22.2)
45–54 years	331 (21.2)	166 (18)	497 (20)
55–64 years	317 (20.3)	205 (22.3)	522 (21)
>65 years	107 (6.8)	67 (7.3)	174 (7)
Nationality			
Arab	1499 (96)	845 (92)	2344 (94.5)
Asian	31 (2)	64 (7)	95 (3.8)
African	31 (2)	9 (1)	40 (1.6)
Employment Status			
Full time	1006 (64.5)	326 (35.5)	1332 (53.7)
Part time	39 (2.5)	13 (1.5)	52 (2.1)
More than one job	16 (1)	5 (.5)	21 (.8)
Retired	344 (22)	37 (4)	381 (15.3)
Housewife		390 (42.5)	390 (15.7)
unemployed	156 (10)	147 (16)	303 (12.2)

The Demographics in Table 1 show that most participants were Arabs (94%), with 63 % male and 37% female. The majority of participants were between the ages of 35 and 44 years (22.2%), followed by the age group 55-64 years (21%) and (20%) between 45-54 years. The table also shows that most of the males were employed full-time(64%), while a significant number of females identified as housewives (42%).

Figure 1: Present of Chronic Disease in MHC- Sectors

Figure 1 shows the presence of chronic disease as participants reported in AL-Shara'e sector by 43.5% while Al-Kamel sector reported only 20.3%

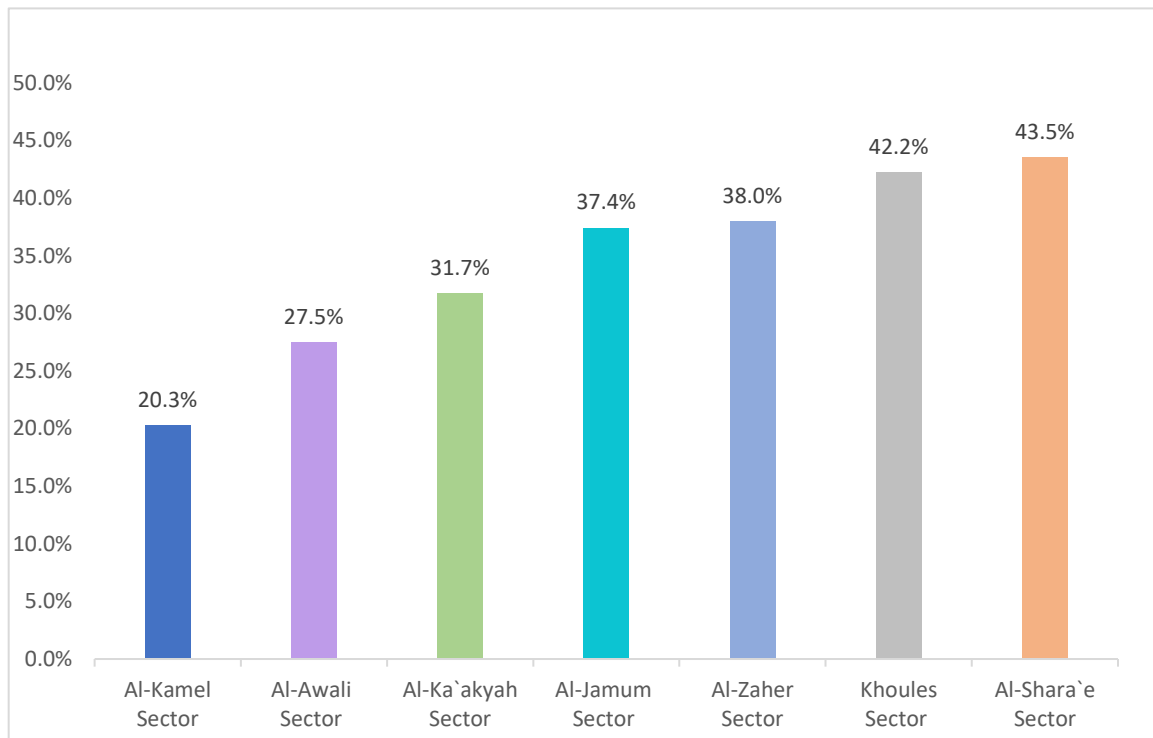
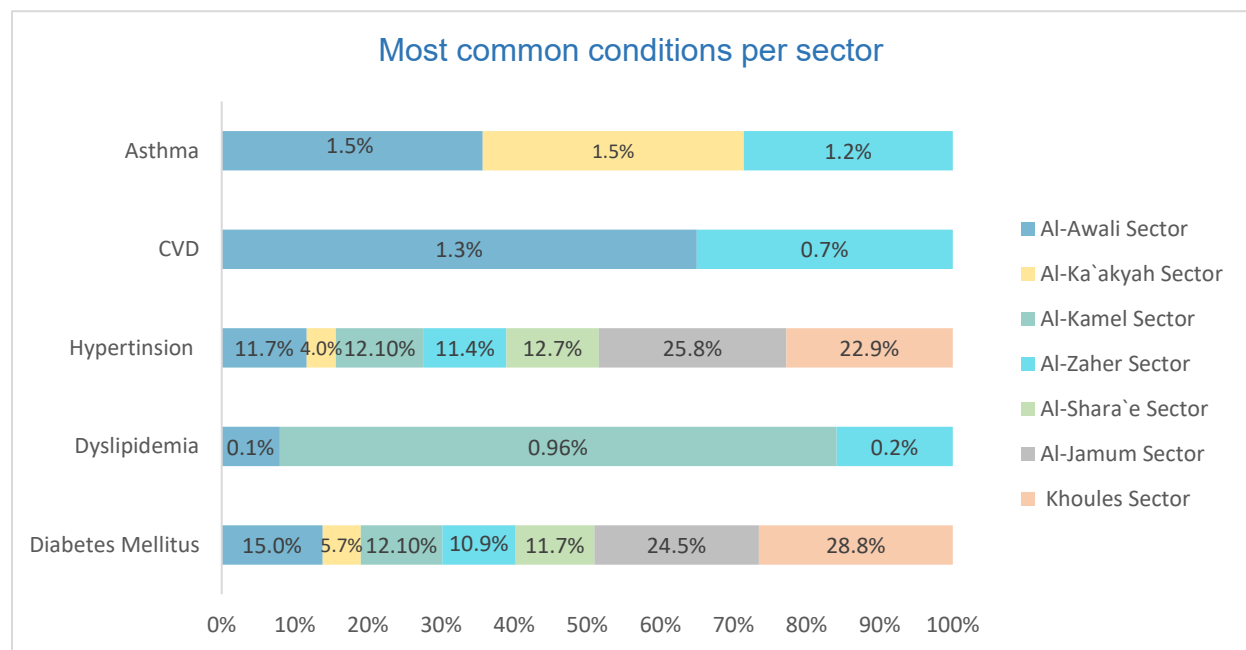


Figure 2: Most Common Conditions in MHC-Sector



- In the Al-Kamel sector, dyslipidemia was reported by 0.96% of participants.
- In the Al-Jamum sector, hypertension was reported by 25.8% of participants.
- In the Al-Awali sector, cardiovascular disease (CVD) was reported by 1.3% of participants.
- Asthma was reported as the most common condition in both the Al-Awali and Al-Ka`akyah sectors

Figure 3: Interests in the community regarding health services

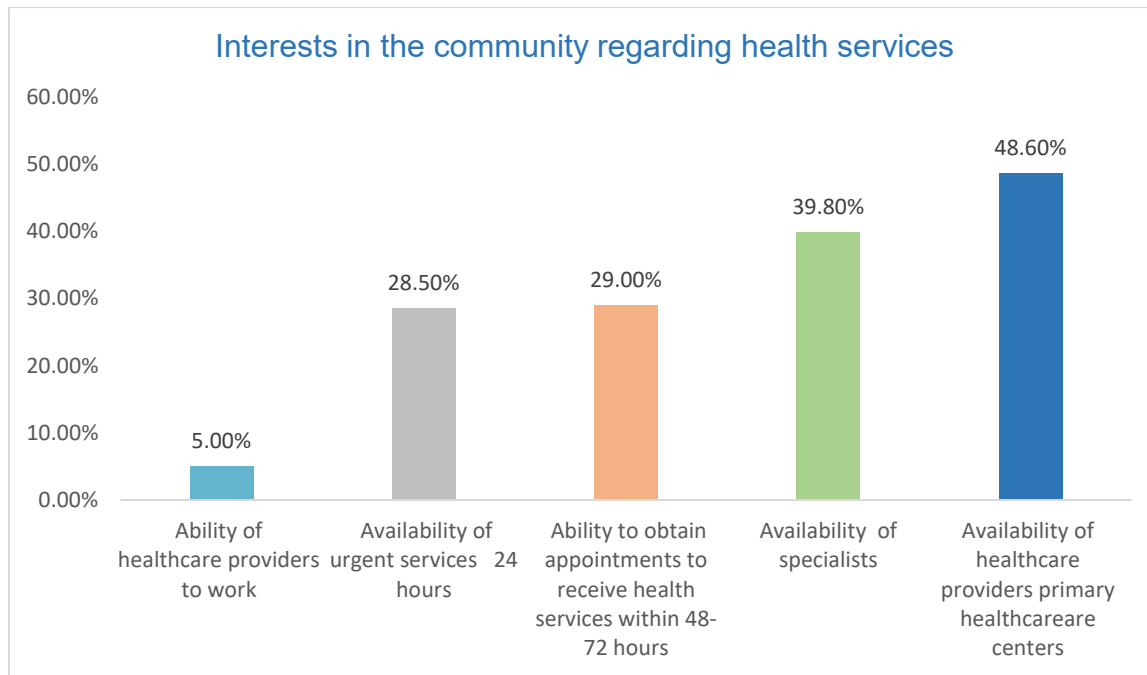


Figure 3 represents the top 5 interests of the community regarding health services. The top-ranked concern, with 48.6% of respondents, is the availability of healthcare providers in primary health centers. In second place at 39.8% is the availability of specialists. The ability to obtain appointments to receive health services within 48-72 hours was a concern for 29% of respondents. The availability of urgent services 24 hours a day was a concern for 28.5% of the community. Finally, the ability of healthcare providers to work effectively was a concern for 5% of respondents.

Figure 4: Top five concerns for youth population

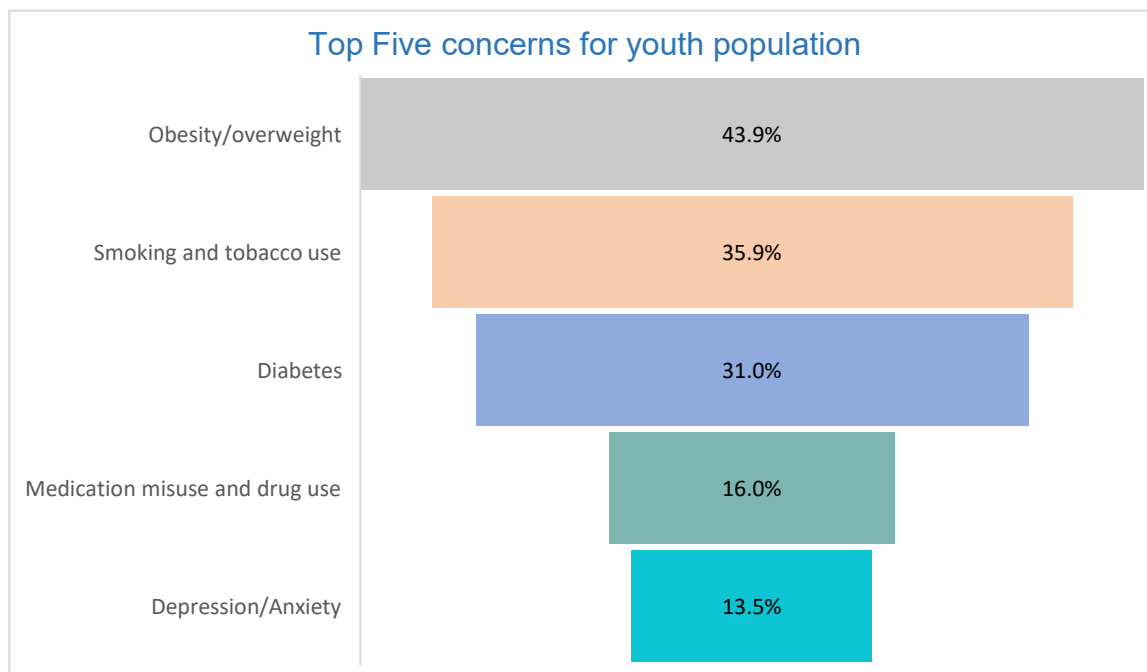


Figure 4 highlights the main concerns among the youth population. Obesity ranks as the primary concern among the youth population, with 43.9% of respondents expressing worry about this issue. Approximately 36% of the youth population is concerned about Smoking and tobacco use. Diabetes is a significant concern for 31% of the youth population, and 16% of the youth population is concerned about Medication and drug misuse, while Depression is a concern for 13.5% of the respondents.

Figure 5: Top five concerns among the elderly population in the community

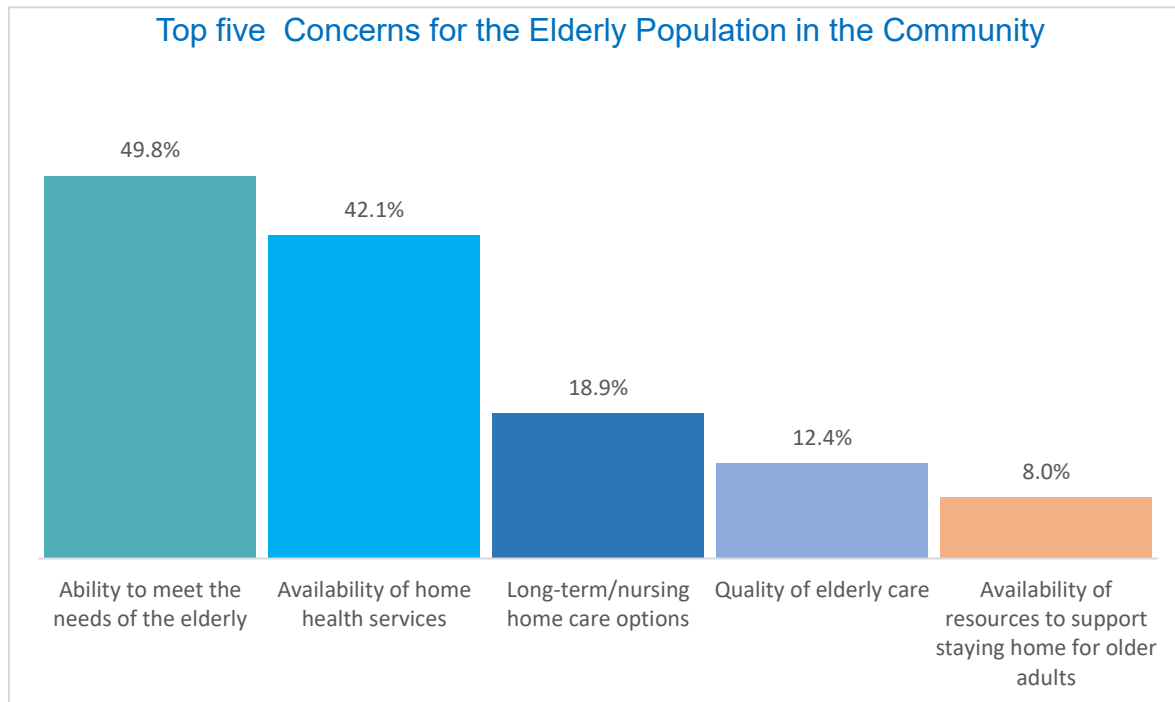
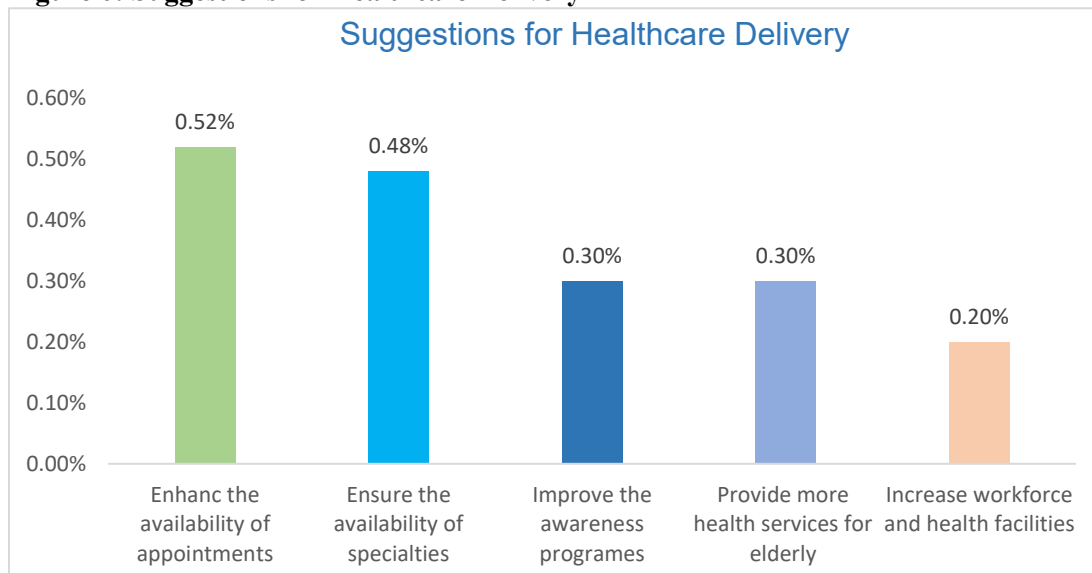


Figure 5 shows the top five concerns among the elderly population in the community. The top-ranked concern, with 49.8% of respondents, is the ability to meet their needs. The second highest concern, expressed by 42.1% of the elderly population, is the availability of home health services. Additionally, 18.9% of the respondents expressed concern about long-term home care options. The quality of elderly care was a concern for 12.4% of the respondents. Finally, 8.0% of the elderly population indicated concern about the availability of support and resources for the elderly to age comfortably in their homes.

Figure 6: Suggestions for Healthcare Delivery



According to the data presented in Figure 6, participants made several suggestions to enhance healthcare delivery services:

- 0.52% emphasized the significance of enhancing the availability of appointments.
- 0.48% of participants expressed the need to ensure the availability of medical specialties.
- 0.30% of participants expressed the need to improve awareness programs and provide more health services for the elderly population
- 0.20% of respondents highlighted the importance of increasing the healthcare workforce and expanding health facilities.

Figure 7: Health issues concerns in Makkah communit

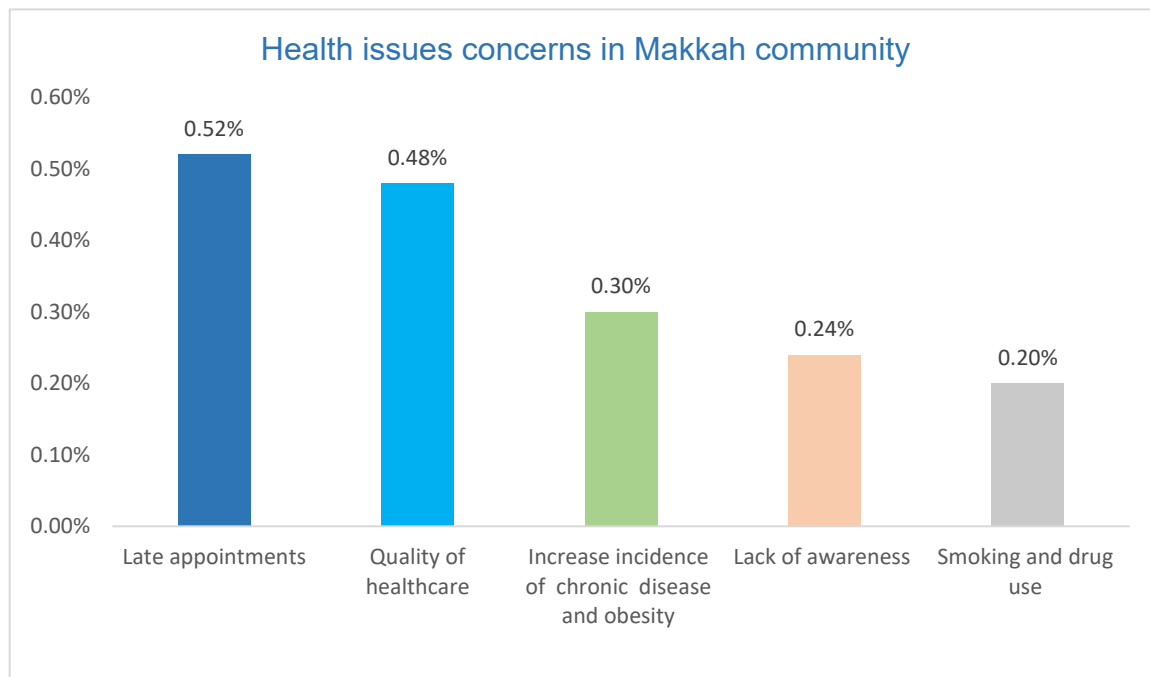
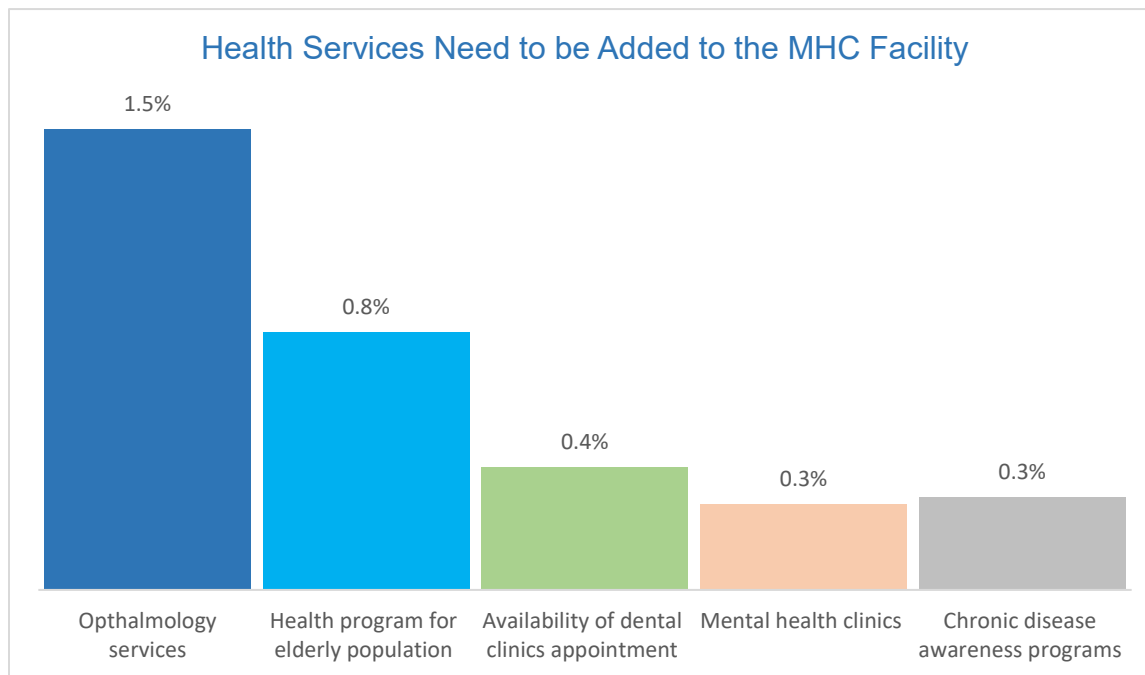


Figure 7 presents the health issues that were of concern to the Makkah community. The most significant concern, identified by 0.52% of the respondents, was Late appointments. The quality of provided health care was about 0.48%, and 0.30% highlighted the increased incidence of chronic disease and obesity. Lack of awareness was another prominent concern, with 0.24% of participants worried about it. Smoking and drug use were identified as problematic by 0.20% of the respondents.

Figure 8: Health Services Need to be Added to the MHC Facility



According to Figure 8, the health services identified as priorities to be added to MHC (Makkah Health Center) facilities are the availability of ophthalmology services at 1.5%, the Health program for the elderly population at 0.8%, and the availability of a dental clinic appointments at 0.4%. There is also a demand for mental health clinics and chronic disease awareness programs, identified by 0.3% of the respondents.

Discussion

A community health needs assessment is a systematic process that aims to identify and analyze the health needs of a specific community, guiding the allocation of resources and the development of programs to address those needs effectively (Derkaoui et al., 2024). It reveals critical gaps in the services provided, highlighting the necessity for targeted interventions to address these specific health concerns within the community (Alharbi & Alzahrani, 2023). By prioritizing these services, MHC can better align its offerings with the needs of the population it serves, ultimately improving overall health outcomes and accessibility. Therefore, this study aims to assess the health needs of Makkah residents, offering insights into the current state of the community and identifying areas where improvements can be made to enhance health services. Our findings showed that the presence of chronic disease was high in al Shara'e sector by 43.5% while the Al-Kamel sector reported only 20.3%. This significant disparity highlights the urgent need for targeted health initiatives that specifically address chronic disease management and prevention in the Al Shara'e sector. Diabetes Mellitus was the most common condition reported by 28.8% of participants in Khoules sector. The prevalence of diabetes in Saudi Arabia is notably high, with estimates suggesting that around 25% of the adult population is affected, and this is expected to rise significantly by 2030 (Robert & Al Dawish, 2020). A study focusing on insulin resistance in Makkah found that 14% of the population was at high risk, which is a precursor to diabetes (Bukhari, 2023). Consistent with our study, the health needs assessment in Jazan showed that diabetes was consistently perceived as the region's most pressing health issue. (Gosadi, 2025). The availability of healthcare providers in primary health centers was our top-ranked concern, with 48.6% of respondents. followed by the availability of specialists, at 39.8%. The ability to obtain appointments to receive health services within 48-72 hours was a concern for 29% of respondents, Similarly, studies from Makkah and Jazan found that the shortage of healthcare services, including specialty

clinics and staff, as well as the unavailability of appointments, highlight significant barriers to accessing necessary medical care and these issues need to be addressed (Alharbi & Alzahrani, 2023) (Gosadi, 2025).

Our study highlighted obesity as the main concern among the youth population. followed by smoking and tobacco use, these findings are consistent with (Alrehaili et al., 2023) which revealed that 50% of Medina's population is within the overweight range and 25% have reached the obesity range, also agrees with (Gosadi, 2025) which showed that 48% of their sample size are either overweight or obese and (Derkaoui et al., 2024) showed that 41% of their sample were overweight. These alarming statistics emphasize the urgent need for targeted public health interventions aimed at promoting healthier lifestyle choices and increasing access to preventive care services in order to combat these rising trends in obesity and related health issues.

The current study has several strengths and limitations; the main strength is the large sample size, which can provide a good assessment of the health needs of the community and appropriate generalizability. The main limitation is using a cross-sectional design and potential selection bias.

Conclusion

The CHNA highlights significant disparities in chronic disease burden and healthcare accessibility across Makkah's regions. Findings underscore the need for tailored, community-driven health initiatives focused on chronic disease prevention, provider availability, and improved service delivery. These results provide a foundation for future health planning and policy efforts aligned with national health goals.

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