

Community Awareness of Preventive Health Measures and Lifestyle-Related Diseases: A Cross-Sectional Study at Al-Diwaniyah Teaching Hospital, Iraq

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Abstract

Introduction: Non-communicable diseases (NCDs) related to lifestyle, such as type 2 diabetes mellitus, hypertension, cardiovascular disease, and obesity are the most common causes of premature mortality and morbidity in Iraq. Increasing awareness within communities about preventative health behaviours are essential to reduce the burden of these diseases. Evidence about community awareness levels in the Al-Diwaniya Governorate is limited.

Aim: To determine the awareness levels of community members of preventative health behaviours and preventable lifestyle diseases among those attending the outpatient clinics at Al-Diwaniya Educational Hospital and the sociodemographic factors associated with low levels of awareness.

Methods: This cross-sectional descriptive study was conducted at Al-Diwaniyah Teaching Hospital outpatient clinics between January to June 2025. Using convenience sampling, 420 adults participated in the study. The validated self-administered structured survey collected sociodemographic data and information about 1) common preventable lifestyle diseases, 2) modifiable risk factors for common preventable lifestyle diseases, and 3) knowledge of preventative health behaviours. Descriptive statistics and the Chi-square statistic were conducted using SPSS version 26.

Results: The average participant age was 38.4 ± 12.7 years. Overall, there was adequate awareness of preventable lifestyle diseases for 41.9% of participants. Awareness levels of preventable lifestyle diseases were significantly more prevalent in participants with university education (68.4%) compared to those with only primary education (18.2%; $p < 0.001$). The variables of sex (i.e., female), residence (i.e., urban), and income level (i.e., higher income) were independently associated with better awareness of preventable lifestyle diseases. Inadequate knowledge of specific preventative health behaviours were found across all levels of education (e.g., dietary modifications, exercise, smoking cessation, and routine screening).

Conclusion: There is inadequate community awareness of preventative health behaviours and preventable lifestyle diseases among those attending Al-Diwaniya Educational Hospital. Targeted community health education programs are urgently required to improve awareness of preventative health behaviours and preventable lifestyle diseases, specifically for those with lower levels of education, living in rural locations, or have lower monthly income to attempt to reduce the growing burden of NCDs in Iraq.

More Information

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Introduction

Globally, non-communicable diseases (NCDs) cause the greatest number of deaths and disabilities, accounting for approximately 74 percent of all deaths worldwide,

resulting in about 41 million deaths annually one year [1].

The Eastern Mediterranean Region, in which Iraq is located, has an estimated 60 percent or more of all

premature deaths, including those from cardiovascular disease, type 2 diabetes mellitus, chronic respiratory disease, and cancer, due to NCDs [2,3].

The epidemiological transition in Iraq has been tremendous over the last 30 years as a result of rapid urbanization, socioeconomic instability, long-term violent conflict and mass expulsion of people [4]. Such changes have produced an environment combined with all these factors that encourages increased obesity and type 2 diabetes, due to sedentary behaviours; eating diets high in calories, including high levels of refined carbohydrates and saturated fats; increasing rates of tobacco consumption; and poor access to quality, organized care for primary prevention [5,6].

National epidemiological studies reveal that Iraq has the highest prevalence of type 2 diabetes in the region, with a prevalence greater than 13.9% of adults [7]. Additionally, estimates suggest that between 26 and 33% of adults in Iraq are hypertensive, while obesity and overweight continue to be a public health problem because estimates show more than 60% of Iraqi adults are overweight [8,9].

The increasing importance of preventive health has been widely discussed in the public health community regarding how to address these two population-level problems. Preventive health includes both primary prevention (making lifestyle changes to promote health) and secondary prevention (early detection and screening) and tertiary prevention (preventing complications and managing disease), as such preventative health behaviours have been demonstrated to positively impact the health of populations through disease prevention efforts [10]. Ultimately, the success and efficacy of preventative paradigm and practice are reliant on having knowledgeable and health literate individuals within their communities. Individuals' overall health can be significantly negatively affected by having limited health literacy; additionally, individuals with low health literacy have been found statistically to have greater likelihoods of having lower overall health outcomes, having higher overall rates of hospitalisation, and having lower adherence rates to preventive health care guidelines.

High-income countries have shown measurable positive change in awareness of NCDs and changed behaviours, which have also shown to positively impact rates of cardiovascular-related deaths and rates of new-onset diabetes through structured public health education campaigns. Low- and middle- income countries continue to experience systematic barriers to the dissemination of preventive health knowledge due to fragmented health systems, poor infrastructure for health promotion, limited community outreach, and poor baseline health literacy.

The Al-Diwaniya Governorate of Iraq is located in the middle Euphrates region of southern Iraq and experiences a disproportionate number of diseases associated with poor lifestyle choices compared to the overall rate of such diseases in Iraq as a whole. Sample without delimiters: Original:

Al-Diwaniyah Teaching Hospital serves as the main tertiary referral centre for a governorate with a population of about 1.6 million and also provides primary and secondary care for many of the surrounding urban and peri-urban areas [17].

Several previous studies from across Iraq have documented significant gaps in community awareness of risk factors for diabetes, with varying reported awareness levels between 29% and 58% according to the population being studied and the type of assessment tool used [18,19]. Nearly half of all respondents from Baghdad and Basra governorates reported inadequate knowledge of hypertension as a modifiable risk factor for stroke and heart attack [20,21].

Within an Iraqi context, rural residents, individuals with lower levels of education, and elderly individuals have low levels of awareness of the primary modifiable risk factors for NCDs, which include lack of physical activity, poor diet, and tobacco use [22,23]. The health literacy of individuals is determined by sociodemographic factors that are well established globally; the variables most frequently associated with superior health literacy and awareness of NCDs include higher education level, urban residency, younger age, and female sex [24,25].

Health communication and community-based lifestyle modification programmes have been piloted throughout the Middle East, with promising results. In Jordan, for example, a national diabetes awareness programme correlated with a 19.4% increase in community knowledge scores over a one-year period. [26]. Similarly, in Saudi Arabia, community health education programmes run out of primary health care centres resulted in significant improvements in both awareness and self-management behaviours associated with hypertension [27,28].

Although the NCD burden is increasingly recognized in Iraq, the published literature contains no comprehensive data about community awareness of health promotion measures in Al-Diwaniya Governorate specifically. This knowledge gap makes it impossible to develop evidence-based, contextually appropriate health promotion strategies for a population that is underserved [29].

Additionally, the WHO Global Action Plan for the Prevention and Control of NCDs 2013-2030 explicitly calls for the development of epidemiological evidence at the sub-national level to help inform the allocation of resources for health promotion and to guide the



tailoring of behaviour change communication strategies [30]. Thus, generating such evidence in Al-Diwaniya is both scientifically relevant and of practical importance.

The purpose of this study is to fill the evidence gap through the systematic assessment of community awareness levels of preventive health measures and lifestyle-related diseases among individuals attending Al-Diwaniya Educational Hospital, and to identify sociodemographic correlates of awareness to facilitate the planning of targeted interventions [31].

Specifically, this study is designed to: (1) estimate the proportion of individuals with adequate awareness of lifestyle-related NCDs and their modifiable risk factors; (2) evaluate the level of knowledge regarding specific preventive measures, including dietary recommendations; physical activity guidelines; smoking cessation resources; and health screening practices; (3) determine the demographic and socioeconomic characteristics that predict level of awareness; and (4) provide a sound basis for the implementation of a targeted community health education programme in Al-Diwaniya Governorate.

Methodology

Study Design and Setting

A descriptive cross-sectional study design was utilized for this study. Data were collected from the outpatient clinics at Al-Diwaniyah Teaching Hospital, residing in Al-Diwaniya City, Al-Qadisiyyah Governorate, Iraq, over a period of six months from 1 January 2025 to 30 June 2025. The Al-Diwaniyah Teaching Hospital is the primary tertiary care facility in Al-Qadisiyyah Governorate and serves people residing in urban areas of Al-Diwaniya City and surrounding areas of rural and peri-urban nature. The hospital operates general medicine, surgical, pediatric, obstetric, and specialty outpatient clinics and has a diverse catchment area for the demographic of the communities served by the outpatient clinics to perform community-based survey research.

Target Population and Eligibility Criteria

The target population for this study was defined as adults from the community aged 18 years and older who attended the outpatient clinics at the Al-Diwaniya Educational Hospital during the data collection period regardless of their presenting complaint. The inclusion criteria were as follows: (1) must be an Iraqi citizen; (2) must be at least 18 years of age; (3) must provide voluntary written informed consent to participate in the study; and (4) must be able to communicate in Arabic. The exclusion criteria for the study were as follows: (1) patients presenting to the outpatient clinics with an acute medical emergency and who are unable to complete the questionnaire; (2) individuals diagnosed with a severe mental illness that prevents their ability to provide informed consent to participate;

and (3) those individuals who had already participated in a prior data collection session within the same study period (these individuals were identified using a unique participant code system to prevent duplicate data entry).

Sample Size Determination

Sample size was estimated using the standard formula for cross-sectional prevalence studies: $n = Z^2P(1-P)/d^2$, where $Z = 1.96$ for a 95% confidence level, $P = 0.50$ (assumed prevalence of adequate awareness in the absence of prior local data, to maximise sample size), and $d = 0.05$ (5% margin of error). This calculation yielded a minimum required sample of 384 participants. Accounting for an anticipated non-response rate of 10%, the target sample size was set at 422 participants. A total of 430 questionnaires were distributed, of which 420 were fully completed and returned (response rate 97.7%), constituting the final analytical sample.

Sampling Strategy

The sampling method used in this study was convenience sampling, whereby all outpatient patients who attended [the study clinic] on specifically set days were approached in the order that they arrived to be invited to take part in the study. Data were gathered three days each week (Sundays, Tuesdays and Thursdays) during the entire study period so that the largest variety of clinic users could be sampled on different days of the week and from different types of clinics. Research assistants were located in the main waiting area of the clinic before their actual consultations to identify and approach eligible participants.

Data Collection Tool

The data collection tool for this study was pre-tested by the research team prior to study commencement to ensure validity [i.e. prove the tool would yield dependable results.] Data were collected using a structured, self-administered questionnaire that was written in Arabic language; the questionnaire was designed by the [research] team following a systematic review of previously validated data collection tools used in similar studies conducted in both Iraq and across the greater Arab world. The questionnaire had four (4) sections, as summarised below:

Section 1 - Sociodemographic Characteristics of Participants: Age, gender, education (categorised as illiterate with no formal schooling, primary school graduate, secondary school graduate [or equivalent] and post-secondary graduate), marital status, area of residence (i.e. rural (or peri-urban) versus urban), employment status and estimated monthly family (household) income in Iraqi Dinars (IQD) - as low (< 300,000 IQD), middle (300,000 - 700,000 IQD) or high (>700,000 IQD).



Section 2 - Awareness of Lifestyle-Related Diseases: Twelve items tested whether participants were familiar with and could identify some of the important lifestyle related noncommunicable diseases (NCDs) (type II diabetes mellitus, high blood pressure, ischaemic heart disease, obesity, stroke and dyslipidaemia). These 12 items were scored 'yes (1)' or 'no (0)'.

Section 3 - Knowledge of Factors That Can Be Changed That Affect the Risk of Developing NCDs: Fourteen items tested if participants knew that lifestyle behaviours contributed to the development of NCDs; the behaviours that were tested included physical inactivity, unhealthy eating patterns, cigarette smoking, excessive alcohol consumption, obesity and psychosocial stress.

Section 4 - Knowledge of the Importance of Preventative Health: Ten items tested if participants were familiar with the preventative health measures, including national guidelines for physical activity, dietary guidelines (that are consistent with the Mediterranean Diet and Healthy Plate Model), cessation methods for smoking, ways to monitor high blood pressure and blood sugar, and weight management strategies.

To establish the overall level of knowledge of the participants, the researchers added the number of correct responses in sections 2, 3 and 4 together (maximum score 36 points). If the participant answered 'yes' to at least 60% of the items (≥ 22 points) they were classified as having 'adequate awareness'; if the participant answered 'yes' to less than 60% of the items (< 22 points), they were classified as having 'inadequate awareness'. These cut-off points for awareness were in line with comparable studies undertaken in the Arab World.

Instrument Validation

While two experts in community medicine, an internist, a nutritionist and a health educator formed a panel of five experts to evaluate the validity of the questionnaire's content, the comments and recommendations of the panel were incorporated into a revised version of the questionnaire. The face validity of the questionnaire was determined through a pilot test that utilized a convenience sample of 30 subjects from the same area, but these individual results were not included in the main analysis. The pilot testing resulted in minor modifications to the language and format of the questionnaire. The Cronbach's alpha

coefficient for the general knowledge section of the questionnaire was 0.78, indicating an acceptable level of reliability for an exploratory study of health knowledge.

Data Management and Statistical Analysis

The principal investigator (PI) reviewed survey results on a daily basis to ensure all data were collected. Completed surveys were entered into a secure (password protected) Microsoft Excel database (Microsoft Corporation, Redmond, WA, USA) and then analyzed with IBM SPSS Statistics version 26.0 (IBM Corp., Armonk, NY, USA). Categorical data were reported as counts and frequencies; continuous data were reported using mean \pm standard deviation (SD) when normally distributed as tested by the Shapiro-Wilk test. Chi-square (χ^2) tests for independence were performed to explore any associations between the categorical sociodemographic variables and dichotomized responses (adequate vs. inadequate) regarding awareness. A p-value ≤ 0.05 (two-tailed) was considered statistically significant for all analyses.

Ethical Considerations

Ethical approval was obtained from the Institutional Review Committee of Al-Diwaniya Educational Hospital (Approval Reference: DEH-IRB-2023/147) and ratified by the Al-Qadisiyyah Directorate of Health. Written informed consent was obtained from each participant prior to questionnaire administration. Participation was entirely voluntary, and participants were explicitly informed of their right to withdraw at any stage without consequence. Confidentiality and anonymity were maintained throughout data collection, storage, and analysis through the use of numerical participant codes in place of personal identifiers.

Results

The total number of individuals involved in this survey is 420. The age of participants was an average of 38.4 years (standard deviation of 12.7 years, range of 18-74). Of the participants, male made up 52.1% of the sample size (219) and female accounted for 47.9% (201). Many of these individuals reside in metropolitan areas (61.4%, $n=258$) and have varying levels of educational achievement. For example, 12.4% have no formal education or are illiterate, 26.2% completed primary school, 35.5% finished secondary school, and 25.9% possess a bachelor's degree or higher. The social characteristics of study participants are summarized in Table 1.

Table 1: Sociodemographic Characteristics of Study Participants (N = 420)

Characteristic	Category	n	%
Sex	Male	219	52.1
	Female	201	47.9
Age group (years)	18–29	128	30.5
	30–44	152	36.2
	45–59	96	22.9



	≥60	44	10.5
Residential area	Urban	258	61.4
	Rural / peri-urban	162	38.6
Educational level	Illiterate / no formal education	52	12.4
	Primary	110	26.2
	Secondary	149	35.5
	University or higher	109	25.9
Marital status	Single	118	28.1
	Married	268	63.8
	Widowed / divorced	34	8.1
Monthly income	Low (<300,000 IQD)	163	38.8
	Middle (300,000–700,000 IQD)	178	42.4
	High (>700,000 IQD)	79	18.8
Employment status	Employed	218	51.9
	Unemployed	102	24.3
	Homemaker	87	20.7
	Student / retired	13	3.1

A total of 176 participants (41.9%) were found to have an adequate awareness of lifestyle diseases while a total of 244 participants (58.1%) had inadequate awareness. The overall mean score was 18.6 ± 5.3 and the maximum possible score was 36. The mean scores for individuals with a university education were significantly higher than the mean scores for illiterate individuals (26.8 ± 4.1 vs 9.4 ± 3.2), respectively. Hypertension was the most commonly recognized disease (78.3%), followed by Diabetes Mellitus (74.8%),

Obesity (63.6%), Cardiovascular Disease (51.2%), Stroke (44.5%), and Dyslipidaemia (28.1%). Participants' knowledge of preventive measures (e.g. physical activity guidelines and dietary recommendations) was poor. Only 34.3% of the participants identified the recommendation for 150 minutes of moderate-intensity physical activity per week. Only 27.6% of participants were aware of the dietary components associated with NCD prevention. Table 2 shows awareness of participants by education level.

Table 2: Awareness of Lifestyle-Related Diseases by Educational Level (N = 420)

Educational Level	Adequate Awareness n (%)	Inadequate Awareness n (%)	χ^2	p-value
Illiterate / no education (n=52)	9 (17.3)	43 (82.7)	71.34	<0.001
Primary (n=110)	20 (18.2)	90 (81.8)		
Secondary (n=149)	73 (49.0)	76 (51.0)		
University or higher (n=109)	74 (67.9)	35 (32.1)		

Table 3: Association Between Sociodemographic Variables and Adequate Awareness

Variable	Adequate Awareness %	Inadequate Awareness %	χ^2	p-value
Sex: Male	38.8	61.2	4.87	0.027
Sex: Female	45.3	54.7		
Urban residence	50.8	49.2	22.14	<0.001
Rural/peri-urban residence	27.2	72.8		
Low income	22.1	77.9	38.92	<0.001
Middle income	44.9	55.1		
High income	62.0	38.0		
Age 18–29 years	48.4	51.6	9.63	0.022
Age ≥60 years	25.0	75.0		

Discussion

This study was conducted in Al-Diwaniya Governorate and is believed to be one of the first systematic assessments of community awareness about preventive health measures and diseases related to lifestyle. The results of this study can provide valuable evidence to be used for planning public health

programs at the national level and the governorate level. The major finding from this study was that the total proportion of the study population that demonstrated an adequate level of awareness was less than four out of ten individuals (41.9%). This is a clinically significant result, and it aligns with findings



from previous studies with similar populations in Iraq and other countries in the Arab region [18,19].

The proportion of the population with an overall awareness level of 41.9% was similar to the results of the study by Al-Rubeaan et al. in Saudi Arabia (38.7%) and slightly larger than the level observed in the study by Mansour et al. in Babil Governorate, which showed that only 31.4% of the primary care population had an adequate awareness level [32,33]. However, this is significantly lower than levels of awareness in higher-income countries like the UK and USA, where public health education initiatives for communities have helped to raise awareness higher than 70% regarding the risk factors related to NCDs [34].

In this study, we also found that higher levels of education were related to having a greater level of awareness, as demonstrated by the strong positive association between educational attainment and having adequate awareness ($\chi^2=71.34$, $p < 0.001$). Individuals who had completed university had a 3.9 times higher chance of having adequate awareness compared to individuals who only completed their primary education. This is a well-established finding in the literature and indicates that formal education plays an important part in developing cognitive skills necessary for processing, evaluating and applying health-related information [11,24]. The findings have important policy implications. The findings suggest that health education interventions aimed at those with lower levels of formal education will necessitate that special tailored communication strategies be used. Community health educators in Al-Diwaniya may wish to utilize audio-visual materials, peer-to-peer education strategies, and the use of community health workers to target this population [35,36]. The increased rates of awareness for urban dwellers ($\chi^2 = 22.14$ respectively, $p < 0.001$) are consistent with previous findings from other Iraqi governorates and therefore suggest that many interconnecting factors contribute to the increased awareness of urban residents in Al-Diwaniya. Urban residents have greater access to broadcast media, social media, and print materials promoting health that are distributed through mosques, markets and community centers. Their nearness to health facilities allows them to have more frequent interactions with health professionals who are key sources of health information in Iraqi cultures [22,37]. The females' Tendency to have slightly higher awareness scores than males (45.3% vs. 38.8%, $P=0.027$). In contrast with previous Iraqi research documenting greater cognizance of health issues among males, females living in major cities and using social media platforms to access health information have improved their health literacy over time [19,38]. The gender differences in terms of health literacy remain a focus for future exploration within Iraq, given

that there are still significant differences amongst male and female patients regarding health-seeking behaviour [39].

Income level provides strong evidence of a degree of health awareness. Awareness was low for individuals who had a low income (22.1% of individuals with an adequate level of health awareness) and high for individuals who had a high income (62.0% of individuals with an adequate level of health awareness). There is a clear association between whether or not an individual is at risk of developing chronic disease and whether or not they have adequate access to health care. Low-income individuals face barriers to receiving quality care because they typically have lower literacy rates and experience food insecurity, which reduces the money available for health-promoting leisure activities [40]. The evidence that income has an impact on health awareness supports the need for educational interventions that are affordable to all members of a given community; free community screening for obesity-related chronic diseases and subsidised health-promoting resources are two examples [30].

There were clearly different patterns of health awareness for different types of diseases. Hypertension was recognized as the disease most at risk of causing chronic diseases and was recognized by 78.3% of those surveyed. This makes sense because hypertension is highly prevalent and is regularly monitored via blood pressure devices that are available throughout pharmacies and community health centres in Iraq. The prevalence of Diabetes diagnosis is (74.8%) which is high due to the amount of media attention around the Iraqi Diabetes Epidemic recently [7,8]. On the other hand, there was very low recognition for Dyslipidemia at (28.1%) which is also in agreement with similar findings by Jaisem and colleagues in their Baghdad study that showed less than a quarter of respondents in their survey were able to identify elevated cholesterol. Compared to the estimates from regional comparative research carried out in Jordan (48.2%) and Lebanon (52.9%), these percentages are significantly lower so have shown that health promotion messaging provided in Al-Diwaniyah has been less than satisfactorily specific and not sufficiently targeted.

Additionally, a large proportion of the population of Iraq have reported that over the last 5–10 years, sedentary lifestyles and habits have become widespread due to many complicating factors. Increased sedentary behaviour is most clearly attributed to extreme summer heat, urbanised areas that are perceived as insecure, limited amenities for physical activity, and cultural preferences for automobile-based transportation rather than physical transportation [6,9]. Consistent evidence indicates that increasing the level of habitual exercise by even a small amount will greatly decrease the likelihood of



individual cases of new type 2 diabetes, high blood pressure, and heart disease in populations that are currently sedentary [13,14].

The level of knowledge of dietary preventive practices is very low and is highly concerning given the rapid nutrition transition occurring in Iraq. The nutrition transition is characterised by a declining intake of fruit, vegetables, and legumes, and an increasing intake of ultra-processed foods, sugary drinks/refined carbohydrates [5,15]. Incorporating appropriate, effective dietary counselling as part of the individual's routine contact with a primary health care provider may be the most realistic solution for improving the dietary knowledge of the Al-Diwaniyah population in complimentary place-based health promotion activities delivered to local communities.

The limitations of the current study should be acknowledged; the sample was recruited via convenience sampling, reducing its external validity and thus its generalisability to the overall population of Al-Diwaniyah due to the higher health literacy level of individuals who seek and access formal health care as opposed to individuals who do not utilise formal health care; therefore the likelihood of establishing cause-and-effect relationships between sociodemographic variables and awareness levels is precluded by the cross-sectional design of this research project. Second, the study's findings are based completely on self-reported data that have the potential to reflect social desirability bias in that participants may over-report their levels of knowledge regarding various health-related issues.

The results of this study were derived from one study site, a tertiary care hospital; thus the findings cannot be assumed to apply equally well to communities that receive care from rural primary health care facilities, or from communities that do not possess a developed health-seeking behaviour. More comprehensive research will be needed to develop community-based sampling tactics for estimating the population level of awareness of the residents living in Al-Diwaniyah.

Despite the above-mentioned limitations, the current research study adds substantially to the body of evidence regarding non-infectious chronic disease awareness in the country of Iraq. The results from this study can be utilised immediately in the development of targeted community health education programming in Al-Diwaniyah through (1) intensively targeting rural and peri-urban communities with health promotion programming; (2) applying alternative non-text-dependent communicative education strategies for culturally congruent health promotion activities with less-educated individuals; (3) prioritising the educational material covering dyslipidaemia, physical activity, and dietary preventive practices; and (4) utilising community health worker initiatives that are

integrated into the primary health care delivery system as an economically sustainable means of delivering health education materials or information within the governorate of Al-Diwaniyah.

Conclusion

A cross-sectional study conducted at Al-Diwaniya Educational Hospital showed that most of the study population lacks sufficient community awareness of preventive health measures and lifestyle-related diseases. Less than half of the participants had sufficient awareness. There were statistically significant differences in awareness according to educational level, geographic location, gender, and monthly income of the participants. These associations demonstrate that the determinants of health literacy are multidimensional in this study. Participants demonstrated a striking lack of knowledge regarding specific preventive strategies, including physical activity guidelines, recommended dietary practices, and dyslipidaemia as a modifiable cardiovascular risk factor. Because of these findings, there is a need for structured, comprehensive, culturally and linguistically appropriate health education programs aimed at improving community awareness in Al-Diwaniya Governorate. There is an immediate need to implement these programs through various delivery modes including primary healthcare visits, community health worker networks and mass media. The delivery of NCD (non-communicable diseases) prevention messages during routine outpatient visits to Al-Diwaniya Educational Hospital is a practical and viable first step to increasing community awareness and therefore reducing unsustainable increases in the burden of lifestyle-related NCDs in this area.

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