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Multi-level Barriers to Chronic Diseases Self-Management in Rural Communities: A Survey of Health Literacy, Social Support, and Cultural Beliefs

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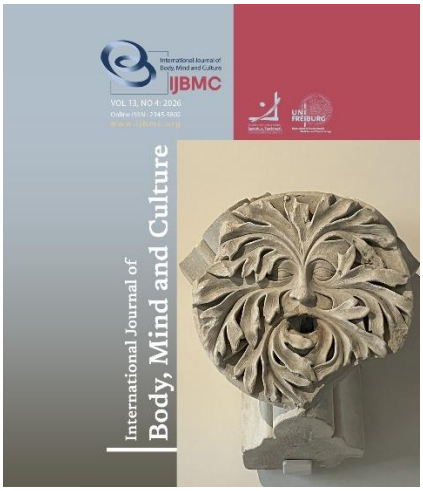

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ABSTRACT

Objective: The study aims to identify the level of health literacy, the nature of social support, and the nature of cultural beliefs. Investigate the influence of health literacy, social support, and cultural beliefs on chronic disease self-management.

Methods and Materials: A cross-sectional study was conducted among 518 patients with chronic diseases who attended primary healthcare centers in rural areas of Diyala Governorate, Iraq, using non-probability purposive sampling. Data were collected via a validated health literacy scale, a perceived social support scale, a cultural beliefs about diseases scale, and a chronic diseases self-management scale. The data was analyzed by SPSS 26. version, descriptive statistics, and multiple linear regression measures were also used.

Findings: More than two fifth of the patients with age groups 36.1-45 years (n=116:22.4%), more than half of the patients are male (n=282:54.4%), less than half of the patients experienced moderate level of health literacy (45.55%), less than half of patents experienced high level of social support (47.87%), most of patients exhibits moderate level of cultural beliefs about chronic diseases (60.61%), half of patients have moderate level of chronic diseases self-management (50.38%), predicted variables (health literacy, social support) positively influence 47.3% of the chronic diseases self-management. Cultural beliefs negatively influence 47.3% chronic disease self-management.

Conclusion: The study highlights that health literacy and social support are protective factors, while cultural beliefs act as barriers. Effective interventions must therefore educate, empower, and culturally engage rural communities to improve chronic disease self-management outcomes.

Keywords: Chronic disease, Self-management, Health literacy, Social support, Cultural beliefs.

Introduction

One of the biggest threats to modern public health is the rise in Non-Communicable Diseases (NCDs), which disproportionately affect low- and middle-income communities. In Iraq, the epidemiological transition has been complicated by decades of geopolitical instability, which has shattered the healthcare infrastructure and shifted the focus from preventive care to emergency response. This crisis is especially severe in the rural areas of the country, where residents face a triple burden of disease: An increasing rates of chronic diseases like Type 2 diabetes, cardiovascular diseases and respiratory diseases a healthcare system that struggles with limited resources in the post-conflict era, and major geographic barriers to specialized medical facilities (Abdulwahhab, 2023; Lafta, 2023; Zakirovna et al., 2024).

The cornerstone of successful NCD control is Chronic Disease Self-Management (CDSM), which entails patients actively managing their treatment plans, leading healthy lifestyles, and coping with the psychological effects of illness. In the study by Shafeea & Naji (2021) assessing diabetes health-promotion behaviors among clients with Type 2 Diabetes Mellitus, the results reveal low levels of health-promoting behaviors related to chronic conditions, including pain management, stress management, physical activity, and enjoyment of life. In addition, a study by Khazew & Faraj (2024) found a strong correlation between acceptance of chronic disease and healthy behaviors and practices. However, in Diyala's rural setting, CDSM is governed by a multi-level ecosystem of obstacles rather than being solely an individual duty. Health literacy, or the ability to access, process, and comprehend fundamental health information, is frequently hampered at the individual level. Recent research indicates that poor glycemic control and medication non-adherence in rural Iraqi settings are significantly predicted by low health literacy, as patients frequently find it difficult to understand complicated therapeutic instructions given in a stressful situation (Altayyer et al., 2024).

At the interpersonal level, social support plays a significant part in society's collectivist culture. Strong family ties can serve as a vital safety net, but they can also paradoxically make self-management more difficult. People with chronic diseases may find it culturally challenging to follow restricted diets that differ from family standards in many rural communities in Diyala. Additionally, miscarried support, in which well-meaning family pressure causes patient suffering rather than adherence, frequently stems from family members' lack of professional career training (Shahin, 2024). Lastly, the therapeutic environment in rural Iraq is significantly shaped by conventional health concepts and cultural beliefs. Beliefs on "Qadar" (predestination) might occasionally encourage a fatalistic perspective on the course of illness, which lowers desire for aggressive self-management. Furthermore, overreliance on traditional herbal medicine, which is sometimes seen as more "natural" and more easily accessible than pharmaceuticals, can lead to harmful drug-herb interactions or the discontinuation of evidence-based therapies (Kareem Abbas et al., 2026). This study aims to identify the levels of health literacy and social support, and the nature of cultural beliefs, and to investigate the influence of these factors on chronic disease self-management in a rural area. For the Ministry of Health and non-governmental organizations to move from generic health interventions to culturally specific, community-based strategies that enable rural communities to manage their health effectively within their distinct socio-cultural contexts, such localized evidence is essential.

Methods and Materials

Study Design

The researcher used the descriptive cross-sectional design. The study was conducted in primary health care centers in the rural area of the Diyala Governorate, Iraq. The target population includes patients with chronic diseases in the rural area of the Diyala Governorate, Iraq.

Paricipants

The study participants include patients with chronic disease attending 12 primary healthcare centers in the rural area of Diyala Governorate, Iraq. The study sample comprises 518 patients with chronic diseases who attend primary healthcare centers, selected through non-probability purposive sampling. The inclusion criteria involve patients with chronic diseases aged 18 years or older from rural areas who attend primary healthcare centers. In contrast, the exclusion criteria include patients attending primary healthcare centers in urban areas, those younger than 18 years, and those

without chronic diseases—the sample size was determined using G.power at 476 samples with a low effect size and a significance level of 0.05.

Instruments

To collect the data, the researcher used a self-report questionnaire consisting of five parts. Part one includes patients' sociodemographic data, such as age, sex, educational level, marital status, monthly income, disease type, and disease duration. Part two includes a 16-item health literacy scale (Lorini et al., 2019). The scale is rated from 1 = very difficult to 4 = very easy; a high score indicates a high level of health literacy. Part three includes a 12-item social support scale (Zimet et al., 1988). The scale is rated from 1 = strongly disagree to 5 = strongly agree. A high score indicates high social support. Part four includes a 9-item cultural beliefs about diseases scale (Kasahun et al., 2022). The scale ranges from 1 (strongly disagree) to 5 (strongly agree); high scores indicate strong cultural beliefs about chronic diseases. Part five includes the 12-item Partner in Health scale of chronic disease self-management (Peñarrieta-de Córdova et al., 2014). The scale ranges from 0 (very little) to 8 (a lot); a high score indicates a high level of chronic disease self-management. To validate the study tools, content validity was assessed by 16 experts from different nursing specialties. All scales are reliable, with Cronbach's alpha> .70 (Forero, 2024).

Procedure

Participants self-administered a questionnaire, and the researcher collected data while patients attended the selected primary healthcare centers in the rural area. Written agreements are obtained from the Diyala Health Directorate, Primary Health Care Sectors, and, in rural areas, from Primary Health Care Centers. The researcher interviews the patient, explains the study objectives, and obtains written consent before the patient participates.

Analysis

The data was analyzed using SPSS 26. version. Descriptive statistics, such as frequencies, percentages, mean scores, and SDs, are used. To investigate the influence of health literacy, social support, and cultural beliefs on chronic disease self-management, multiple linear regression is used. The significance level was set at $p < 0.05$ for the statistical test.

Findings and Results

The mean age of participants was 45.04 ± 15.60 years, with the largest proportion in the 36–45-year age group (22.4%). Males constituted 54.4% of the sample. Most participants were married (57.3%).

Table 1

Distribution of the study sample according to socio-demographic data

Variables	Groups	Frequency	Percentage
Age	18-27	33	6.4
	27,1-36	63	12.2
	36.1-45	116	22.4
	45.1-54	87	16.8
	54.1-63	124	23.9
	63.1-72	95	18.3
M.S ± SD		45.04± 15.60	
Sex	Male	282	54.4
	Female	236	45.6
Marital Status	Single	85	16.4
	Married	297	57.3
	Separated	44	8.5
	Widowed	92	17.8
Educational Level	Read and Write	73	14.1
	Primary School Graduate	122	23.6
	Intermediate School Graduate	78	15.1
	High School Graduate	84	16.2
	Diploma Degree	60	11.6
	Bachelor Degree	67	12.9
	High Degree	34	6.6
Monthly Income	Enough	154	29.7
	Some What Enough	246	47.5
	Not Enough	118	22.8

Occupation	Employed	150	28.95
	Retired	111	21.42
	Not Working	107	20.65
	Free work	155	29.92
Type of Diseases*	Hypertension	501	23.65
	Diabetic Mellitus	483	22.80
	Cerebrovascular Diseases	204	9.63
	Endocrine Diseases	124	5.85
	Psychiatric Diseases	172	8.12
	Diseases of the Digestive System	313	14.77
	Diseases of Skin	32	1.51
	Chronic Obstructive Pulmonary Diseases	143	6.75
	Kidney Diseases	124	5.85
	Cancers	22	1.03
Duration of Diseases	Less than a year	61	11.8
	1-5	192	37.1
	6-10	150	29.0
	11-15	39	7.5
	More than 16 years	76	14.7
	M.S ± SD	7.1 ± 5.3	

*M.S= Mean of Score, SD= Standard Deviation, *= Participants choose more than one option*

In terms of education, the primary school level was the most common (23.6%). Nearly half of the participants reported somewhat sufficient income (47.5%). Regarding occupation, the largest group was unemployed (29.9%). Hypertension (23.65%) and diabetes mellitus (22.80%) were the most prevalent conditions. The mean disease duration was 7.1 ± 5.3 years, with most participants reporting 1–5 years (37.1%) (Table 1).

Table 2

Assessment of health literacy

No.	Items	M.S	SD	Asses.
1	Find information on the treatment of illnesses that concern you	2.25	.980	Mod
2	Find out where to get professional help when you are ill	3.23	0.420	High
3	Understand what your doctor says to you	2.19	1.094	Mod
4	Understand your doctor's or pharmacist's instructions on how to take a prescribed medicine	2.11	1.053	Mod
5	Judge when you may need to get a second opinion from another doctor	1.34	0.70	Low
6	Use the information the doctor gives you to make decisions about your illness	1.26	0.440	Low
7	Follow instructions from your doctor or pharmacist	2.70	1.146	Mod
8	Find information on how to manage mental health problems like stress or depression	2.47	1.166	Mod
9	Understand health warnings about behavior such as smoking, low physical activity, and drinking too much	2.51	1.180	Mod
10	Understand why you need health screenings	2.24	1.155	Mod
11	Judge if the information on health risks in the media is reliable	1.14	0.350	Low
12	Decide how you can protect yourself from illness based on information in the media	2.26	.874	Mod
13	Find out about activities that are good for your mental well-being	2.59	1.134	Mod
14	Understand advice on health from family members or friends	3.37	0.48	High
15	Understand information in the media on how to get healthier	2.75	1.232	Mod
16	Judge which everyday behavior is related to your health	2.38	1.222	Mod

M.S= Mean of Score SD= Standard Deviation, Asses=Assessment, No=Number, Low Level:1-2, Moderate Level:2.1-3, High Level:3.1-4

The results in Table 2 show that patients have a high level of health literacy regarding items such as finding out where to get professional help when they are ill and understanding health advice from family members or friends (2,14). The patients show moderate level of health literacy concerning the items find information on treatments of illnesses that concern you, understand what your doctor says to you, understand your doctor's or pharmacist's instruction on how to take a prescribed medicine, follow instructions from your doctor or pharmacist, find information on how to manage mental health problems like stress or depression, understand health warnings about behavior such as smoking, low physical activity and drinking too much, understand why

need health screenings, decide how you can protect yourself from illness based on information in the media, find out about activities that are good for your mental well-being, understand information in the media on how to get healthier, judge which everyday behavior is related to your health (1,3,4,7,8,9,10,12,13,15,16) respectively. The patients show low levels of health literacy regarding the following items: judging when you may need to get a second opinion from another doctor, using information the doctor gives you to make decisions about your illness, and judging whether information on health risks in the media is reliable (5,6,11), respectively. The results reveal that more than two-fifths (45.55%) of patients in rural areas experienced a moderate level of health literacy.

Table 3

Assessment of Social Support

No.	Items	M.S	SD	Asses.
1	There is a special person who is around when I am in need	3.741	1.870	High
2	There is a special person with whom I can share joys and sorrows	2.562	1.281	Mod
3	My family really tries to help me	3.13	1.195	Mod
4	I get the emotional help & support I need from my family	3.951	0.987	High
5	I have a special person who is a real source of comfort to me	3.07	1.209	Mod
6	My friends really try to help me	3.852	0.770	High
7	I can count on my friends when things go wrong.	3.09	1.209	Mod
8	I can talk about my problems with my family.	2.312	1.734	Mod
9	I have friends with whom I can share my joys and sorrows	3.18	1.169	Mod
10	There is a special person in my life who cares about my feelings	3.14	1.201	Mod
11	My family is willing to help me make decisions	2.104	1.578	Mod
12	I can talk about my problems with my friends	3.15	1.208	Mod

M.S= Mean of Score, SD= Standard Deviation, Asses=Assessment, No=Number, Low Level:1-2.33, Moderate Level:2.34-3.66, High Level:3.67-5

The results in Table 3 show that the patients exhibit moderate to high levels of social support. Concerning the items, there is a special person who is around when I am in need; I get the emotional help & support I need from my family; my friends really try to help me (1,4,6). The patents exhibits moderate level of social support for the items There is a special person with whom I can share joys and sorrows, My family really tries to help me, I have a special person who is a real source of comfort to me, I can count on my friends when things go wrong, I can talk about my problems with my family, I have friends with whom I can share my joys and sorrows, There is a special person in my life who cares about my feelings, My family is willing to help me make decisions, I can talk about my problems with my friends (2,3,5,7,8,9,10,11,12) respectively. The results show that approximately 47.87% of patients attending primary health care centers experienced a high level of social support.

Table 4

Nature of cultural beliefs about chronic diseases

No.	Items	M.S	SD	Asses.
1	In order for my disease condition to improve, I have to accumulate good deeds in my daily life	3.17	1.326	Mod
2	My disease condition is a punishment for my bad behaviors	3.29	1.234	Mod
3	My disease condition is caused by witchcraft or the evil eye	3.88	.936	High
4	If people know I have my disease condition, it will reflect badly not only on me, but on my entire family	2.84	1.372	Mod
5	Other people play a big role in whether my disease condition improves, stays the same, or gets worse	3.19	1.441	Mod
6	Luck plays a big part in determining how my disease condition improves	3.38	1.206	Mod
7	Following the doctor's order is the best way to keep my disease condition from getting any worse	3.41	1.080	Mod
8	My illness will improve by casting a spell on food, drink, or other objects	3.42	1.193	Mod
9	Traditional medicines are more effective for long-standing diseases than modern medicines	3.48	1.194	Mod

M.S= Mean of Score, SD= Standard Deviation, Asses=Assessment, No=Number Low Level:1-2.33, Moderate Level:2.34-3.66, High Level:3.67-5

The results in Table 4 show that patients exhibit high to moderate levels of cultural beliefs, firm cultural beliefs concerning item 3, My disease condition is caused by witchcraft or evil eye. While moderate level of cultural beliefs concerning items In order for my disease condition to improve, I have to accumulate good deeds in my daily life, My disease condition is a punishment for my bad behaviors, If people know I have my disease condition, it will reflect badly not only to myself, but to my entire family, Other people play a big role in whether my disease condition improve, stay the same, or gets worse, Luck plays a big part in determining how my disease condition improves, Following doctors order is the best way to keep my disease condition from getting any worse, My illness will improve by casting spell on food, drink or other objects, Traditional medicines are more effective for long standing disease than modern medicines (1,2,4,5,6,7,8,9) respectively. The results indicate that 60.61% of patients attending primary health care centers in rural settings exhibit a moderate level of cultural beliefs about chronic diseases.

Table 5

Assessment of chronic disease self-management

No.	Items	M.S	SD	Asses.
1	Overall, what I know about my health condition(s)	3.30	1.954	Mod
2	Overall, what I know about the treatment, including medication, of my health condition(s)	3.87	1.991	Mod
3	I take medications or carry out the treatments prescribed by my doctors or health workers:	3.61	1.891	Mod
4	I share decisions made about my health condition(s) with my doctor or health worker:	3.37	1.851	Mod
5	I can deal with health professionals to get the services I need that fit with my culture, values, and beliefs:	2.64	0.528	Low
6	I attend appointments as asked by my doctor or health worker:	3.31	1.829	Mod
7	I keep track of my symptoms and early warning signs (blood sugar levels, peak flow, weight, shortness of breath, pain, sleep problems, mood):	3.38	1.868	Mod
8	I take action when my early warning signs and symptoms get worse:	3.18	1.763	Mod
9	I manage the effect of my health condition(s) on my physical activity (walking, household tasks):	3.31	1.918	Mod
10	I manage the effect of my health condition(s) on how I feel (that is, my emotions and spiritual wellbeing):	3.20	1.889	Mod
11	I manage the effect of my health condition(s) on my social life (how I mix with other people):	3.13	1.842	Mod
12	Overall, I manage to live a healthy life – no smoking, moderate alcohol, healthy food, regular physical activity, and manage stress:	3.45	1.937	Mod

M.S. = Mean of Score, SD = Standard Deviation, Asses=Assessment, No=Number, Low Level:0-3, Moderate Level: 3.1-6, High Level: 6.1-9

The results in Table 5 show, the patients have moderate to low level chronic diseases self-management, moderate level of management in activity such as knowledge about health condition, knowledge about treatment of health condition, take medications or carry out the treatments asked by doctors or health worker, share decisions made about health condition with doctor or health worker, attend appointments as asked by doctor or health worker, keep track of symptoms and early warning signs (blood sugar levels, peak flow, weight, shortness of breath, pain, sleep problems, mood), take action when early warning signs and symptoms get worse, manage the effect of health condition on physical activity (walking, household tasks), manage the effect of health condition on how I feel (that is, my emotions and spiritual wellbeing), manage the effect of health condition on social life (how I mix with other people), manage to live a healthy life – no smoking, moderate alcohol, healthy food, regular physical activity, manage stress (1,2,3,4,6,7,8,9,10,11,12) respectively. In contrast, the patients show a low level of management in activities such as interacting with health professionals to obtain needed services that align with their culture, values, and beliefs (item 5). The results reveal that half, 50.38%, of patients attending primary healthcare centers in rural settings have a moderate level of chronic disease self-management.

Table 6

Multiple linear regression analysis of the influence of health literacy, social support, and cultural beliefs on chronic disease self-management

Dependent Variable	Predictors	R	R Square	Adjusted R-Square	F	p	Standardized Coefficients Beta	t	p
CDSM	Health Literacy	0.691	0.477	0.473	54.481	.000b	.158	3.953	.000
	Social Support						.430	10.995	.000
	Cultural Beliefs						-.171	-4.349	.000

a. Dependent Variable: Chronic Diseases Self-management

b. Predictors: (Constant), Health literacy, Social Support, Cultural Belief

**Regression is significant at the 0.05 level.*

The results in Table 6 demonstrate that the regression is significant (F = 54.481, p<*0.05).* The results reveal that the predicted variables (health literacy, social support) positively influence 47.3% of the self-management of chronic diseases. Cultural beliefs negatively influence 47.3% chronic disease self-management. This means increasing the patients' health literacy one degree produces a change in the amount of chronic diseases self-management amount (3.953) units, similarly, increasing one degree of social support produces a change in chronic diseases self-management in amount (10.995) units, in contrast, decreasing the patients' cultural beliefs about diseases one degree produces a change in chronic diseases self-management amount (4.349) units.

Discussion and Conclusion

The study aims to identify the level of health literacy, the nature of social support, and the nature of cultural beliefs. Investigate the influence of health literacy, social support, and cultural beliefs on chronic disease self-management. Overall, the socio-demographic data indicate a population facing significant barriers to effective chronic disease self-management due to age distribution, socioeconomic constraints, and high prevalence of lifestyle-related illnesses. The study results reveal a mean age of 45.04 years. This finding is consistent with the study by Mohammed Alsdfan et al. (2025), which reported a mean participant age of 49.31 years. In addition, more than two-fifths of patients attending primary health care centers in rural settings were aged 36.1-45 years (n=116; 22.4%). This finding is supported by a cross-sectional study conducted in India, the Philippines, and Indonesia by Wahab et al. (2025), who found that the need for services for chronic diseases was 24.5% among rural residents. More than half of the study participants are male, compared with female participants. This finding is supported by a study conducted in the Middle East by Alharbi & Aljuaid (2024), focusing on elderly patients in primary care, which found that males accounted for 52.25% of the population attending for chronic conditions. The study by Showaya et al. (2024) found that most participants were female. Approximately, most of the study participants are married (n=297; 57.3%). This finding is supported by studies conducted in Saudi Arabia by Alosaimi & Albahrani (2026) and Ghayadh & Naji (2023), which found that the vast majority of patients were married (n = 31184.7%). More than two-fifths of the study participants are primary school graduates (n=122, 23.6%). This finding is supported by a study by Almezaal et al. (2021), which found that 28.4% of the patients attending primary healthcare centers in rural settings held a primary or intermediate school certificate. The finding is also supported by a study by Grazi & Mohammed (2022). Approximately half of the study participants reported having a somewhat sufficient monthly income (n=246; 47.5%). This finding is supported by studies conducted in Iraq by Arrar and Al-Abedi (2021) and Salim et al. (2025), who found that approximately three-quarters (73.6%, n = 265) of participants reported having a somewhat sufficient monthly income. Fewer than a third of participants have free work (n=155; 29.92%). This finding is similar to a study conducted in Lebanon by Machaalani et al. (2022), which found that (n=11129.1%) of patients with chronic diseases were engaged in free work (self-employed). More than two-fifths of the diseases reported in rural settings are hypertension (n=501:23.65%). This finding is supported by a study conducted in India by Su et al. (2024), who found that hypertension was the most common chronic disease among patients in rural India, with a prevalence of 25.2%. More than a third of patients

with chronic diseases attending primary healthcare centers in rural settings have had their conditions for 1-5 years (n=192; 37.1%). This finding was supported by a study by Aschalew et al. (2020) assessing the quality of life of patients with chronic non-communicable diseases (NCDs) in rural Ethiopia. They found that 38.8% of patients reported a disease duration of less than 5 years, with the majority concentrated in the 2–5-year range.

Patients in rural areas show a moderate level of health literacy regarding chronic diseases; the finding suggests that patients may understand basic instructions but lack the advanced skills needed to navigate the complexities of long-term illness. This is consistent with the study by Xu et al. (2025), which found that 53.16% of rural residents had moderate health literacy. The finding contradicts the study by Jassem & Al-Ashour (2023), which reported that most participants had inadequate health literacy. Regarding the scale items, the patients demonstrate a high level of health literacy, such as knowing where to seek professional help when they are ill and understanding health advice from family members or friends. This finding is in line with the study by Tran et al. (2022), which found that patients demonstrated high proficiency in Social support for health, with over 70% reporting they could easily understand health advice from their social circles and find help when ill.

For patients with chronic diseases in rural settings, a high level of social support is often viewed as a protective factor. While rural areas frequently face a shortage of doctors and hospitals, the strength of the community acts as a buffer against the hardships of chronic disease, and social networks (family, neighbors, church groups) step in to fill the gap. This finding is consistent with a study by Tang et al. (2023), which reported that 52% of rural patients reported high levels of subjective emotional support, often provided by community "mutual-aid" networks. Concerning the social support scale items, the patients high to moderate level of social support, high social support concerning the items there is a special person who is around when I am in need, I get the emotional help & support I need from my family, my friends really try to help menthes finding supported with study in Saudi Arabia by Almezaal et al., (2021), they found that, with 82.1% of patients in rural area reporting high levels of support from a special person and family members during times of need.

Patients in rural settings exhibit a moderate level of cultural beliefs about chronic diseases, indicating that the rural population in Diyala is undergoing a cultural transition. This suggests that while modern medical concepts are present, traditional, spiritual, or folk-oriented understandings of illness still hold significant weight. The patients use a pluralistic approach to health. They do not necessarily choose between "modern medicine" and "tradition," but rather use both simultaneously. This finding is supported by the study by Uddin & Siddiqui (2026), which found that most patients exhibited a moderate level of adherence to cultural beliefs. Concerning cultural beliefs scale items, the patients show high to moderate cultural beliefs about diseases, with high cultural beliefs reported in item 3, My disease condition is caused by witchcraft or evil eye. This aligns with a study by Conteh et al. (2025) that focused on rural patients with hypertension and diabetes. It found that more than half of the participants believed their condition was "not a natural illness," but rather a result of spiritual arrows or witchcraft.

Patients with chronic diseases in rural areas show a moderate level of management. The results indicate that patients likely understand they should take medication or exercise, but they do so only intermittently (e.g., when they feel symptoms). This finding is in line with studies by Hamzah (2026) and Liu et al. (2025), which found that self-management behaviors were consistently moderate. Concerning the chronic diseases self-management scale items, the patient show low level of management in activity such as ability to deal with health professionals to get the services need that fit with culture, values and beliefs, manage the effect of health condition on the social life how they mix with other, this finding supported by study of Hailu et al., (2025), they found that Social Role Management" was the lowest level among rural patients, approximately 58.7% of patients showed low levels of management regarding their ability to "mix with other people" and maintain social roles due to their illness. In addition, the finding is also in line with a study by Jin et al. (2026), which found that more than half of the rural patients reported a low level of skill in getting health services that fit their "culture, values, and beliefs. The results reveal that the predicted variables (health literacy, social support) positively influence 47.3% of the variance in chronic disease self-management. This finding agrees with the study by Tang et al. (2023), which

found that the integrated model of health literacy and social network support explained 45.8% of the variance in chronic disease self-management behaviors. In addition, cultural beliefs negatively influence 47.3% of chronic disease self-management; this agrees with the study by Uddin & Siddiqui (2026), which found that strong cultural health beliefs negatively influenced self-management outcomes by 48.6%.

Patients have some understanding of chronic disease management; gaps remain that hinder optimal self-care. Family and community networks play a crucial role in facilitating self-management behaviors. Patients are engaged but not consistently effective in managing their diseases. Health literacy and social support significantly improve self-management. Cultural beliefs hinder self-management to the same extent, showing that misconceptions or traditional views may act as barriers.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Declaration of Helsinki, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contribute to this study.

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