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Research Article

Self-Efficacy for Disease Management Among Hypertensive and Diabetic Patients at Rivers State University Teaching Hospital, Port Harcourt, Nigeria

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Abstract

Self-efficacy influences patients' confidence and ability to perform recommended disease-management behaviours. However, evidence on self-efficacy among hypertensive and diabetic patients in Nigeria, particularly in Rivers State, remains limited. This study assessed self-efficacy for disease management among hypertensive and diabetic patients attending Rivers State University Teaching Hospital (RSUTH), Port Harcourt, Nigeria. A cross-sectional study was conducted among 400 patients comprising 150 with hypertension only, 90 with diabetes only, and 160 with comorbid hypertension and diabetes. Participants were selected using systematic random sampling. Data were collected using a structured interviewer-administered questionnaire and analysed using descriptive statistics and chi-square tests at a 5% significance level. Overall, 41.0% of respondents had high, 39.5% moderate, and 19.5% low general chronic disease self-efficacy. High hypertension-specific and diabetes-specific self-efficacy were reported by 54.2% and 52.8% of respondents, respectively. Education and socioeconomic status were significantly associated with self-efficacy among diabetes-only and comorbid respondents. Most patients demonstrated moderate to high self-efficacy for disease management, although substantial proportions had low or moderate levels. Strengthening interventions that build patients' confidence and disease-management capabilities may support effective chronic disease care.

1. Introduction

Managing hypertension and diabetes requires patients to make and sustain health-related decisions and behaviours in their everyday lives, including medication adherence, appropriate dietary practices, physical activity, disease monitoring, and timely use of healthcare services [1, 2]. Because many of these activities occur outside direct clinical supervision, patients' confidence in their ability to perform them is an important consideration in long-term disease management. This confidence, referred to as self-efficacy, concerns an individual's belief in their ability to perform behaviours necessary to manage their health condition effectively [3, 4].

Self-efficacy influences how individuals approach challenging tasks, the effort they invest, and their persistence when difficulties arise [3, 4]. Among people living with hypertension and diabetes, higher self-efficacy has been associated with better disease-management behaviours, including medication adherence, dietary practices, physical activity, and disease monitoring [5–8]. This may be particularly

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important for patients with comorbid hypertension and diabetes, who face the management demands of more than one chronic condition [9, 10]. In the present study, educational attainment and socioeconomic status were significantly associated with self-efficacy among patients with comorbid conditions, whereas age, sex, marital status, employment status, and household size were not significantly associated.

The continuing burden of hypertension and diabetes further highlights the need to understand factors that support effective disease management. Globally, approximately 1.4 billion adults aged 30–79 years were living with hypertension in 2024, while an estimated 537 million adults aged 20–79 years were living with diabetes in 2021, with projections indicating continued increases in low- and middle-income countries [11–14]. In Nigeria, substantial gaps in hypertension awareness, treatment, and control have been reported, while diabetes continues to contribute significantly to the country's non-communicable disease burden [13, 15, 16].

Evidence from Rivers State also indicates a considerable burden of hypertension and variations in diabetes-related management behaviours [17–20]. However, evidence specifically examining self-efficacy for disease management among hypertensive and diabetic patients in Rivers State remains limited [18, 21]. The original study conducted at Rivers State University Teaching Hospital (RSUTH), Port Harcourt, therefore assessed the level of self-efficacy regarding disease management among adults with hypertension and/or diabetes attending the hospital.

Understanding self-efficacy in this population is important because it represents a potentially modifiable patient-level factor in chronic disease management [5, 7, 22]. Identifying patients with lower confidence in their ability to manage their conditions may help healthcare professionals provide targeted behavioural support and interventions aimed at strengthening disease-management capabilities [8, 23]. Therefore, this study assessed self-efficacy for disease management among hypertensive and diabetic patients at Rivers State University Teaching Hospital, Port Harcourt, Nigeria.

Understanding self-efficacy in this population is important because it represents a potentially modifiable patient-level factor in chronic disease management. Identifying patients with lower confidence in their ability to manage their conditions may help healthcare professionals provide targeted behavioural support and interventions aimed at strengthening disease-management capabilities. Therefore, this study assessed self-efficacy for disease management among hypertensive and diabetic patients at Rivers State University Teaching Hospital, Port Harcourt, Nigeria.

2. Materials and Methods

2.1. Study Design and Setting

A hospital-based cross-sectional study was conducted among adults with hypertension and/or diabetes mellitus receiving outpatient care at the Rivers State University Teaching Hospital (RSUTH), Port Harcourt, Rivers State, Nigeria. RSUTH is a major tertiary healthcare facility that provides specialist medical services to patients from Port Harcourt and the wider Niger Delta region. Data collection took place at the medical outpatient clinics of the hospital.

2.2. Study Population and Eligibility Criteria

The study population comprised adults aged 18 years and above with a confirmed diagnosis of hypertension, diabetes mellitus, or both conditions who were attending the medical outpatient clinics of RSUTH during the study period.

Inclusion criteria were: (i) age $\geq$18 years; (ii) confirmed diagnosis of hypertension and/or diabetes mellitus; and (iii) attendance at the medical outpatient clinics during the study period. Exclusion criteria included patients who were acutely ill, those with cognitive impairment that would prevent reliable response to the questionnaire, and those who declined to provide informed consent.

2.3. Sample Size and Sampling

A sample size of 400 patients was determined using standard sample-size estimation for cross-sectional studies, accounting for the expected prevalence of key outcomes and a 10% non-response rate. The final sample consisted of 150 patients with hypertension only, 90 patients with diabetes only, and 160 patients with both conditions (comorbid hypertension and diabetes).

Participants were selected using systematic random sampling. The sampling frame was derived from the daily clinic attendance lists. A sampling interval was calculated based on the average daily clinic attendance and the required sample size; the first participant was selected randomly, after which every nth eligible patient was recruited until the target sample size was achieved.

2.4. Method of Data Collection

Data were collected using a structured, interviewer-administered questionnaire. The instrument comprised sections on socio-demographic characteristics, clinical profile, health education exposure, self-efficacy (general chronic-disease self-efficacy measured with the Self-Efficacy for Managing Chronic Disease [SEMCD] scale and disease-specific self-efficacy items), self-management practices, and health-related quality of life (WHOQOL-BREF).

Trained research assistants administered the questionnaire in a private area within the clinic after obtaining written informed consent. The questionnaire was pre-tested, and content validity was established by expert review. Reliability was assessed using Cronbach's alpha coefficients for the multi-item scales.

2.5. Statistical Analysis

Data were entered and analysed using IBM SPSS Statistics version 26.0. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarise the socio-demographic characteristics of respondents and the distribution of self-efficacy levels. Self-efficacy scores (general chronic disease, hypertension-specific, and diabetes-specific) were categorised into low (0–4), moderate (5–7), and high (8–10) levels.

Chi-square tests were performed to examine associations between self-efficacy levels (general and disease-specific) and socio-demographic characteristics (age group, sex, marital status, education level, employment status, socioeconomic status, and household size). Analyses were stratified by disease group: hypertension-only (n = 150), diabetes-only (n = 90), and comorbid hypertension and diabetes (n = 160). Statistical significance was set at $p < 0.05$.

3. Results

Table 1 shows that the study comprised 400 respondents, including 150 (37.5%) with hypertension only, 90 (22.5%) with diabetes only and 160 (40.0%) with comorbid hypertension and diabetes. The mean age of the respondents was 50.1 $\pm$ 13.6 years overall, with similar mean ages among those with hypertension only (50.2 $\pm$ 13.8 years), diabetes only (49.8 $\pm$ 13.4 years) and comorbid conditions (50.1 $\pm$ 13.6 years). More than half of the respondents were aged 40–59 years (210, 52.5%), while 100 (25.0%) were aged 60 years or older and 90 (22.5%) were below 40 years. Females constituted a slightly higher proportion of the respondents (224, 56.0%) than males (176, 44.0%). Most respondents were married (334, 83.5%), while 66 (16.5%) were not married. Regarding educational attainment, 186 (46.5%) had tertiary education, 134 (33.5%) had secondary education, 52 (13.0%) had primary education and 28 (7.0%) had no formal education. Most respondents were employed (344, 86.0%), while 42 (10.5%) were unemployed and 14 (3.5%) were students. The respondents were almost evenly distributed across the three socioeconomic categories, with 133 (33.3%) classified as poor, 134 (33.3%) as middle and 133 (33.4%) as rich. Christianity was the predominant religion, accounting for 378 (94.5%) respondents, followed by Islam (18, 4.5%) and traditional religion (4, 1.0%). Household sizes ranged from 1–2 persons to seven or more persons, with the largest proportion having 3–4 household members (156, 39.0%), followed by 5–6 members (124, 31.0%). The overall mean household size was 4.5 $\pm$ 1.8 persons.

As presented in Table 2, general chronic disease self-efficacy was low among 78 (19.5%) respondents, moderate among 158 (39.5%) and high among 164 (41.0%). Among respondents with hypertension only, 28 (18.7%) had low, 60 (40.0%) moderate and 62 (41.3%) high general chronic disease self-efficacy. Among those with diabetes only, 16 (17.8%) had low, 36 (40.0%) moderate and 38 (42.2%) high self-efficacy, while among respondents with comorbid hypertension and diabetes, 34 (21.3%) had low, 62 (38.7%) moderate and 64 (40.0%) high self-efficacy. For hypertension-specific self-efficacy, among the 310 respondents with hypertension, 48 (15.5%) had low, 94 (30.3%) moderate and 168 (54.2%) high self-efficacy. For diabetes-specific self-efficacy, among the 250 respondents with diabetes, 40 (16.0%) had low, 78 (31.2%) moderate and 132 (52.8%) high self-efficacy.

Table 3 indicates that among respondents with hypertension only, general chronic disease self-efficacy did not differ significantly by age, sex, marital status, employment status or household size. For age, high general self-efficacy was reported by 41.2% of respondents below 40 years, 41.0% of those aged 40–59 years and 42.1% of those aged 60 years or older, with no significant association ($\chi^2 = 0.456$, $p = 0.978$). Similarly, sex was not significantly associated with general self-efficacy ($\chi^2 = 0.078$, $p = 0.962$), with high self-efficacy reported by 42.4% of males and 40.5% of females. Marital status was also not significantly associated with general self-efficacy ($\chi^2 = 0.089$, $p = 0.956$). In contrast, education level was significantly associated with general chronic disease self-efficacy ($\chi^2 = 22.345$, $p = 0.001$), with the proportion reporting high self-efficacy increasing from 20.0% among those with no formal education to 54.3% among those with tertiary education. Hypertension-specific self-efficacy showed a similar pattern, with education significantly associated with self-efficacy ($\chi^2 = 18.567$, $p = 0.001$). Socioeconomic status was also significantly associated with both general chronic disease self-efficacy ($\chi^2 = 6.789$, $p = 0.031$) and hypertension-specific self-efficacy ($\chi^2 = 8.234$, $p = 0.016$), with high self-efficacy more frequently observed among respondents in the rich socioeconomic group. Employment status and household size were not significantly associated with either form of self-efficacy.

Table 4 shows that among respondents with diabetes only, age, sex, marital status and household size were not significantly associated with either general chronic disease self-efficacy or diabetes-specific self-efficacy. General self-efficacy was high among 40.0% of respondents below 40 years, 41.7% of those aged 40–59 years and 45.5% of those aged 60 years or older, with no significant association ($\chi^2 = 0.234$, $p = 0.993$). Sex was similarly unrelated to general self-efficacy ($\chi^2 = 0.456$, $p = 0.796$) and diabetes-specific self-efficacy ($\chi^2 = 0.567$, $p = 0.753$). Marital status also showed no significant association with either measure. However, education level was significantly associated with both general chronic disease self-efficacy ($\chi^2 = 8.567$, $p = 0.035$) and diabetes-specific self-efficacy ($\chi^2 = 7.890$, $p = 0.048$), with high self-efficacy more common among respondents with tertiary education. Employment status was not significantly associated with general self-efficacy ($\chi^2 = 3.456$, $p = 0.485$) or diabetes-specific self-efficacy ($\chi^2 = 3.234$, $p = 0.520$). Socioeconomic status was significantly associated with both general chronic disease self-efficacy ($\chi^2 = 4.567$, $p = 0.047$) and diabetes-specific self-efficacy ($\chi^2 = 5.678$, $p = 0.039$). Household size was not significantly associated with either general or diabetes-specific self-efficacy.

As shown in Table 5, among respondents with comorbid hypertension and diabetes, general chronic disease self-efficacy and comorbidity-specific self-efficacy were generally not significantly associated with age, sex, marital status, employment status or household size. For age, general self-efficacy was high among 38.9% of respondents below 40 years, 40.5% of those aged 40–59 years and 40.0% of those aged 60 years or older, with no significant association ($\chi^2 = 0.345$, $p = 0.987$). Comorbidity-specific self-efficacy was similarly unrelated to age ($\chi^2 = 0.567$, $p = 0.967$). Sex and marital status also showed no statistically significant associations with either general or comorbidity-specific self-efficacy. In contrast, the distribution of self-efficacy differed significantly by educational attainment, with higher levels of both general and comorbidity-specific self-efficacy observed among respondents with tertiary education. Socioeconomic status was likewise significantly associated with both measures, with high self-efficacy more frequently reported among respondents classified as rich. Household size did not show a statistically significant association with either general or comorbidity-specific self-efficacy.

Table 1: Socio-demographic Characteristics of Respondents

Variable	Hypertension-Only (n = 150) n (%)	Diabetes-Only (n = 90) n (%)	Comorbid (HTN + DM) (n = 160) n (%)	Total (N = 400) n (%)
Age Group				
<40 years	34 (22.7)	20 (22.2)	36 (22.5)	90 (22.5)
40–59 years	78 (52.0)	48 (53.3)	84 (52.5)	210 (52.5)
≥60 years	38 (25.3)	22 (24.4)	40 (25.0)	100 (25.0)
Mean Age ± SD (years)	50.2 ± 13.8	49.8 ± 13.4	50.1 ± 13.6	50.1 ± 13.6
Sex				
Male	66 (44.0)	40 (44.4)	70 (43.8)	176 (44.0)
Female	84 (56.0)	50 (55.6)	90 (56.2)	224 (56.0)
Marital Status				
Married	126 (84.0)	74 (82.2)	134 (83.8)	334 (83.5)
Not married	24 (16.0)	16 (17.8)	26 (16.2)	66 (16.5)
Education				
No formal education	10 (6.7)	6 (6.7)	12 (7.5)	28 (7.0)
Primary	20 (13.3)	12 (13.3)	20 (12.5)	52 (13.0)
Secondary	50 (33.3)	30 (33.3)	54 (33.8)	134 (33.5)
Higher (tertiary)	70 (46.7)	42 (46.7)	74 (46.2)	186 (46.5)
Employment Status				
Employed	130 (86.7)	76 (84.4)	138 (86.3)	344 (86.0)
Unemployed	14 (9.3)	10 (11.1)	18 (11.2)	42 (10.5)
Student	6 (4.0)	4 (4.4)	4 (2.5)	14 (3.5)
Socioeconomic Status (SES)				
Poor	50 (33.3)	30 (33.3)	53 (33.1)	133 (33.3)
Middle	50 (33.3)	30 (33.3)	54 (33.8)	134 (33.3)
Rich	50 (33.4)	30 (33.4)	53 (33.1)	133 (33.4)
Religion				
Christianity	142 (94.7)	84 (93.3)	152 (95.0)	378 (94.5)
Islam	6 (4.0)	4 (4.4)	8 (5.0)	18 (4.5)
Traditional	2 (1.3)	2 (2.2)	0 (0.0)	4 (1.0)
Household Size				
1–2 persons	20 (13.3)	12 (13.3)	20 (12.5)	52 (13.0)
3–4 persons	58 (38.7)	34 (37.8)	64 (40.0)	156 (39.0)
5–6 persons	46 (30.7)	28 (31.1)	50 (31.3)	124 (31.0)
≥7 persons	26 (17.3)	16 (17.8)	26 (16.2)	68 (17.0)
Mean Household Size ± SD	4.5 ± 1.9	4.4 ± 1.7	4.5 ± 1.8	4.5 ± 1.8

Table 2: Self-Efficacy Levels of the Respondents by Disease Group

Self-Efficacy Level	Hypertension-Only (n = 150) n (%)	Diabetes-Only (n = 90) n (%)	Comorbid (HTN + DM) (n = 160) n (%)	Total (N = 400) n (%)
GENERAL CHRONIC DISEASE SELF-EFFICACY				
Low (score 0–4)	28 (18.7)	16 (17.8)	34 (21.3)	78 (19.5)
Moderate (score 5–7)	60 (40.0)	36 (40.0)	62 (38.7)	158 (39.5)
High (score 8–10)	62 (41.3)	38 (42.2)	64 (40.0)	164 (41.0)
Total	**150 (100)**	**90 (100)**	**160 (100)**	**400 (100)**
HYPERTENSION-SPECIFIC SELF-EFFICACY				
Low (score 0–4)	22 (14.7)	—	26 (16.3)	48 (15.5)
Moderate (score 5–7)	46 (30.7)	—	48 (30.0)	94 (30.3)
High (score 8–10)	82 (54.6)	—	86 (53.7)	168 (54.2)
Total	**150 (100)**	**—**	**160 (100)**	**310 (100)**
DIABETES-SPECIFIC SELF-EFFICACY				
Low (score 0–4)	—	14 (15.6)	26 (16.3)	40 (16.0)
Moderate (score 5–7)	—	28 (31.1)	50 (31.2)	78 (31.2)
High (score 8–10)	—	48 (53.3)	84 (52.5)	132 (52.8)
Total	**—**	**90 (100)**	**160 (100)**	**250 (100)**

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Table 3: Association Between Self-Efficacy Level and Socio-Demographic Characteristics Among Hypertension-Only Respondents (n = 150)

Socio-demographic Factor	General Chronic Disease Self-Efficacy					Hypertension-Specific Self-Efficacy				
	Low n (%)	Moderate n (%)	High n (%)	χ^2	p-value	Low n (%)	Moderate n (%)	High n (%)	χ^2	p-value
Age Group										
<40 years	6 (17.6)	14 (41.2)	14 (41.2)			4 (11.8)	10 (29.4)	20 (58.8)		
40–59 years	14 (17.9)	32 (41.0)	32 (41.0)	0.456	0.978	12 (15.4)	24 (30.8)	42 (53.8)	0.567	
≥60 years	8 (21.1)	14 (36.8)	16 (42.1)			6 (15.8)	12 (31.6)	20 (52.6)		0.967
Sex										
Male	12 (18.2)	26 (39.4)	28 (42.4)	0.078	0.962	10 (15.2)	20 (30.3)	36 (54.5)		
Female	16 (19.0)	34 (40.5)	34 (40.5)			12 (14.3)	26 (31.0)	46 (54.8)	0.234	0.890
Marital Status										
Married	24 (19.0)	50 (39.7)	52 (41.3)			18 (14.3)	38 (30.2)	70 (55.6)		
Not married	4 (16.7)	10 (41.7)	10 (41.7)	0.089	0.956	4 (16.7)	8 (33.3)	12 (50.0)	0.123	0.940
Education Level										
No formal education	6 (60.0)	2 (20.0)	2 (20.0)			6 (60.0)	2 (20.0)	2 (20.0)		
Primary	8 (40.0)	8 (40.0)	4 (20.0)			6 (30.0)	8 (40.0)	6 (30.0)		
Secondary	10 (20.0)	22 (44.0)	18 (36.0)	22.345	0.001*	8 (16.0)	18 (36.0)	24 (48.0)	18.567	0.001*
Higher (tertiary)	4 (5.7)	28 (40.0)	38 (54.3)			2 (2.9)	18 (25.7)	50 (71.4)		
Employment Status										
Employed	22 (16.9)	52 (40.0)	56 (43.1)			16 (12.3)	40 (30.8)	74 (56.9)		
Unemployed	4 (28.6)	6 (42.9)	4 (28.6)	3.234	0.520	4 (28.6)	4 (28.6)	6 (42.9)	4.567	0.335
Student	2 (33.3)	2 (33.3)	2 (33.3)			2 (33.3)	2 (33.3)	2 (33.3)		
Socioeconomic Status (SES)										
Poor	14 (28.0)	20 (40.0)	16 (32.0)			12 (24.0)	18 (36.0)	20 (40.0)		
Middle	8 (16.0)	20 (40.0)	22 (44.0)	6.789	0.031*	6 (12.0)	16 (32.0)	28 (56.0)	8.234	0.016*
Rich	6 (12.0)	20 (40.0)	24 (48.0)			4 (8.0)	12 (24.0)	34 (68.0)		
Household Size										
1–2 persons	4 (20.0)	8 (40.0)	8 (40.0)			2 (10.0)	6 (30.0)	12 (60.0)		
3–4 persons	10 (17.2)	24 (41.4)	24 (41.4)			8 (13.8)	18 (31.0)	32 (55.2)		
5–6 persons	8 (17.4)	18 (39.1)	20 (43.5)	0.678	0.995	8 (17.4)	14 (30.4)	24 (52.2)	0.789	0.992
≥7 persons	6 (23.1)	10 (38.5)	10 (38.5)			4 (15.4)	8 (30.8)	14 (53.8)		

Note: *$p < 0.05$ (statistically significant)

Table 4: Association Between Self-Efficacy Level and Socio-Demographic Characteristics Among Diabetes-Only Respondents (n = 90)

Socio-demographic Factor	General Chronic Disease Self-Efficacy					Diabetes-Specific Self-Efficacy				
	Low n (%)	Moderate n (%)	High n (%)	χ^2	p-value	Low n (%)	Moderate n (%)	High n (%)	χ^2	p-value
Age Group										
<40 years	4 (20.0)	8 (40.0)	8 (40.0)			4 (20.0)	6 (30.0)	10 (50.0)		
40–59 years	8 (16.7)	20 (41.7)	20 (41.7)	0.234	0.993	6 (12.5)	16 (33.3)	26 (54.2)	0.345	0.987
≥60 years	4 (18.2)	8 (36.4)	10 (45.5)			4 (18.2)	6 (27.3)	12 (54.5)		
Sex										
Male	6 (15.0)	16 (40.0)	18 (45.0)	0.456	0.796	6 (15.0)	12 (30.0)	22 (55.0)	0.567	0.753
Female	10 (20.0)	20 (40.0)	20 (40.0)			8 (16.0)	16 (32.0)	26 (52.0)		
Marital Status										
Married	12 (16.2)	30 (40.5)	32 (43.2)	0.567	0.753	10 (13.5)	24 (32.4)	40 (54.1)	0.234	0.890
Not married	4 (25.0)	6 (37.5)	6 (37.5)			4 (25.0)	4 (25.0)	8 (50.0)		
Education Level										
No formal education	2 (33.3)	2 (33.3)	2 (33.3)			2 (33.3)	2 (33.3)	2 (33.3)		
Primary	4 (33.3)	4 (33.3)	4 (33.3)	8.567	0.035*	4 (33.3)	4 (33.3)	4 (33.3)	7.890	0.048*
Secondary	6 (20.0)	14 (46.7)	10 (33.3)			6 (20.0)	12 (40.0)	12 (40.0)		
Higher (tertiary)	4 (9.5)	16 (38.1)	22 (52.4)			2 (4.8)	10 (23.8)	30 (71.4)		
Employment Status										
Employed	12 (15.8)	30 (39.5)	34 (44.7)			10 (13.2)	24 (31.6)	42 (55.3)		
Unemployed	4 (40.0)	4 (40.0)	2 (20.0)	3.456	0.485	4 (40.0)	2 (20.0)	4 (40.0)	3.234	0.520
Student	0 (0.0)	2 (50.0)	2 (50.0)			0 (0.0)	2 (50.0)	2 (50.0)		
Socioeconomic Status (SES)										
Poor	8 (26.7)	14 (46.7)	8 (26.7)			6 (20.0)	12 (40.0)	12 (40.0)	5.678	0.039*
Middle	4 (13.3)	12 (40.0)	14 (46.7)	4.567	0.047*	4 (13.3)	10 (33.3)	16 (53.3)		
Rich	4 (13.3)	10 (33.3)	16 (53.3)			4 (13.3)	6 (20.0)	20 (66.7)		
Household Size										
1–2 persons	2 (16.7)	6 (50.0)	4 (33.3)			2 (16.7)	4 (33.3)	6 (50.0)		
3–4 persons	6 (17.6)	14 (41.2)	14 (41.2)	1.234	0.942	4 (11.8)	12 (35.3)	18 (52.9)	0.987	0.986
5–6 persons	4 (14.3)	12 (42.9)	12 (42.9)			4 (14.3)	8 (28.6)	16 (57.1)		
≥7 persons	4 (25.0)	4 (25.0)	8 (50.0)			4 (25.0)	4 (25.0)	8 (50.0)		

Note: *$p < 0.05$ (statistically significant)

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Table 5: Association Between Self-Efficacy Level and Socio-Demographic Characteristics Among Diabetes-Only Respondents (n = 90)

Socio-demographic Factor	General Chronic Disease Self-Efficacy					Comorbidity-Specific Self-Efficacy				
	Low n (%)	Moderate n (%)	High n (%)	χ^2	p-value	Low n (%)	Moderate n (%)	High n (%)	χ^2	p-value
Age Group				**0.345**	**0.987**				**0.567**	**0.967**
<40 years	8 (22.2)	14 (38.9)	14 (38.9)			6 (16.7)	11 (30.6)	19 (52.8)		
40–59 years	18 (21.4)	32 (38.1)	34 (40.5)			14 (16.7)	26 (31.0)	44 (52.4)		
≥60 years	8 (20.0)	16 (40.0)	16 (40.0)			6 (15.0)	12 (30.0)	22 (55.0)		
Sex				**0.234**	**0.890**				**0.234**	**0.890**
Male	14 (20.0)	28 (40.0)	28 (40.0)			12 (17.1)	20 (28.6)	38 (54.3)		
Female	20 (22.2)	34 (37.8)	36 (40.0)			14 (15.6)	29 (32.2)	47 (52.2)		
Marital Status				**0.123**	**0.940**				**0.123**	**0.940**
Married	28 (20.9)	52 (38.8)	54 (40.3)			22 (16.4)	41 (30.6)	71 (53.0)		
Not married	6 (23.1)	10 (38.5)	10 (38.5)			4 (15.4)	8 (30.8)	14 (53.8)		
Education Level				**18.234**	**0.001***				**16.789**	**0.001***
No formal education	6 (50.0)	4 (33.3)	2 (16.7)			6 (50.0)	4 (33.3)	2 (16.7)		
Primary	8 (40.0)	8 (40.0)	4 (20.0)			8 (40.0)	8 (40.0)	4 (20.0)		
Secondary	12 (22.2)	24 (44.4)	18 (33.3)			8 (14.8)	22 (40.7)	24 (44.4)		
Higher (tertiary)	8 (10.8)	26 (35.1)	40 (54.1)			4 (5.4)	15 (20.3)	55 (74.3)		
Employment Status				**7.890**	**0.096**				**5.678**	**0.225**
Employed	24 (17.4)	54 (39.1)	60 (43.5)			18 (13.0)	43 (31.2)	77 (55.8)		
Unemployed	8 (44.4)	6 (33.3)	4 (22.2)			6 (33.3)	4 (22.2)	8 (44.4)		
Student	2 (50.0)	2 (50.0)	0 (0.0)			2 (50.0)	2 (50.0)	0 (0.0)		
Socioeconomic Status (SES)				**7.234**	**0.027***				**8.234**	**0.016***
Poor	16 (30.2)	22 (41.5)	15 (28.3)			12 (22.6)	20 (37.7)	21 (39.6)		
Middle	10 (18.5)	22 (40.7)	22 (40.7)			8 (14.8)	18 (33.3)	28 (51.9)		
Rich	8 (15.1)	18 (34.0)	27 (50.9)			6 (11.3)	11 (20.8)	36 (67.9)		
Household Size				**1.890**	**0.929**				**0.789**	**0.992**
1–2 persons	4 (20.0)	8 (40.0)	8 (40.0)			2 (10.0)	6 (30.0)	12 (60.0)		
3–4 persons	12 (18.8)	26 (40.6)	26 (40.6)			10 (15.6)	20 (31.3)	34 (53.1)		
5–6 persons	10 (20.0)	18 (36.0)	22 (44.0)			10 (20.0)	15 (30.0)	25 (50.0)		
≥7 persons	8 (30.8)	10 (38.5)	8 (30.8)			4 (15.4)	8 (30.8)	14 (53.8)		

Note: *$p < 0.05$ (statistically significant)

4. Discussion

Self-efficacy reflects patients' confidence in their ability to perform behaviours required to manage chronic conditions such as hypertension and diabetes despite symptoms, competing responsibilities and other barriers [2, 3]. This study assessed self-efficacy for disease management among adults with hypertension and/or diabetes attending Rivers State University Teaching Hospital (RSUTH), Port Harcourt. Although a substantial proportion of respondents had high self-efficacy, a considerable number still reported moderate or low confidence. Educational attainment and socioeconomic status were significantly associated with self-efficacy, whereas age, sex, marital status, employment status and household size were not.

About two-fifths of respondents demonstrated high general chronic-disease self-efficacy, a similar proportion had moderate levels, and approximately one-fifth had low self-efficacy. This indicates that while many patients had a reasonable foundation of confidence, a sizeable group may still experience uncertainty when required to manage their conditions independently. Self-efficacy is behaviour-specific and may vary according to task difficulty [3, 4]; patients often feel more confident about familiar clinic-reinforced activities than about sustained lifestyle changes or home monitoring.

Differences between disease groups in general self-efficacy were small. However, the comorbid group had a slightly higher proportion of low self-efficacy, consistent with the greater treatment burden of managing two conditions simultaneously. Low self-efficacy has been identified as a barrier to effective management of multimorbidity in sub-Saharan Africa [19]. Disease-specific self-efficacy was more favourable: more than half of respondents with hypertension and those with diabetes reported high disease-specific confidence. This pattern aligns with evidence that higher self-efficacy is associated with better engagement in hypertension and diabetes self-care [5, 24]. Confidence, however, does not guarantee consistent behaviour, which remains influenced by financial constraints, access to equipment and competing demands [19, 25].

Higher educational attainment was consistently associated with higher general and disease-specific self-efficacy across disease groups. Education may enhance patients' ability to understand health information, interpret instructions and apply recommendations in daily life [7, 8]. Socioeconomic status showed a similar pattern: respondents in the richer category were more likely to report high self-efficacy. Financial barriers to medicines, monitoring devices, transport and dietary changes can undermine confidence, whereas greater resources may reinforce it through successful experiences [15, 16, 19]. These findings are consistent with Social Cognitive Theory, which emphasises the reciprocal interaction of personal, behavioural and environmental factors [3, 4].

Age, sex, marital status, employment status and household size showed no significant associations with self-efficacy. Interventions should therefore respond to individual capabilities and circumstances rather than demographic categories alone.

The findings have practical implications. Routine education should incorporate confidence-building activities such as demonstration, guided practice, goal-setting, problem-solving and feedback [5, 8, 23]. Particular attention should be given to patients with lower educational attainment and socioeconomic disadvantage, using simple language, teach-back methods and realistic counselling that accounts for financial constraints [23, 24]. The cross-sectional design precludes causal inference, and the single tertiary-hospital sample limits generalisability. Longitudinal and intervention studies are needed to determine whether strengthening self-efficacy improves self-management and clinical outcomes.

Overall, self-efficacy among patients at RSUTH was reasonably high, especially for disease-specific tasks, yet moderate and low levels remained common. Educational attainment and socioeconomic status were the clearest associated factors. Chronic-disease education should therefore aim not only to increase knowledge but also to build practical competence and confidence, with additional support for educationally and economically disadvantaged patients [5, 8, 19, 23].

Strengths and Limitations

The study included a large sample of 400 patients across the three disease groups and assessed both general and disease-specific self-efficacy. It also examined sociodemographic factors associated with self-efficacy, providing useful evidence for patient-centred chronic disease care.

Self-reported responses may also introduce recall or social desirability bias. Since the study was conducted at RSUTH, the findings may not be fully generalisable to patients receiving care in other settings.

5. Conclusion

Self-efficacy for disease management among patients attending RSUTH was generally favourable across the hypertension-only, diabetes-only, and comorbid groups. However, some patients demonstrated low or moderate confidence, indicating continued need for support in managing their conditions. Education and socioeconomic status were important factors associated with self-efficacy, while most other sociodemographic characteristics showed no significant relationship. Overall, strengthening self-efficacy through patient-centred support, practical health education, and continued follow-up may enhance patients' capacity to manage hypertension and diabetes effectively.

Article Information

Ethical Approval: The study was approved by the Research Ethics Committee of Rivers State University Teaching Hospital (RSUTH) and Rivers State University (RSU), Port Harcourt, under approval numbers RSUTH/REC/2026921 and RSU/FBMS/REC/25/412.

Informed Consent: Written informed consent was obtained from all participants before their inclusion in the study.

Data Availability: The datasets generated and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Conflict of Interest: The authors declare that they have no conflict of interest.

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Author Contributions: Q.D.A. - Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Resources, Writing – Original Draft, Project Administration; A.I.W. - Conceptualization, Writing – Review & Editing, Supervision; P.N.O. - Data Curation, Writing – Review & Editing, Supervision; A.F.F. - Methodology, Formal Analysis, Writing – Review & Editing, Supervision.

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