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Self-care behavior and social support among persons with hypertension at Sher-E-Bangla Medical College Hospital in Barishal, Bangladesh

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ABSTRACT

Hypertension, a major global public health issue, affects millions worldwide and is defined as persistently elevated blood pressure (≥140/90 mmHg) on two or more occasions. Globally, the prevalence of hypertension surged from 594 million in 1975 to 1.13 billion in 2015. In Bangladesh, the prevalence has risen alarmingly from 16% in 2012 to 35.6% in 2014, with an average prevalence of 12.2%. This study explores self-care behaviors and social support among 183 hypertensive patients at Sher-e-Bangla Medical College Hospital, Barishal. Using the Hypertension Self-Care Behavior and Perceived Social Support scales, lifestyle modifications and social support levels were assessed. Results revealed low self-care practices (M = 2.22, SD = 0.22) and moderate social support (M = 5.74, SD = 1.03). Significant differences in self-care behaviors were associated with gender (p = 0.04), living status (p = 0.01), family history (p = 0.000), comorbidities (p = 0.01), and stress management (p = 0.000). Social support varied significantly with income (p = 0.007), family type (p = 0.01), and comorbidities (p = 0.000). These findings highlight critical demographic factors influencing hypertension management. Tailored interventions addressing self-care and enhancing social support are essential for improving health outcomes among hypertensive patients.

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1. Introduction

Self-care behavior is a foundational concept in health promotion, encompassing the actions individuals undertake to manage health conditions or enhance their well-being. Despite its importance, there is no universally agreed-upon definition of self-care behavior, with variations existing in terms of the agents practicing it (individuals, families, or communities), its objectives (health promotion, illness prevention, impact reduction, or health restoration), and the degree of professional involvement. The World Health Organization (WHO) defines self-care as "actions people, families, and communities take to improve their health, prevent disease, reduce illness, and restore health," driven by knowledge and skills derived from both professional and non-professional experiences. These actions are initiated either independently or collaboratively with experts (WHO, 1983). This perspective suggests that self-care activities occur outside formal healthcare settings but are informed by technical and experiential knowledge. Notably, self-care involves a spectrum of actions, from promoting health and preventing illness to symptom evaluation and recovery, performed with or without professional assistance

(Webber et al., 2013). This approach is considered empowering as it enables individuals to take an active role in health management, contributing to better patient outcomes and reduced healthcare costs (Orem, 1991).

Self-care behaviors are particularly crucial in managing chronic conditions such as hypertension. Research demonstrates that these behaviors, such as adhering to treatment regimens, engaging in physical activity, adopting healthy dietary practices like the DASH diet, maintaining a healthy weight, moderating alcohol consumption, and avoiding tobacco use, significantly contribute to blood pressure management (Bosworth et al., 2011). Despite these benefits, many individuals with hypertension face challenges in adopting and sustaining these behaviors, influenced by factors such as lack of knowledge, motivation, and resources (Han et al., 2014; Mellen et al., 2008). Additionally, healthcare practitioners often struggle to provide adequate guidance on self-care practices, highlighting the need for clearer communication and support strategies. Self-care is not merely a set of actions but a mindset that promotes active participation in health and well-being. This perspective aligns with the WHO's recommendation of patient engagement in self-care as a critical strategy for hypertension management (Yang et al., 2014).

The Social support, an integral component of health and well-being, significantly influences self-care behaviors among individuals with hypertension. Defined as the "everyday behaviors that communicate to an individual that they are valued and cared for by others" ('Burleson et al., 1994), social support encompasses emotional, informational, and instrumental assistance. It stems from various sources, including family, friends, peers, and community organizations, and serves to buffer stress, enhance coping mechanisms, and improve health outcomes. Research underscores that perceived support—the belief that help is available—has a more substantial impact on mental health and well-being than actual received support (Thoits, 1985). In the context of hypertension, social support facilitates adherence to self-care practices, providing encouragement, shared experiences, and practical assistance in managing the condition. Studies indicate that individuals with robust social support systems are more likely to engage in effective self-care behaviors, such as medication adherence, regular physical activity, and dietary modifications, thereby achieving better health outcomes (Ademe et al., 2019; Pahria et al., 2022).

The interplay between self-care behavior and social support is particularly relevant in addressing hypertension, a prevalent and chronic health condition in Bangladesh. Hypertension management requires consistent behavioral modifications and lifestyle adjustments, which are often challenging to sustain without external support. Social support acts as a catalyst, motivating individuals to overcome barriers and maintain adherence to self-care practices. For instance, family members can play a pivotal role in meal preparation, ensuring the availability of low-sodium and heart-healthy options, while friends and community groups can provide encouragement for regular physical activity and stress management. Moreover, healthcare providers can enhance social support networks by fostering patient education, creating peer support groups, and promoting collaborative care models. This synergistic relationship between self-care and social support highlights the importance of a holistic approach to hypertension management, emphasizing the need for comprehensive interventions that integrate individual, familial, and community-level efforts to improve health outcomes.

The healthcare system in Bangladesh addresses hypertension through a combination of public health initiatives, primary healthcare services, and specialized care in hospitals. The government has implemented national programs focusing on non-communicable diseases (NCDs), including hypertension, under the National Health Policy. Primary healthcare centers provide screening and basic management, while tertiary hospitals offer specialized treatment. However, challenges such as limited accessibility to healthcare facilities, shortage of trained healthcare professionals, and lack of awareness among patients hinder effective hypertension management. Additionally, medication adherence remains a concern due to financial constraints and inadequate patient education.

Unlike previous studies that primarily focus on clinical interventions and pharmacological management of hypertension, this study uniquely emphasizes the role of self-care behaviors and social support in managing hypertension in Bangladesh. By exploring the interplay between self-care practices

and social support networks, the study aims to provide a comprehensive understanding of the barriers and facilitators to effective hypertension management in a resource-constrained setting. Furthermore, it seeks to offer practical recommendations for integrating community-based support mechanisms into existing healthcare strategies, ultimately contributing to more sustainable and culturally relevant health interventions.

In Bangladesh, where healthcare systems often face resource constraints, understanding the interplay between self-care and social support can help design more effective interventions tailored to the local context. This study is anticipated to provide valuable insights into the factors influencing self-care behaviors and the role of social support among hypertensive individuals, enabling healthcare providers and policymakers to develop targeted strategies to improve hypertension management. By fostering a holistic approach that integrates individual, family, and community support, the study aimed to contribute to better health outcomes and reduce the burden of hypertension in the region.

2. Methods

This study employed a cross-sectional design to explore self-care behavior and social support among individuals with hypertension in Barishal, Bangladesh. It was conducted at Sher-E-Bangla Medical College Hospital (SBMCH), a 1,000-bed tertiary hospital located in Barishal. SBMCH was chosen due to its accessibility, diverse patient population, and comprehensive medical care facilities, which made it an ideal location for recruiting a representative sample. As a referral and teaching hospital, SBMCH attracts patients from various socio-economic and geographic backgrounds, ensuring a heterogeneous sample that mirrors the broader population of hypertensive patients in Bangladesh. The target population included individuals diagnosed with essential hypertension who were receiving care at SBMCH between March and May 2024. The inclusion criteria were patients who had been diagnosed with hypertension for at least six months, were taking at least one antihypertensive medication, had no history of stroke or psychiatric illness, and consented to participate. A convenient sampling technique was employed to recruit participants, ensuring that individuals who met these criteria were accessible during the study period. To calculate the sample size, the study utilized the World Health Organization (WHO) formula, with a standard prevalence rate of 12.2% (Hossain et al., 2022), yielding a minimum required sample size of 165. To account for a 10% non-response rate, the final sample size was adjusted to 183 participants, ensuring the robustness and reliability of the study findings.

Data were gathered through a researcher-administered structured questionnaire, divided into four sections such as socio-demographic information, health status, self-care behaviors, and perceived social support. This format ensured a comprehensive understanding of the participants' backgrounds, health conditions, and behavioral patterns, as well as their social support systems. The first section collected socio-demographic data, including age, gender, marital status, educational level, occupation, monthly income, residency, type of family, and family history of hypertension. On the other hand, the second section focused on health-related variables such as systolic and diastolic blood pressure, body mass index (BMI), duration of diagnosis, comorbidities, cholesterol levels, antihypertensive medications, and stress control methods. The third section utilized a 20-item scale developed by Han et al. (2014)(Hu et al., 2013) to measure self-care behaviors, such as medication adherence, physical activity, dietary habits, and stress management (Han et al., 2014). Scored on a four-point Likert scale, the instrument ranged from 20 to 80, with higher scores indicating better self-care behaviors. The tool demonstrated high internal consistency (Cronbach's alpha: 0.83–0.93) and robust validity, ensuring its suitability for assessing lifestyle modifications in hypertensive patients. Participant adherence to prescribed treatment regimens was assessed through self-reported medication adherence, cross-checked with prescription records and blood pressure readings obtained from hospital records.The final section assessed social support using a 12-item scale (Zimet et al., 1988) , which measured support from family, significant others, and friends. Rated on a seven-point Likert scale, scores ranged from 12 to 84, with higher scores reflecting greater perceived support. The scale's reliability (Cronbach's alpha: 0.88) affirmed its appropriateness for evaluating the role of social support in managing hypertension.

To ensure the validity and reliability of measurement tools in the cultural context of Bangladesh, a pilot study was conducted with 20 participants before full-scale data collection. The translated questionnaire underwent forward and backward translation by bilingual experts, ensuring linguistic and conceptual equivalence. Content validity was reviewed by a panel of healthcare professionals, and internal consistency reliability was re-evaluated using Cronbach's alpha.Data collection adhered to strict ethical guidelines, with approval from the Institutional Review Board (IRB) of Sher-E-Bangla Medical College and permission from the hospital administration. Participants provided informed written consent, ensuring their voluntary participation. The structured questionnaire was administered through face-to-face interviews, allowing the researcher to clarify questions and ensure accurate responses. Face-to-face interviews were chosen to minimize literacy-related barriers, ensure clarity in responses, and enhance rapport with participants, thereby improving data accuracy and completeness. Confidentiality and anonymity were strictly maintained by assigning code numbers to participants, and all data were securely stored in a locked file. Participants were informed about their right to withdraw at any time and were assured that the findings would be used solely for research purposes, with data destroyed after five years. Data were analyzed using SPSS version 23. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize participant characteristics. Inferential statistics, such as t-tests, ANOVA, and correlation analyses, were employed to explore relationships between socio-demographic factors, self-care behaviors, and social support. The study was conducted in compliance with ethical principles, ensuring respect, confidentiality, and informed consent for all participants. The research protocol received IRB approval, and every effort was made to safeguard participant rights and well-being.

3. Results and Discussion

This section illustrates the findings of the study which which were gathered from the descritpive and inferential analysis of the data.

Table 1.
Distribution of Socio-demographic Characteristics of the hypertensive patients (N = 183)

Variables	Categories	N	%	Mean±SD
Age (Years)	Min = 30 and Max = 85			53.34±8.59
Total family Income (Bangladeshi Taka)	Min=10000 and Max= 85000			46655.74±18634.02
Gender	Male	98	53.6	
	Female	85	46.4	
Religion	Muslim	163	89.1	
	Hinduism	20	10.9	
Marital Status	Single	36	19.7	
	Married	147	80.3	
Education	Under graduate education	176	96.2	
	Post Graduate education	7	3.8	
Occupation	Employment	78	42.6	
	Unemployment	105	57.4	
Living status	Rural	145	79.2	
	Urban	37	20.2	
Type of family	Nuclear family	68	37.2	
	Extended family	115	62.8	
Family history of hypertension	Yes	106	57.9	
	No	77	42.1	

Table 1 presents the socio-demographic characteristics of 183 hypertensive patients. The average age of the participants was 53.34 years (SD = 8.59), ranging from 30 to 85 years. The mean total

family income was 46,655.74 BDT (SD = 18,634.02), with a range of 10,000 to 85,000 BDT. The gender distribution was slightly skewed, with 53.6% male and 46.4% female participants. Most participants identified as Muslim (89.1%), while 10.9% were Hindu. The majority were married (80.3%), and a significant proportion had an undergraduate education (96.2%), with only 3.8% achieving postgraduate education. Employment status showed 42.6% employed, while 57.4% were unemployed. Regarding residence, 79.2% lived in rural areas, and 20.2% resided in urban settings. Most participants belonged to extended families (62.8%), and 57.9% reported a family history of hypertension, while 42.1% did not.

Table 2.
Distribution of the health status of the participants

Questions	Categories	N	%	Mean±SD
BMI(Body mass Index)	18.5 – 24.9 (Normal)	65	35.5	25.68±2.59
	25 – 39.9(Obese)	118	64.5	
Duration of Diagnosis	Min = 1 and Max = 15			5.47±3.22
Comorbidity	No comorbidity	62	33.9	
	DM	64	35	
	CKD	7	3.8	
	Stroke	24	13.1	
	CAD	22	12	
	others	4	2.2	
Way of stress control	Prayer	122	66.7	
	Listening to music	2	1.1	
	Taking rest	49	26.8	
	Talking with family or friends	10	5.5	

Table 2 outlines the health status of the hypertensive participants. The mean BMI was 25.68 (SD = 2.59), with the majority (64.5%) classified as obese (BMI: 25–39.9), while 35.5% had a normal BMI (18.5–24.9). The duration of diagnosis ranged from 1 to 15 years, with a mean of 5.47 years (SD = 3.22). Regarding comorbidities, 33.9% had no comorbid condition, while 35% reported diabetes mellitus (DM), 13.1% had a history of stroke, 12% had coronary artery disease (CAD), 3.8% had chronic kidney disease (CKD), and 2.2% reported other conditions. Stress control methods varied, with the majority (66.7%) relying on prayer, followed by rest (26.8%), talking with family or friends (5.5%), and listening to music (1.1%).

Table 3.
Total mean and mean of total mean of self-care behavior and social support status of participants

Category	Total mean	Mean of total mean
Self-care behavior	44.59±4.47	2.22±0.22
Social support status	68.90±12.41	5.74±1.03

Table 3 presents the overall self-care behavior and social support status of the participants. The total mean score for self-care behavior was 44.59 (SD = 4.47), with a mean of the total mean score of 2.22 (SD = 0.22), indicating a moderate level of adherence to hypertension self-care practices. In contrast, the total mean score for social support status was 68.90 (SD = 12.41), with a mean of the total mean score of 5.74 (SD = 1.03), reflecting a high level of perceived social support among the participants.

Table 4.
Relationship among socio-demographic and health status related characteristics and self-care behavior and social support of the participants. (N = 183)

Variables	Categories	Self-care behavior		Social Support	
		Mean±SD	t/F/r(P)	Mean±SD	t/F/r(P)
Age (years)	Mean 53.34, min – 30 & max - 85		0.03(0.68)		1.31(0.07)
Monthly family income	Min – 10000 & max – 85000		-0.04(0.59)		0.19(0.007)*
Gender	Male	45.59±7.62		67.82±11.96	-1.26(0.21)
	Female	43.44±7.17	1.96(0.04)*	70.14±12.87	
Religion	Muslim	44.63±7.21	0.18(0.86)	69.56±11.47	
	Hinduism	44.30±9.58			2.04(0.0 4)*
				63.60±17.85	
Marital status	Single	44.44±6.92	-0.13(0.89)	69.81±7.60	0.48(0.63)
	Married	44.63±7.63		68.68±13.35	
Education level	Under graduate education	44.39±7.50	-2.66(0.32)	68.81±12.63	-0.52(0.60)
	Post graduate education	49.57±4.93		71.29±3.25	
Occupation	Employment	45.26±8.17	1.04(0.30)	68.13±14.94	0.68(0.49)
	Unemployment	44.10±6.92		69.48±10.20	
Living status	Rural	44.00±7.89	-2.61(0.01)*	68.14±12.65	-1.19(0.23)
	Urban	46.78±5.12		70.78±9.27	
Type of family	Nuclear family	43.18±9.19	-1.79(0.08)	65.42±16.07	-2.58(0.01)*
	Extended family	45.43±6.13		70.94±9.15	
Family history of hypertension	Yes	46.85±5.93	4.86(0.000)*	69.69±8.54	0.92(0.36)
	No	41.48±8.26		67.83±16.28	
Bmi	Normal bmi	43.62±7.91	-0.96(0.34)		1.48(0.14)
	Obese	44.74±7.11			
Duration of Diagnosis	Min = 1 and Max = 15	-0.02(0.75)			-0.01(0.81)
Comorbidities	No comorbidity	45.45±5.73	2.94(0.01)*	71.40±3.69	11.56(0.000)*
	DM	44.64±8.03		69.03±12.25	
	CKD	34.57±11.87		49.86±23.43	
	Stroke	44.08±4.75		71.42±4.63	
	CAD	45.59±9.52		60.82±16.96	
	Others	45.50±4.04		91.00±21.94	
Way of stress control	Prayer	46.05±6.43	6.48(0.000)*	70.02±11.05	1.88(0.13)
	Listening to music	48.00±0.00		76.00±0.00	
	Taking rest	40.78±9.09		65.49±15.97	
	Talking with family or friends	44.80±4.78		70.80±3.85	

The data in Table 4 reveal several significant relationships between socio-demographic and health status characteristics with self-care behavior and social support among hypertensive participants. Participants living in urban areas demonstrated significantly higher self-care behavior scores (Mean = 46.78, SD = 5.12) than those in rural areas (Mean = 44.00, SD = 7.89, p = 0.01). Similarly, participants with a family history of hypertension reported higher self-care behavior (Mean = 46.85, SD = 5.93) compared to those without such history (Mean = 41.48, SD = 8.26, p < 0.001). The presence of comorbidities also

influenced self-care behavior, as participants without comorbidities had higher scores (Mean = 45.45, SD = 5.73) compared to those with chronic kidney disease (CKD), who scored the lowest (Mean = 34.57, SD = 11.87, p = 0.01). Stress management strategies showed significant effects; participants using prayer for stress control had the highest self-care behavior scores (Mean = 46.05, SD = 6.43, p < 0.001), while those resting scored the lowest (Mean = 40.78, SD = 9.09).

For social support, monthly family income showed a positive association (p = 0.007), and female participants reported significantly higher social support (Mean = 70.14, SD = 12.87) than males (Mean = 67.82, SD = 11.96, p = 0.04). Religion also played a role, with Muslims reporting greater social support (Mean = 69.56, SD = 11.47) than Hindus (Mean = 63.60, SD = 17.85, p = 0.04). Family structure significantly impacted social support, as participants from extended families (Mean = 70.94, SD = 9.15) experienced higher support compared to those from nuclear families (Mean = 65.42, SD = 16.07, p = 0.01). Additionally, participants without comorbidities reported the highest levels of social support (Mean = 71.40, SD = 3.69), while those with CKD had the lowest scores (Mean = 49.86, SD = 23.43, p < 0.001). These findings highlight the importance of socio-demographic and health-related factors in shaping self-care behaviors and social support among hypertensive individuals.

Socio-demographic profile of the participants

The socio-demographic findings of the current study highlight important patterns among hypertensive participants, which can be compared with previous research to contextualize the results. In the present study, participants ranged in age from 30 to 85 years, with an average age of 53.34 years (SD = 8.59). More than half (53.6%) were male, and the majority (79.2%) resided in rural areas. A large proportion of participants were part of extended families (62.8%), and over half (57.9%) had a family history of hypertension. Educationally, the overwhelming majority (96.1%) had completed undergraduate degrees, while employment status varied, with 42.6% employed and 57.4% unemployed. These findings align in part with a study conducted in Bhutan, which reported participants' mean age as 49.3 years and a similar proportion of males (58.3%) (Dorji et al., 2021). However, significant differences emerged, such as Bhutanese participants being predominantly married (86.1%) and more likely to be employed (55.6%) than those in the current study.

Comparatively, a study conducted in Iran found a mean participant age of 60.26 years (SD = 12.66), which is older than that of the current study, and a higher proportion of females (60.7%) among participants (Zinat Motlagh et al., 2016). Additionally, the proportion of Iranian participants residing in rural areas (55.2%) was lower than the current study's rural population (79.2%), and the prevalence of family history of hypertension (45.3%) was slightly lower. Similarly, a study in Nepal reported only 39.2% of participants with a family history of hypertension, considerably lower than the 57.9% observed in the present study (Nakarmi et al., 2023). These variations across studies underscore the influence of regional and cultural factors on the socio-demographic profiles of hypertensive populations and highlight the necessity of tailoring public health interventions to local contexts.

Health status of the study subjects

The findings of the current study provide a comprehensive view of the health status of hypertensive participants, highlighting notable trends and comparisons with previous research. Approximately one-third (33.9%) of participants had no comorbidities, while 35% had diabetes mellitus (DM), and 12% had coronary artery disease (CAD). These results diverge from a study in Bhutan, where 71.3% of hypertensive patients reported no comorbidities, and the prevalence of DM (19.4%) and heart disease (7.4%) was notably lower (Dorji et al., 2021). In contrast, a study conducted in Nepal revealed that 44% of participants had comorbidities, including diabetes, dyslipidemia, and ischemic heart disease, indicating variability across different populations (Nakarmi et al., 2023). These variations may reflect differences in lifestyle, healthcare access, and population health dynamics across regions.

In terms of body mass index (BMI), the current study found that participants had an average BMI of 25.68 (SD = 2.59), with 64.5% classified as obese. This aligns closely with findings from Iran, where 63.5% of participants were obese (Zinat Motlagh et al., 2016) but is slightly lower than the 72.2% obesity rate observed in Bhutan (Dorji et al., 2021). The mean duration of hypertension diagnosis in the current

study was 5.47 years (SD = 3.22), ranging from 1 to 15 years, closely mirroring Bhutanese findings of a mean duration of 5.5 years (SD = 4.9) with a broader range up to 30 years (Dorji et al., 2021). Collectively, these findings emphasize the high prevalence of obesity and significant comorbidity burden among hypertensive patients, underscoring the need for targeted interventions to manage weight and associated conditions effectively.

Self-Care Behavior of Hypertensive Patients

The study revealed that hypertensive patients exhibited limited engagement in self-care behaviors, as reflected in the self-care behavior mean score (M = 2.22, SD = 0.22), which indicated that participants seldom adopted self-care measures. Among the measured behaviors, the lowest adherence was observed for reducing foods high in saturated and trans fats (M = 1.36, SD = 0.63), while non-smoking behavior had the highest adherence (M = 3.05, SD = 0.73). Similar findings were reported in a Bhutanese study (Dorji et al., 2021), where the lifestyle modification score (M = 53.9, SD = 7.7) suggested that participants only occasionally practiced health-promoting behaviors, including physical activity, balanced diets, stress management, and medication adherence. Notably, quitting smoking scored relatively higher (M = 3.3) compared to other lifestyle modification components. An Ethiopian study using the Hypertension Self-Care Activity Level Effect (H-SCALE) found that only 33.1% of participants achieved good self-care practice, further highlighting the challenge of sustaining self-care behaviors (Tebelu et al., 2023). Another study conducted in Indonesia reported moderate self-care behavior levels among hypertensive patients (M = 49.78, SD = 6.64), closely aligning with findings from the current study (Sarfika et al., 2023). These insights emphasize the need for tailored interventions to promote consistent self-care practices among hypertensive individuals.

Social Support Status of Hypertensive Patients

The study demonstrated a relatively high level of social support among hypertensive participants, with an overall mean score of (M = 5.74, SD = 1.03). The strongest support was noted in familial assistance, as reflected by the statement "My family really tries to help me" (M = 6.17, SD = 0.56), while the lowest support was recorded for "There is a special person who is around when I am in need" (M = 5.26, SD = 1.41). These findings are consistent with those reported by (Dorji et al., 2021) where participants similarly exhibited high levels of social support (M = 5.2, SD = 1.1). Additionally, (Bhattarai et al., 2024) reported that 73% of hypertensive patients experienced moderate to high levels of social support, corroborating the current study's findings. The results underscore the critical role of family and close social networks in supporting hypertensive patients, emphasizing the importance of leveraging these relationships to improve disease management and outcomes.

Relationship Between Socio-Demographic Characteristics and Self-Care Behavior

The study revealed significant associations between socio-demographic factors and self-care behaviors among hypertensive participants. Gender differences were evident, with men engaging in more self-care behaviors compared to women (t = 1.96, p = 0.04). Participants residing in urban areas also demonstrated higher self-care engagement than their rural counterparts (t = -2.61, p = 0.01). A family history of hypertension was positively associated with self-care practices, as those with such a history were more likely to engage in self-care (t = 4.86, p = 0.000). Additionally, the presence of comorbidities (F = 2.60, p = 0.01) and stress control strategies (F = 6.48, p = 0.000) were significant predictors of self-care behavior, with participants without comorbidities demonstrating better adherence. Contrasting findings by (Sarfika et al., 2023) in Indonesia identified significant relationships between self-care behavior and body mass index (p = 0.008), marital status (p = 0.017), and ethnicity (p = 0.041). These variations highlight the influence of cultural and contextual factors on self-care practices, emphasizing the need for culturally sensitive interventions to improve self-care adherence across diverse populations.

Relationship Between Socio-Demographic Characteristics and Social Support

The study also found significant associations between socio-demographic factors and social support among hypertensive patients. Higher family income was associated with greater social support

(r = 0.19, p = 0.007), while extended family members reported receiving more social support compared to nuclear family members (t = 2.58, p = 0.01). Participants without comorbidities had significantly better social support compared to those with comorbidities (F = 11.56, p = 0.000). These findings underscore the importance of socio-economic stability and family structure in fostering social support for disease management. However, a study by (Taher et al., 2014) on the relationship between social support and adherence to hypertension treatment highlighted differing predictors, showing that social support varied significantly with education level and marital status. These discrepancies suggest that while family income and type may play pivotal roles in some populations, educational and marital factors might be more influential in others. Tailored strategies that consider these socio-demographic variations are essential to optimize social support systems for hypertensive patients.

4. Conclusion

The findings of this study indicate a low level of engagement in self-care behaviors among participants. To address this, nutritionists should provide consistent dietary guidance, and healthcare providers should improve their practices and communication with patients to encourage better self-care adherence. Expanding educational programs targeting older adults is crucial, along with the regular assessment and monitoring of patients' adherence to self-management routines. Emphasis should be placed on identifying and addressing barriers to compliance with hypertension self-care protocols. Policymakers need to incorporate these considerations into public health campaigns and support initiatives aimed at reducing non-communicable diseases. Additionally, public health facilities should focus on delivering targeted training to patients and their families on various aspects of self-care. Further research employing triangulation methods is recommended to explore the reasons behind non-compliance with self-care practices. The study also highlights the significant role of social support in managing hypertension. It was found that support from social resources had a stronger influence on treatment adherence than support from nuclear family members. The extended family emerged as the primary source of social support for patients. Therefore, individuals with hypertension should receive comprehensive social support from friends, relatives, communities, and healthcare professionals to enhance their self-care practices. These findings emphasize the importance of exploring ways to promote social support as a strategic approach to improving adherence to hypertension self-care routines. To strengthen public health initiatives and address these challenges, a comprehensive policy framework is essential. Health promotion and disease prevention policies should focus on raising awareness about healthy lifestyle choices, while healthcare access policies should ensure affordable and equitable medical services for all. Regulatory policies addressing food safety, environmental health, and occupational safety are also necessary to reduce public health risks. Additionally, strengthening the healthcare system through workforce development, digital health solutions, and telemedicine can improve service delivery. Policies targeting infectious disease control, non-communicable disease prevention, and mental health support are also critical. Addressing the social determinants of health—such as poverty, education, and housing—will further contribute to improved health outcomes. A multi-sectoral approach involving policymakers, healthcare professionals, and communities is required to implement these policies effectively and enhance public health outcomes.

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