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Perceptions of Self-Care, Treatment Burden, and Quality of Life Among Adults With Uncontrolled Hypertension: A Grounded Theory Study

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ABSTRACT

Objective: This study aimed to develop a grounded theory explaining how adults with uncontrolled hypertension perceive and negotiate self-care, treatment burden, and quality of life.
Methods and Materials: This qualitative study was conducted using a grounded theory design among 34 adults with uncontrolled hypertension in Ontario, Canada. Participants were recruited from primary health care clinics, community health centers, and outpatient cardiovascular services through purposive and theoretical sampling. Eligibility criteria included being 30 years of age or older, having a diagnosis of hypertension for at least one year, and having uncontrolled blood pressure based on recent clinical records. Data were collected through semi-structured individual interviews, demographic and clinical information forms, and researcher field notes. Interviews were audio-recorded, transcribed verbatim, and analyzed concurrently with data collection using constant comparative analysis, including initial coding, focused coding, axial coding, and theoretical integration. Recruitment continued until theoretical saturation was achieved.
Findings: The analysis generated one core category, "negotiating control under cumulative treatment burden," and five main categories: living with an invisible but threatening condition, translating medical advice into daily self-care, carrying the burden of treatment, quality of life under pressure, and reconstructing control through practical adaptation. The findings indicated that participants experienced uncontrolled hypertension as a condition marked by uncertainty, emotional strain, and repeated self-care demands. Treatment burden emerged through the accumulation of medication routines, lifestyle restrictions, home monitoring, appointments, costs, information management, and relational pressures. Participants' quality of life was affected by worry, guilt, reduced confidence, social restriction, and diminished spontaneity. However, participants also developed adaptive strategies, including selective adherence, family-supported routines, trigger recognition, and realistic self-care prioritization.
Conclusion: Adults with uncontrolled hypertension experience self-care as a continuous negotiation between clinical expectations and everyday capacity. Hypertension care should therefore address treatment burden, emotional distress, feasibility of self-care behaviors, and quality of life alongside blood pressure control.
Keywords: *Uncontrolled hypertension; Self-care; Treatment burden; Quality of life; Grounded theory; Medication adherence; Chronic disease management.*

1. Introduction

Hypertension remains one of the most persistent and consequential chronic health conditions worldwide, not only because of its high prevalence but also because of its long-term association with cardiovascular disease, stroke, kidney disease, disability, premature mortality, and reduced quality of life. Over the past two decades, global attention to hypertension has intensified as epidemiological evidence has shown that elevated blood pressure continues to affect a substantial proportion of adults across diverse health systems, socioeconomic contexts, and age groups. Despite advances in screening, pharmacological therapy, clinical guidelines, and public health awareness, many adults continue to live with uncontrolled hypertension, indicating that the clinical availability of treatment does not automatically translate into sustained blood pressure control. Global trends in hypertension between 2000 and 2020 demonstrate that hypertension control remains a major challenge and that the burden of disease is shaped by both biomedical and health-system factors (O'Connell et al., 2026). National and international efforts to improve hypertension control increasingly emphasize integrated care, population-level strategies, patient engagement, equitable access, and implementation of evidence-based interventions across primary care and community settings (Commodore-Mensah et al., 2022). However, the persistence of uncontrolled hypertension suggests that a purely clinical view of treatment is insufficient, and that greater attention must be paid to how patients understand, experience, and sustain the everyday work required for long-term self-care.

Uncontrolled hypertension is especially complex because it is often experienced as an invisible condition. Many adults do not feel acutely ill, yet they are repeatedly informed that their blood pressure places them at serious future risk. This discrepancy between the absence of symptoms and the seriousness of clinical risk can create uncertainty, ambivalence, and fluctuating motivation. Hypertension also frequently occurs alongside other chronic conditions, including diabetes, obesity, chronic kidney disease, cardiovascular disease, and mental health problems, which may increase both clinical vulnerability and the practical difficulty of self-management. Studies of chronic illness patterns and multimorbidity show that older and middle-aged adults often experience overlapping conditions that influence health service use, treatment priorities, daily functioning, and perceived well-being (Leite, 2025; Xie & Xiong, 2025; Xue et al., 2025). Multimorbidity research among working-age and older populations has further shown that chronic conditions rarely operate in isolation; instead, they cluster in ways that shape functional outcomes, treatment complexity, and quality of life (Batista et al., 2022; Pati et al., 2021; Yogesh et al., 2024). In this context, uncontrolled hypertension should not be viewed simply as a failure to reach a numerical blood pressure target, but as a lived condition embedded in broader patterns of illness, aging, social responsibility, and health-system contact.

The burden of hypertension becomes more visible when it is considered in relation to the broader clinical realities of adult and older adult care. Older adults commonly face medical, functional, dental, nutritional, and psychological problems that can complicate routine health behaviors and intensify the demands of chronic disease management (Chan et al., 2021). Diabetes care standards for older adults emphasize the need to individualize treatment according to comorbidity, functional status, cognitive capacity, hypoglycemia risk, and patient preferences, principles that are also relevant to hypertension management among adults whose health needs are complex and changing (ElSayed et al., 2022). Similarly, evidence on early-onset type 2 diabetes highlights that chronic cardiometabolic conditions require long-term attention to lifestyle, medication, monitoring, and complication prevention across adulthood (Savage et al., 2025). Chronic kidney disease further illustrates the need for continuity, interdisciplinary support, and community-based nursing attention, particularly when chronic conditions require ongoing surveillance and lifestyle adaptation (Ferris et al., 2021; Tiago Manuel Horta Reis da, 2024). These related literatures indicate that adults with uncontrolled hypertension often manage more than blood pressure alone; they manage competing risks, multiple recommendations, and changing perceptions of bodily reliability.

Self-care is central to hypertension control and typically includes medication adherence, dietary modification, sodium reduction, physical activity, weight management, smoking cessation, stress management, blood pressure monitoring, and regular engagement with health care services. However, the translation of medical advice into everyday practice is rarely straightforward. Research on self-care among older adults with hypertension has shown that self-care behaviors are shaped by knowledge, confidence, perceived benefit, social support, comorbidities, and the capacity to integrate health behaviors into daily routines (Guo et al., 2022). Interventions designed to improve self-management among older adults with uncontrolled hypertension indicate that structured support may improve

outcomes, but the effectiveness of such programs depends on whether patients can meaningfully incorporate recommended behaviors into their lives (Sukpattanasrikul et al., 2021). Community-based nursing interventions have also been associated with improvements in knowledge, self-efficacy, and blood pressure control, suggesting that self-care can be strengthened when support extends beyond brief clinical encounters (Herlinah et al., 2024). Family and community empowerment approaches similarly point to the importance of relational and local support in improving the health status of older adults with hypertension (Achjar et al., 2022). These findings collectively suggest that self-care is not merely an individual behavioral task, but a socially and contextually organized process.

Health education and community programs have been used to address hypertension knowledge, adherence, and quality of life. For example, community-based programs informed by planning models such as PRECEDE-PROCEED have been applied to improve knowledge, treatment adherence, and quality of life among hypertensive adults (Majeed et al., 2023). Integrated hospital-community-family management approaches have also been examined in relation to blood pressure, quality of life, anxiety, and depression among hypertensive patients, highlighting the potential value of continuity across care settings (Shi et al., 2022). The development of community-based e-health programs for older adults with chronic diseases has introduced additional possibilities for education, monitoring, and patient-provider communication (Wu et al., 2022). Digital health interventions for older adults with chronic diseases living alone further indicate that technology may support self-care, although digital interventions must be adapted to patients' capacities, social circumstances, and health literacy levels (Park et al., 2025). Nutritional digital microinterventions and virtual culinary medicine programs also demonstrate growing interest in making dietary change more practical, engaging, and behaviorally specific (Zábó et al., 2025). Nevertheless, nutritional interventions for adults with complex chronic conditions require careful consideration of clinical guidelines, personal preference, access to healthy food, and the realities of aging and comorbidity (Sarteau et al., 2024).

Although self-care is necessary for hypertension control, it may also generate treatment burden. Treatment burden refers to the workload imposed on patients by health care and self-management, including medication schedules, appointments, monitoring, lifestyle change, information processing, financial costs, transportation, coordination among providers, and emotional responsibility. In adults with multiple chronic conditions, treatment burden is closely related to health literacy and medication adherence, indicating that patients' ability to understand and act on medical advice affects whether treatment feels manageable or overwhelming (Selvakumar et al., 2023). Medication non-adherence remains a major challenge in hypertension care, and evidence from a large meta-analysis in sub-Saharan Africa demonstrates that non-adherence to blood pressure-lowering medications is a substantial problem among adults with hypertension (Aminde et al., 2024). Although the reasons for non-adherence vary across health systems and populations, they often include side effects, cost, forgetfulness, limited understanding, competing priorities, distrust, and discouragement when treatment does not produce visible improvement. The potential of mobile health interventions for adults with advanced chronic illness and their care partners further illustrates that management burden extends beyond patients alone and may involve family members, caregivers, and digital support systems (Burrows et al., 2023). Therefore, uncontrolled hypertension may reflect not only patient behavior but also cumulative treatment workload and the fit between clinical recommendations and everyday life.

Family function, coping style, and interpersonal support are also important in understanding hypertension self-care. Research on medical coping modes and family function among older adults with hypertension suggests that how patients respond to illness is shaped by the relational environment in which care occurs (Yang, 2023). Family members may encourage medication adherence, prepare healthier meals, support clinic attendance, and provide emotional reassurance; however, they may also introduce pressure, criticism, surveillance, or conflict. For some adults, family involvement can make self-care more sustainable, while for others it may intensify feelings of guilt or loss of autonomy. This relational complexity is particularly important in uncontrolled hypertension because patients are often repeatedly reminded that they need to do more, change more, or monitor more. When such messages are delivered without attention to context, they may be experienced as blame rather than support. The social environment of self-care therefore deserves close examination, particularly in qualitative research that allows patients to explain how they interpret support, pressure, responsibility, and control.

Quality of life is a critical outcome in hypertension because chronic disease management affects not only

physiological risk but also physical functioning, emotional well-being, social participation, role performance, and identity. Studies on quality of life among older adults with hypertension have identified multiple contributing factors, including health status, symptom burden, self-management capacity, social support, and psychological well-being (Hu et al., 2024). Depression is also an important concern among elderly hypertensive patients, with evidence indicating that depressive symptoms may be associated with clinical and social factors that complicate self-care (Nguyen et al., 2025). Classification-based research on depressive disorders among older adults with essential hypertension further suggests that mental health difficulties are meaningfully linked to the experience of hypertension and should not be separated from cardiovascular care (Ruan et al., 2022). In patients with diabetes complicated by hypertension, longitudinal evidence on burnout and insomnia underscores how chronic cardiometabolic illness may be accompanied by psychological exhaustion and sleep disturbance (Zhang et al., 2025). These studies suggest that uncontrolled hypertension may reduce quality of life not only through physical risk but also through worry, fatigue, self-monitoring, frustration, sleep disruption, and emotional strain.

The broader literature on health-related quality of life in chronic illness also provides useful insight for hypertension research. Studies in other long-term conditions, such as colorectal cancer survivorship, benign prostatic hyperplasia, periodontal disease, and systemic disease, show that quality of life is shaped by symptom burden, functional limitations, health perceptions, treatment demands, social consequences, and the meaning patients assign to illness (Burrell et al., 2023; Park et al., 2022; Romito et al., 2024). These findings are relevant because adults with uncontrolled hypertension may not always experience obvious symptoms, yet their quality of life may be affected by fear of complications, repeated medical monitoring, medication side effects, lifestyle restrictions, and the persistent awareness of risk. In such circumstances, quality of life may decline through subtle but cumulative mechanisms, including reduced spontaneity, perceived loss of freedom, worry during daily activities, avoidance of certain foods or social settings, and uncertainty about the future. Therefore, examining quality of life in uncontrolled hypertension requires attention to both measurable health outcomes and subjective interpretations of living under chronic cardiovascular risk.

Despite the growth of research on hypertension prevalence, medication adherence, self-care interventions, digital health, and quality of life, there remains a need for qualitative studies that explain how adults with uncontrolled hypertension connect these issues in their own accounts. Quantitative studies are essential for identifying predictors, associations, and intervention effects, but they may not fully capture how patients make sense of competing demands, negotiate treatment recommendations, interpret uncontrolled readings, and decide which self-care behaviors are realistic. Grounded theory is especially appropriate for this purpose because it allows the development of an explanatory model grounded in participants' experiences. Such a model can clarify how self-care becomes burdensome, how burden affects quality of life, and how patients reconstruct control despite persistent difficulty achieving blood pressure targets. A patient-centered understanding of these processes is particularly important for health care systems seeking to improve hypertension control without unintentionally increasing guilt, surveillance, or emotional exhaustion among patients.

The aim of this study was to develop a grounded theory explaining how adults with uncontrolled hypertension in Canada perceive and negotiate self-care, treatment burden, and quality of life.

2. Methods and Materials

2.1. Study Design and Participants

This study was conducted using a qualitative grounded theory design to explore how adults with uncontrolled hypertension perceive self-care, treatment burden, and quality of life, and to develop an explanatory model of the processes through which patients interpret and manage the demands of long-term hypertension care. Grounded theory was selected because the study aimed not only to describe participants' experiences but also to generate a conceptual understanding of how individuals make sense of daily self-management responsibilities, medication adherence, lifestyle modification, clinical monitoring, and the psychological and social consequences of living with persistently elevated blood pressure. The study was conducted in Canada among adults receiving care in primary health care clinics, community health centers, and outpatient cardiovascular follow-up services in Ontario. Participants were recruited through purposive and theoretical sampling to ensure variation in age, gender, duration of hypertension, medication regimen, comorbid conditions, employment status, and perceived difficulty in managing hypertension. The final sample consisted of 34 adults with uncontrolled

hypertension. Participants were eligible if they were 30 years of age or older, had a documented diagnosis of hypertension for at least one year, and had uncontrolled blood pressure based on recent clinical records, defined as systolic blood pressure of 140 mmHg or higher and/or diastolic blood pressure of 90 mmHg or higher despite lifestyle advice and/or antihypertensive treatment. Participants were also required to be able to communicate in English and provide informed consent. Individuals with severe cognitive impairment, acute cardiovascular events during the previous three months, end-stage renal disease, severe psychiatric instability, or inability to participate in an interview were excluded. Recruitment continued until theoretical saturation was reached, meaning that additional interviews no longer produced substantially new categories or properties relevant to the emerging theory. All participants were informed about the purpose of the study, the voluntary nature of participation, confidentiality of the data, and their right to withdraw at any stage without any effect on their health care. Written informed consent was obtained before data collection.

2.2. Measures

Data were collected using a semi-structured interview guide, a demographic and clinical information form, and researcher field notes. The semi-structured interview guide was developed specifically for this study based on the objectives of the research and the central concepts of self-care, treatment burden, and quality of life in uncontrolled hypertension. The interview questions were open-ended and designed to encourage participants to describe their experiences in their own words. The guide included questions about participants' understanding of hypertension, their perceptions of blood pressure control, daily self-care behaviors, medication use, diet, physical activity, symptom monitoring, emotional responses to uncontrolled blood pressure, experiences with health care providers, financial and practical challenges of treatment, family and social support, and the perceived effects of hypertension on physical, psychological, social, and occupational aspects of quality of life. Examples of guiding questions included how participants usually managed their blood pressure in daily life, what aspects of hypertension treatment felt most difficult or burdensome, how treatment routines affected their mood and relationships, and what helped or prevented them from following recommended self-care behaviors. Probing questions were used to clarify meanings, explore contradictions, and obtain deeper explanations of participants' experiences. As data analysis progressed, the interview guide was refined in accordance with grounded theory procedures so that later interviews could explore emerging categories in greater depth.

The demographic and clinical information form was used to collect background information, including age, gender, marital status, education level, employment status, living arrangement, duration of hypertension diagnosis, number of prescribed antihypertensive medications, presence of comorbid conditions, frequency of blood pressure monitoring, smoking status, physical activity pattern, and most recent recorded blood pressure values. This form helped describe the sample and supported theoretical sampling by identifying participants with diverse clinical and social characteristics. Field notes were also used as an important qualitative data collection tool. Immediately after each interview, the researcher recorded observations about participants' emotional expressions, pauses, emphasis, interactional context, nonverbal cues, and preliminary analytic reflections. These field notes were not treated as a substitute for interview data but were used to support interpretation, preserve contextual details, and guide the development of emerging categories during the analytic process. Interviews were conducted individually in a private room at the clinic or through secure online video calls, depending on participant preference and accessibility. Each interview lasted approximately 45 to 75 minutes and was audio-recorded with permission. All recordings were transcribed verbatim, and identifying information was removed during transcription to protect participant confidentiality.

2.3. Data Analysis

Data analysis was conducted concurrently with data collection using the constant comparative method associated with grounded theory. Interview transcripts and field notes were reviewed repeatedly to gain an overall understanding of the data before formal coding began. The analysis proceeded through initial coding, focused coding, axial coding, and theoretical integration. During initial coding, transcripts were examined line by line to identify meaningful units related to participants' perceptions of self-care, treatment burden, uncontrolled blood pressure, health care interactions, emotional responses, and quality of life. Codes were kept close to participants' own language whenever possible in order to preserve the meanings expressed in the

interviews. In the focused coding stage, the most frequent and analytically significant codes were compared across participants and grouped into broader categories. Constant comparison was used throughout the process by comparing incidents with incidents, codes with codes, codes with categories, and categories with emerging theoretical concepts.

Axial coding was then used to examine relationships among categories and to identify the conditions, actions, interactions, and consequences that shaped participants' experiences of uncontrolled hypertension. Particular attention was paid to how participants balanced medical recommendations with everyday life demands, how they interpreted the burden of treatment, and how repeated difficulties in achieving blood pressure control influenced their motivation, emotional well-being, and perceived quality of life. Theoretical sampling was used during later stages of recruitment to refine emerging categories and explore underdeveloped dimensions of the developing theory. Analytic memos were written throughout the study to document conceptual decisions, comparisons, assumptions, category development, and emerging theoretical links. These memos formed an audit trail and supported movement from descriptive findings toward a more abstract explanatory model.

To enhance trustworthiness, several strategies were used. Credibility was supported through prolonged engagement with the data, iterative questioning during interviews, and comparison of participants with different clinical and social backgrounds. Member checking was conducted with a subset of participants, who were invited to comment on the clarity and resonance of the preliminary categories. Dependability was strengthened by maintaining detailed documentation of sampling decisions, interview guide revisions, coding procedures, and analytic memos. Confirmability was addressed through reflexive note-taking, in which the researcher documented assumptions, expectations, and potential influences on interpretation. Transferability was supported by providing detailed descriptions of the study setting, participant characteristics, recruitment procedures, and analytic process. Data management and coding were supported by qualitative analysis software, while all analytic interpretations were developed through repeated reading, comparison, memo writing, and discussion among the research team. Data analysis continued until theoretical saturation was achieved and a coherent grounded theory explaining the perceived relationship between self-care demands, treatment burden, and quality of life among adults with uncontrolled hypertension was developed.

3. Findings and Results

The findings are presented in accordance with the grounded theory analysis of interviews with 34 adults with uncontrolled hypertension in Ontario, Canada. Participants ranged in age from 35 to 79 years, with a mean age of 58.6 years. The sample included 18 women and 16 men. Most participants had lived with hypertension for several years, with the duration of diagnosis ranging from 1.5 to 24 years. The mean duration of hypertension was 8.4 years. Twenty-two participants were taking two or more antihypertensive medications, while 12 were taking one prescribed antihypertensive medication at the time of interview. In addition to hypertension, 21 participants reported at least one chronic comorbid condition, most commonly type 2 diabetes, dyslipidemia, obesity, chronic kidney disease, osteoarthritis, or anxiety symptoms. Regarding marital and living status, 20 participants were married or living with a partner, 9 lived alone, and 5 lived with family members or other relatives. Sixteen participants were employed either full-time or part-time, 12 were retired, and 6 were unemployed, receiving disability support, or not currently in paid work. Educational backgrounds varied, with 8 participants reporting high school education or less, 13 reporting college or vocational education, and 13 reporting university-level education. Participants' most recent recorded blood pressure values indicated persistent lack of control, with systolic values ranging from 142 to 186 mmHg and diastolic values ranging from 86 to 112 mmHg. Although participants differed in age, social background, duration of diagnosis, and treatment complexity, a common pattern emerged across the interviews: uncontrolled hypertension was experienced not merely as a biomedical condition but as a continuous process of negotiating self-care expectations, treatment demands, emotional strain, and perceived limitations in daily quality of life.

Table 1

Characteristics of the qualitative data corpus and analytic development

Component of data generation and analysis	Description	Contribution to the grounded theory
Main interviews	Thirty-four individual semi-structured interviews were conducted with adults with uncontrolled hypertension. Interviews lasted between 45 and 75 minutes.	Provided the primary source of narrative data on self-care practices, treatment burden, health care experiences, and perceived quality of life.
Follow-up clarification contacts	Six participants were contacted briefly after the initial interview to clarify emerging meanings or confirm interpretations.	Strengthened credibility and helped refine early categories related to emotional fatigue, medication routines, and perceived control.
Field notes	Field notes were written immediately after each interview and included observations about tone, pauses, emotional responses, contextual details, and preliminary analytic reflections.	Supported interpretation of participants' accounts and helped connect verbal statements with emotional and situational contexts.
Initial codes	A total of 286 initial codes were generated through line-by-line coding of transcripts and field notes.	Captured concrete actions, perceptions, difficulties, and meanings expressed by participants in relation to hypertension management.
Focused codes	Initial codes were compared and condensed into 41 focused codes.	Identified recurring patterns across participants and allowed movement from descriptive coding toward conceptual organization.
Subcategories	Focused codes were grouped into 15 subcategories.	Represented specific dimensions of the experience, including disrupted routines, medication fatigue, dietary negotiation, uncertainty, and diminished vitality.
Main categories	Five main categories were developed through axial and theoretical coding.	Explained the broader process by which participants understood, managed, resisted, adapted to, and emotionally responded to uncontrolled hypertension.
Core category	One core category was identified: negotiating control under cumulative treatment burden.	Integrated all categories into a grounded theory explaining how self-care demands and treatment burden shaped perceived quality of life.
Saturation	Theoretical saturation was reached after 34 interviews, when additional interviews no longer produced new conceptual properties of the main categories.	Confirmed the adequacy of the final category structure and supported theoretical integration.

Table 1 summarizes the scope of the qualitative data and the analytic pathway through which the grounded theory was developed. The findings were not based on isolated statements but on repeated comparison across a substantial interview corpus, field notes, analytic memos, and clarification contacts with selected participants. The coding process began with close attention to participants' own words and gradually moved toward more abstract conceptual categories. The large number of initial codes reflected the complexity of living with uncontrolled hypertension, particularly because participants described the condition as affecting medication routines, food choices, financial planning, social participation, emotional stability, family relationships, work performance, and their sense of bodily reliability. Through focused and axial coding, these experiences were organized into five main categories that converged around the core process of negotiating control under cumulative treatment burden. This core category captured the central finding that participants did not experience hypertension self-care as a simple matter of following medical advice; rather, they described it as a continuous, effortful, and often exhausting negotiation between what they knew they were expected to do and what they could realistically sustain within the demands of everyday life.

Table 2

Main categories, subcategories, and representative participant meanings

Main category	Subcategories	Representative codes	Illustrative participant meanings
Living with an invisible but threatening condition	Silent disease perception; uncertainty about bodily signals; fear of sudden complications	"I do not feel sick," "numbers are frightening," "stroke is always in the back of my mind," "blood pressure surprises me"	Participants often described hypertension as confusing because it was usually symptomless but still associated with serious future risks.
Translating medical advice into daily self-care	Medication routines; dietary adjustment; physical activity negotiation; home blood pressure monitoring	"Pills are the easy part and the hard part," "salt is everywhere," "exercise depends on pain and time," "checking numbers changes my mood"	Participants attempted to follow clinical advice but had to modify it around work, family roles, food access, fatigue, pain, and emotional readiness.
Carrying the burden of treatment	Medication fatigue; appointment burden; financial and time costs; fragmented care	"Too many instructions," "clinic visits take over my day," "I am tired of changing pills," "everyone tells me something different"	Treatment was experienced as cumulative, repetitive, and sometimes poorly coordinated, especially among participants with comorbid conditions.

Quality of life under pressure	Reduced physical confidence; emotional distress; social restriction; identity disruption	"I do less than before," "I feel older than I am," "I avoid certain situations," "I am always thinking about pressure"	Uncontrolled hypertension affected quality of life through worry, restricted activities, reduced spontaneity, and a sense of vulnerability.
Reconstructing control through practical adaptation	Selective adherence; support-based routines; learning personal triggers; acceptance and prioritization	"I do what I can keep doing," "my family reminds me," "I know what raises it," "I choose the changes that fit my life"	Participants developed individualized strategies to regain control, although these strategies were often partial, negotiated, and shaped by available support.

Table 2 presents the five main categories and 15 subcategories that emerged from the grounded theory analysis. The first category, living with an invisible but threatening condition, reflected the paradox that hypertension was perceived as both absent and dangerous. Many participants stated that they did not feel physically ill most of the time, yet they remained aware that uncontrolled blood pressure could lead to stroke, heart disease, kidney problems, or premature death. This created a persistent tension between the absence of symptoms and the seriousness of medical warnings. The second category, translating medical advice into daily self-care, showed that participants understood the importance of medication adherence, diet, exercise, and monitoring, but struggled to convert general recommendations into stable everyday routines. The third category, carrying the burden of treatment, captured the cumulative load associated with pills, medication changes, appointments, monitoring, side effects, costs, transportation, waiting times, and communication with multiple providers. The fourth category, quality of life under pressure, demonstrated that uncontrolled hypertension influenced participants' lives through worry, fatigue, reduced confidence, social withdrawal, and loss of spontaneity. Finally, reconstructing control through practical adaptation described how participants tried to regain a sense of agency by developing personally manageable routines, relying on family support, identifying triggers, and prioritizing realistic changes over idealized self-care expectations.

Table 3

Treatment burden and its perceived consequences for quality of life

Dimension of treatment burden	How participants experienced the burden	Perceived consequence for quality of life
Medication burden	Participants described daily medication use as repetitive, sometimes confusing, and emotionally tiring, especially when doses changed or side effects occurred.	Reduced sense of normality, frustration with long-term dependence on pills, and anxiety about missing doses.
Lifestyle burden	Dietary change, salt restriction, weight management, and physical activity were experienced as difficult to sustain within family meals, work schedules, pain, fatigue, and cultural food practices.	Reduced enjoyment of food, conflict between health goals and social life, and feelings of guilt after non-adherence.
Monitoring burden	Home blood pressure monitoring was useful for some participants but stressful for others, particularly when readings remained high despite effort.	Increased worry, mood fluctuation, and avoidance of monitoring when numbers felt discouraging.
Health care access burden	Participants described appointment scheduling, transportation, waiting times, short consultations, and repeated follow-up visits as disruptive.	Loss of work time, practical inconvenience, and feeling that hypertension care competed with other life responsibilities.
Information burden	Participants received advice from physicians, nurses, pharmacists, family members, internet sources, and community networks, but the advice was sometimes inconsistent.	Confusion, reduced confidence in decision-making, and selective adherence to recommendations perceived as realistic.
Financial burden	Although most participants had access to health services, costs related to medication, transportation, healthy food, home monitoring devices, and time away from work remained important.	Stress about affordability, delayed self-care purchases, and prioritization of immediate household needs over health goals.
Emotional burden	Participants experienced fear, guilt, frustration, helplessness, and fatigue when blood pressure remained uncontrolled despite effort.	Reduced psychological well-being, diminished motivation, and a sense of personal failure.
Relational burden	Family members sometimes provided reminders and support but could also criticize, monitor, or pressure participants.	Mixed effects on quality of life, including both increased support and increased interpersonal tension.

Table 3 explains how treatment burden operated as a multidimensional experience rather than a single obstacle. Medication burden was especially salient among participants taking multiple medications or those who had experienced side effects such as dizziness, frequent urination, swelling, fatigue, or sexual dysfunction. Several participants reported that they understood the necessity of medication but disliked the feeling of being dependent on

pills for the rest of their lives. Lifestyle burden was also prominent, particularly in relation to diet. Participants repeatedly emphasized that salt restriction was more difficult than simply "eating less salt," because sodium was embedded in restaurant meals, processed food, family cooking practices, and social gatherings. Monitoring burden had a dual meaning: some participants viewed home blood pressure checks as empowering, while others experienced them as a repeated reminder of failure when readings stayed high. Health care access burden and information burden were closely connected, as participants often felt that short clinical appointments did not provide enough time to discuss the realities of daily self-care. Financial burden was not limited to medication costs; it also included the cost of healthier food, transportation, parking, blood pressure devices, and missed work hours. Emotional and relational burdens were deeply connected to quality of life, because participants often interpreted uncontrolled blood pressure as evidence that they were not doing enough, even when they were making significant efforts. As a result, the burden of treatment was not only practical but also moral and emotional, shaping how participants evaluated themselves and their capacity to live well with hypertension.

Table 4

Axial coding structure of the grounded theory

Axial coding component	Category-level interpretation	Manifestation in participants' accounts
Causal conditions	Persistent uncontrolled blood pressure, long-term diagnosis, comorbid illness, medication changes, and repeated clinical warnings created the context for heightened self-care demands.	Participants described being repeatedly told that their blood pressure was too high and that they needed to improve adherence, diet, activity, stress management, or monitoring.
Contextual conditions	Work schedules, family responsibilities, income, food environment, immigration history, cultural habits, pain, fatigue, and access to care shaped what forms of self-care were possible.	Participants explained that recommendations were easier to understand than to implement, especially when they conflicted with daily routines or social obligations.
Intervening conditions	Health literacy, family support, trust in clinicians, emotional resilience, previous experiences with medication, and perceived seriousness influenced engagement with self-care.	Participants with stronger support and clearer understanding tended to describe more stable routines, while others described confusion, avoidance, or discouragement.
Action and interaction strategies	Participants used medication routines, selective lifestyle change, blood pressure monitoring, negotiation with family, avoidance of discouraging information, and prioritization of manageable goals.	Self-care was often partial and adaptive; participants chose strategies they believed they could maintain rather than strictly following all recommendations.
Consequences	Participants experienced fluctuating control, emotional fatigue, guilt, reduced quality of life, occasional empowerment, and gradual reconstruction of personal agency.	Uncontrolled hypertension affected physical confidence, emotional well-being, social participation, and identity, but some participants developed practical ways to regain control.
Core process	Negotiating control under cumulative treatment burden connected the experience of hypertension, the work of self-care, and the impact on quality of life.	Participants continuously balanced medical expectations against personal capacity, available resources, competing responsibilities, and the desire to maintain a normal life.

Table 4 presents the axial coding structure that explains the relationships among conditions, strategies, and consequences in the emerging theory. The causal conditions centered on the persistence of uncontrolled blood pressure despite treatment, which intensified clinical attention and increased pressure on participants to change their behavior. However, the ability to respond to these expectations was shaped by contextual conditions, including work demands, family roles, financial constraints, cultural food practices, physical limitations, and the accessibility of health services. Intervening conditions, such as health literacy, emotional resilience, trust in clinicians, and family support, influenced whether participants experienced self-care as manageable or overwhelming. Participants' action and interaction strategies were rarely perfect or linear. Instead, they were negotiated and adaptive. Some participants created pill routines, reduced salt selectively, walked when possible, or checked blood pressure regularly. Others avoided monitoring, delayed appointments, skipped lifestyle changes they perceived as unrealistic, or followed only the recommendations that fit their daily lives. The consequences of these strategies were mixed. Some participants gained a sense of control through small achievable changes, while others experienced guilt, frustration, and declining confidence when their blood pressure remained high. The core process, negotiating control under cumulative treatment burden, therefore explains uncontrolled hypertension as an ongoing social, emotional, and practical process rather than only a clinical outcome.

Figure 1

Grounded theory model of negotiating control under cumulative treatment burden among adults with uncontrolled hypertension

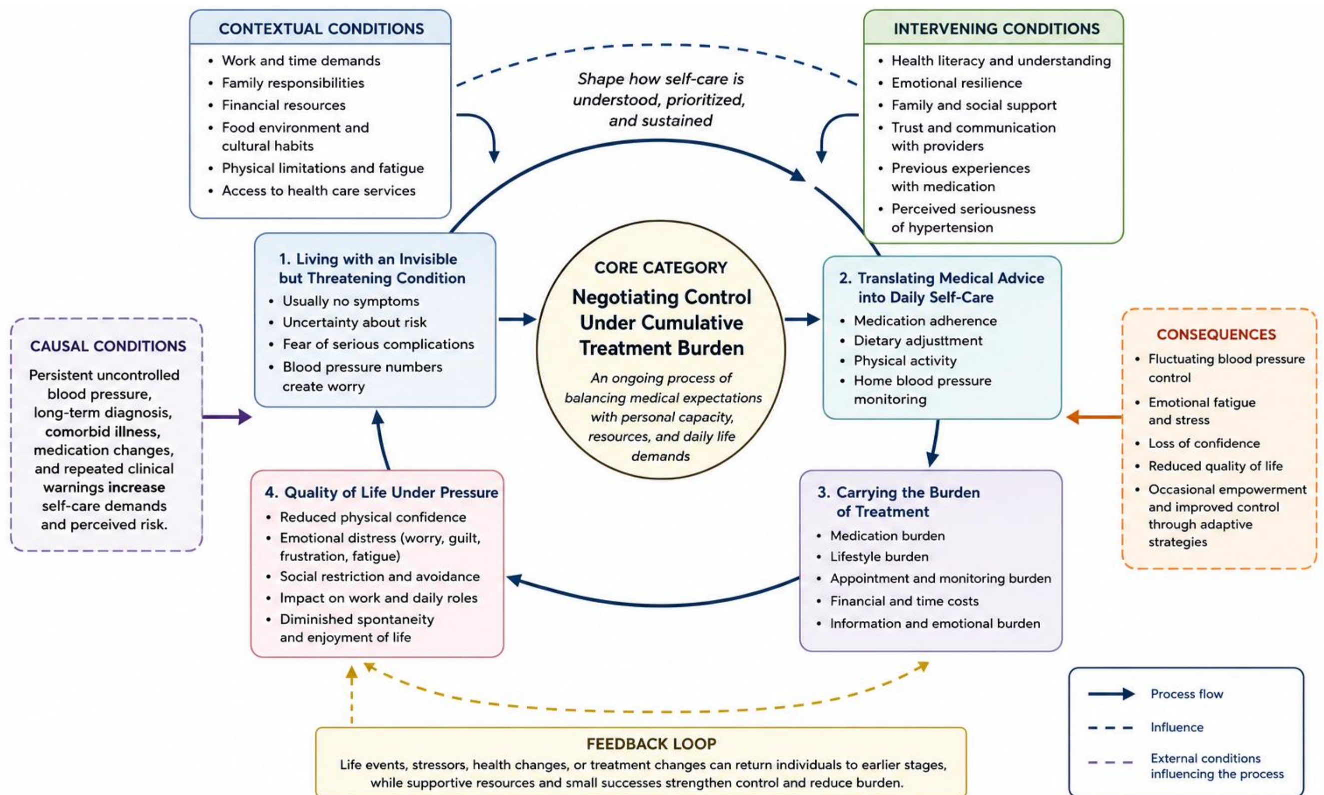

Figure 1 represents the final theoretical model generated from the analysis. The model places the core category, negotiating control under cumulative treatment burden, at the center of participants' experience. In this model, uncontrolled hypertension begins as a clinical condition but becomes meaningful through participants' interpretations of risk, responsibility, treatment expectations, and everyday feasibility. Participants first encounter hypertension as an invisible but threatening condition, which creates uncertainty because the absence of symptoms conflicts with medical warnings about serious complications. This uncertainty leads to attempts to translate advice into self-care routines, including medication adherence, dietary change, physical activity, and blood pressure monitoring. However, these routines generate treatment burden when they accumulate across time, interact with other chronic illnesses, or compete with work, family, financial, and emotional demands. As treatment burden increases, quality of life is affected through worry, reduced physical confidence, social restriction, guilt, and diminished spontaneity. Participants then attempt to reconstruct control through practical adaptation, selecting strategies that are realistic, personally meaningful, and sustainable. The model is cyclical rather than linear, because uncontrolled readings, medication changes, or life stressors can return participants to earlier stages of uncertainty and burden. At the same time, supportive relationships, clear communication with providers, improved health literacy, and small successful routines can strengthen perceived control and reduce the negative impact of hypertension on quality of life.

Table 5

Final theoretical categories and explanatory propositions

Final theoretical category	Explanatory proposition	Evidence from participants' narratives
Hypertension becomes burdensome when it is both invisible and constantly monitored.	The lack of symptoms reduces urgency, while repeated measurements and clinical warnings increase fear and responsibility.	Participants often said they did not feel ill but became anxious when readings were high or when providers emphasized future risks.

Self-care is shaped by feasibility more than knowledge alone.	Participants generally understood the importance of medication, diet, activity, and monitoring, but adherence depended on whether these behaviors fit daily life.	Participants described barriers related to work, fatigue, pain, family meals, cost, transportation, and emotional readiness.
Treatment burden accumulates across tasks, not within one task.	No single part of care was always overwhelming, but the combination of medications, appointments, monitoring, lifestyle change, and uncertainty became exhausting.	Participants used expressions such as “too much,” “always something,” and “never finished” to describe hypertension management.
Quality of life declines when self-care feels like permanent surveillance.	Participants experienced reduced spontaneity and increased self-monitoring when hypertension care entered meals, movement, emotions, and social situations.	Participants reported avoiding certain foods, activities, conversations, and social events because of concern about blood pressure.
Control is reconstructed through realistic routines rather than perfect adherence.	Participants regained agency when they created manageable routines, accepted partial progress, and received support without judgment.	Participants described practical adaptations such as pill organizers, family reminders, walking in short intervals, reducing rather than eliminating salt, and checking blood pressure at specific times.

Table 5 presents the final theoretical propositions developed from the grounded theory analysis. These propositions clarify the conceptual contribution of the study by explaining how self-care, treatment burden, and quality of life were connected in participants’ accounts. The first proposition highlights the paradoxical nature of hypertension: it is often symptomless, yet it becomes psychologically present through numbers, appointments, warnings, and future-oriented fear. The second proposition shows that knowledge alone was insufficient to explain self-care behavior. Most participants knew that uncontrolled blood pressure was dangerous and understood the general recommendations, but they struggled with feasibility. The third proposition identifies accumulation as the central mechanism of treatment burden. Participants were not necessarily overwhelmed by taking one pill, attending one appointment, or reducing one food item; rather, burden emerged when multiple tasks continued indefinitely and interacted with other responsibilities. The fourth proposition explains the quality-of-life impact of hypertension as a form of permanent surveillance, in which participants felt watched by numbers, clinicians, family members, and their own sense of responsibility. The fifth proposition provides the adaptive dimension of the theory: participants were more likely to experience control when they developed realistic routines that reduced pressure rather than intensified guilt. Overall, the theory suggests that improving quality of life among adults with uncontrolled hypertension requires attention not only to clinical targets but also to the lived burden of sustaining self-care over time.

Across the findings, participants described uncontrolled hypertension as a condition that demanded continuous attention while often offering little immediate bodily feedback. This created a distinctive form of uncertainty: participants could feel well and still be medically at risk. For some, this uncertainty produced fear and motivated self-care. For others, it produced avoidance, especially when repeated efforts did not result in improved readings. Medication was commonly viewed as necessary, but not always sufficient. Participants frequently stated that they took their medication but still had high readings, which led them to question whether the treatment was working, whether their body was resistant, or whether they were personally failing. Dietary change was one of the most difficult areas of self-care because it involved taste, habit, family meals, cultural identity, income, convenience, and social participation. Physical activity was also shaped by competing demands and bodily limitations, particularly among participants with arthritis, obesity, fatigue, or work-related exhaustion. Home blood pressure monitoring served as both a tool of control and a source of distress. Participants who interpreted readings as useful feedback tended to describe monitoring positively, while those who interpreted high readings as evidence of failure often reduced or avoided monitoring.

The central grounded theory generated from the study indicates that adults with uncontrolled hypertension experience self-care as a negotiated process shaped by cumulative treatment burden. Participants did not simply accept or reject medical recommendations. Instead, they interpreted, adapted, delayed, prioritized, resisted, or selectively followed recommendations depending on their resources, confidence, emotional state, and daily circumstances. Quality of life was affected when hypertension care became intrusive, repetitive, and morally charged. Participants described feeling guilty when they ate the wrong foods, worried when readings were high, frustrated when medications changed, embarrassed when family members criticized their habits, and tired of being reminded that they needed to do more. However, the findings also showed that participants were not passive. Many developed practical strategies to regain control, such

as using pill boxes, linking medication to daily rituals, reducing restaurant meals, checking labels, walking in short intervals, purchasing home monitors, seeking pharmacist advice, involving family members, or setting modest goals. These strategies were most effective when they reduced complexity and supported dignity rather than increasing pressure. Therefore, the findings suggest that the experience of uncontrolled hypertension is best understood as a dynamic interaction between clinical risk, self-care work, treatment burden, and the ongoing effort to preserve quality of life.

4. Discussion

The present grounded theory study explored how adults with uncontrolled hypertension in Canada perceive self-care, treatment burden, and quality of life. The findings showed that uncontrolled hypertension was experienced not merely as a biomedical condition defined by elevated blood pressure values, but as a continuous process of negotiating control under cumulative treatment burden. Participants described hypertension as an invisible but threatening condition, because they often did not feel physically ill while simultaneously understanding that uncontrolled blood pressure could lead to serious cardiovascular, cerebrovascular, and renal complications. This tension between bodily silence and clinical risk shaped their perceptions of responsibility, uncertainty, and emotional strain. The findings are consistent with global evidence showing that hypertension remains a major public health challenge despite the availability of effective pharmacological and lifestyle interventions (O'Connell et al., 2026). They also align with national and international calls to improve hypertension control through integrated, patient-centered, and community-based strategies rather than relying only on clinical prescriptions and episodic follow-up (Commodore-Mensah et al., 2022). In the present study, participants generally understood the importance of controlling blood pressure, but the challenge was not limited to lack of knowledge. Rather, the central issue was the difficulty of sustaining self-care under real-life conditions, including work demands, family responsibilities, cost, fatigue, comorbid illness, emotional distress, and fragmented health care communication.

One of the most important findings was that participants interpreted hypertension through a paradox of invisibility and threat. Many participants stated that they did not experience clear symptoms, yet they remained aware that uncontrolled blood pressure represented a serious risk. This paradox contributed to fluctuating motivation. When participants felt well, hypertension seemed less urgent; when readings were high or clinicians emphasized risk, fear and responsibility increased. This finding is consistent with research indicating that chronic illness is often experienced through patterns of uncertainty, perceived vulnerability, and changing health meanings, especially when conditions are long-term and require ongoing management (Leite, 2025). It also corresponds with evidence that hypertension commonly exists within broader multimorbidity patterns, where patients must manage overlapping conditions and risks rather than a single isolated disease (Batista et al., 2022; Pati et al., 2021; Xie & Xiong, 2025). Participants with diabetes, kidney disease, obesity, pain, or anxiety described hypertension care as part of a larger health workload, which supports previous studies showing that multimorbidity affects quality of life, health service use, and self-management capacity (Xue et al., 2025; Yogesh et al., 2024). Therefore, uncontrolled hypertension should be interpreted not only as a failure to reach a numerical target, but also as a lived condition embedded in cumulative illness burden.

The findings also revealed that participants attempted to translate medical advice into everyday self-care, but this translation was often partial, adaptive, and shaped by feasibility. Participants commonly recognized the importance of medication adherence, dietary change, physical activity, home blood pressure monitoring, and regular clinical follow-up. However, they described self-care as difficult to sustain when recommendations conflicted with daily routines, family meals, income constraints, physical limitations, work schedules, or emotional readiness. This finding aligns with research on self-care among older adults with hypertension, which indicates that self-care behaviors are influenced by health knowledge, confidence, perceived barriers, social support, and the ability to integrate recommendations into daily life (Guo et al., 2022). It also supports evidence from self-management interventions for older adults with uncontrolled hypertension, where structured programs can improve outcomes when they are realistic, supportive, and behaviorally specific (Sukpattanasrikul et al., 2021). Similarly, community-based nursing interventions have been shown to improve knowledge, self-efficacy, and blood pressure control, suggesting that patients may require ongoing practical support rather than brief instructions alone (Herlinah et al., 2024). Family and cadre empowerment approaches also support the present finding that self-care is strengthened

when patients are supported within their social and community environments (Achjar et al., 2022).

A central contribution of this study is the identification of treatment burden as a cumulative and relational process. Participants did not always describe one specific aspect of care as overwhelming; rather, burden emerged through the accumulation of medication routines, monitoring, appointments, dietary restrictions, information, costs, transportation, emotional responsibility, and repeated clinical messages. This finding is consistent with previous research showing that treatment burden, health literacy, and medication adherence are closely connected in older adults coping with multiple chronic conditions (Selvakumar et al., 2023). It also aligns with evidence of high non-adherence to blood pressure-lowering medications among adults with hypertension, showing that medication adherence remains a persistent challenge across settings (Aminde et al., 2024). In the present study, medication non-adherence was not always intentional resistance; it was sometimes related to side effects, confusion, changes in prescriptions, discouragement, disrupted routines, or a desire to feel less dependent on medication. This interpretation supports the need to understand adherence as a situated behavior rather than a simple indicator of patient motivation. Participants' accounts also correspond with research on chronic disease care models showing that successful management often requires continuity, coordination, and interdisciplinary support, particularly when patients have complex health needs (Ferris et al., 2021; Tiago Manuel Horta Reis da, 2024).

Dietary change was one of the most difficult self-care domains reported by participants. Salt reduction, healthier eating, and weight management were not experienced as isolated behaviors; they were connected to taste, family routines, cultural food practices, affordability, food access, social gatherings, and emotional comfort. This finding is supported by research emphasizing the importance of nutritional interventions for older adults and adults with chronic diseases, while also recognizing that dietary change requires practical, individualized, and context-sensitive support (Sarteau et al., 2024). Digital nutritional microinterventions and virtual culinary medicine programs have been proposed as potentially useful tools for promoting healthier dietary patterns, including plant-based and cardioprotective eating behaviors (Zábó et al., 2025). However, the present findings suggest that such interventions must be adapted to patients' everyday realities, because information alone may be insufficient when patients face financial strain, family food expectations, or limited time. Similar considerations apply to digital health more broadly. Community-based e-health programs and digital interventions for older adults with chronic diseases have shown promise in supporting self-management, education, and monitoring (Park et al., 2025; Wu et al., 2022). Yet, participants in the present study suggested that technology may reduce burden only when it is simple, accessible, and supportive rather than another source of surveillance or pressure.

Another important finding was that home blood pressure monitoring functioned as both a source of control and a source of distress. Some participants experienced monitoring as empowering because it helped them recognize patterns and evaluate the effects of medication, diet, stress, or activity. Others avoided monitoring because high readings produced fear, guilt, or discouragement. This ambivalence is important because monitoring is often promoted as a self-management strategy, yet its emotional effects may vary depending on interpretation, health literacy, and clinical support. Integrated care models that connect hospital, community, and family support have shown positive effects on blood pressure, quality of life, anxiety, and depression among hypertensive patients, suggesting that monitoring may be more beneficial when embedded in a supportive care pathway (Shi et al., 2022). Community-based programs designed to improve knowledge, adherence, and quality of life also indicate that self-monitoring should be paired with education and feedback so that patients understand how to respond constructively to readings (Majeed et al., 2023). Without such support, home monitoring may unintentionally intensify emotional burden, especially among patients who repeatedly see uncontrolled readings despite effort.

The findings further showed that uncontrolled hypertension affected quality of life through psychological, social, and functional pathways. Participants described worry, frustration, guilt, reduced confidence, diminished spontaneity, social restriction, and a sense of being constantly monitored by numbers, clinicians, family members, and themselves. This finding is consistent with research demonstrating that quality of life among older adults with hypertension is shaped by physical health, psychological well-being, social support, and self-management capacity (Hu et al., 2024). It also aligns with evidence showing that depression is common among elderly hypertensive patients and may be associated with clinical and social factors that complicate disease management

(Nguyen et al., 2025). Research on depressive disorders in older adults with essential hypertension further supports the view that mental health and hypertension management are closely connected (Ruan et al., 2022). The present study adds to this literature by showing how emotional distress may emerge not only from hypertension itself but also from the ongoing effort to manage it, particularly when participants perceive uncontrolled readings as personal failure. Similar patterns of chronic illness-related exhaustion are reflected in longitudinal research on burnout and insomnia among patients with diabetes complicated by hypertension (Zhang et al., 2025).

The quality-of-life findings also correspond with broader chronic disease literature showing that treatment demands, symptoms, functional limitations, and illness perceptions shape subjective well-being. Studies on health-related quality of life among long-term cancer survivors, patients with benign prostatic hyperplasia, and individuals affected by periodontal and systemic disease demonstrate that quality of life is influenced by both direct symptoms and the social, emotional, and functional meanings of illness (Burrell et al., 2023; Park et al., 2022; Romito et al., 2024). Although hypertension may be less symptomatically obvious than many chronic conditions, the present findings suggest that its quality-of-life effects may operate through chronic vigilance, perceived vulnerability, and lifestyle restriction. Participants were not only concerned about current blood pressure values; they were also concerned about what those values represented for the future. This future-oriented risk shaped everyday decisions, including what to eat, whether to exercise, when to monitor, whether to attend appointments, and how to interpret bodily sensations. Therefore, quality of life in uncontrolled hypertension should be understood as a multidimensional construct involving physical, psychological, relational, and existential components.

Family and social support emerged as both protective and burdensome. Some participants described family members as helpful in reminding them to take medication, preparing healthier meals, accompanying them to appointments, or encouraging activity. Others described family involvement as critical, controlling, or emotionally stressful. This finding aligns with research showing that family function is associated with coping modes among older adults with hypertension (Yang, 2023). It also supports the broader interpretation that self-care is not solely an individual responsibility but is embedded in relational contexts. In the present study, participants were more likely to describe self-care as sustainable when support was practical and nonjudgmental. In contrast, when support was experienced as criticism or surveillance, it intensified guilt and resistance. This distinction is important for clinical practice because involving family members in hypertension care may be beneficial only when communication supports autonomy, dignity, and shared problem-solving.

5. Conclusion

The final grounded theory, negotiating control under cumulative treatment burden, suggests that adults with uncontrolled hypertension continuously balance medical expectations against personal capacity, daily life demands, available resources, and the desire to preserve normality. This model extends previous hypertension research by integrating self-care, treatment burden, and quality of life into one explanatory process. Participants did not simply comply or fail to comply with medical advice; they interpreted recommendations, selected what seemed realistic, adapted routines, avoided discouraging information, and reconstructed control through small manageable strategies. This finding is consistent with patient-centered chronic disease frameworks emphasizing that successful long-term management requires alignment between clinical goals and patient capacity. It also reinforces the importance of integrated hypertension control initiatives, community-based support, digital tools, family engagement, and interdisciplinary care, while cautioning that these strategies must reduce rather than increase patient workload (Burrows et al., 2023; Commodore-Mensah et al., 2022). Overall, the study highlights that improving blood pressure control requires more than prescribing treatment; it requires understanding the lived workload of care and designing support that patients can sustain.

6. Limitations & Suggestions

The present study has several limitations. First, the participants were recruited from selected primary care, community health, and outpatient settings in Ontario, Canada; therefore, the findings may not fully reflect the experiences of adults with uncontrolled hypertension in other provinces, rural and remote communities, Indigenous communities, or health systems with different access structures. Second, the study relied on self-reported experiences, which may have been influenced by recall bias, social desirability, or participants' willingness to discuss sensitive issues such as non-adherence, financial strain, emotional distress, or family conflict. Third, although

theoretical saturation was reached, the sample size of 34 participants limits the ability to represent all possible experiences of uncontrolled hypertension across diverse cultural, linguistic, socioeconomic, and clinical groups. Fourth, the study focused on adults who could participate in English interviews, which may have excluded individuals with different communication needs or recent immigrants whose experiences of hypertension care may be shaped by language barriers. Finally, because the study was qualitative and grounded theory-based, the findings are intended to provide conceptual depth and theoretical explanation rather than statistical generalizability.

Future research should examine the grounded theory developed in this study across larger and more diverse populations, including rural residents, recent immigrants, Indigenous adults, low-income communities, and patients with severe multimorbidity. Longitudinal qualitative research would be valuable for understanding how perceptions of self-care, treatment burden, and quality of life change over time, particularly after medication adjustments, clinical complications, hospitalization, or participation in self-management programs. Mixed-methods studies could also test the relationships suggested by the present model, including the links among treatment burden, health literacy, medication adherence, emotional distress, family support, and blood pressure control. Future intervention studies should evaluate whether reducing treatment burden improves both clinical outcomes and quality of life among adults with uncontrolled hypertension. In addition, research should explore how digital monitoring tools, pharmacist-led care, community nursing, dietary coaching, and family-based interventions can be designed in ways that support patient autonomy rather than increasing surveillance, guilt, or workload.

In practice, the findings suggest that clinicians should assess treatment burden as a routine part of hypertension care, particularly among patients whose blood pressure remains uncontrolled despite treatment. Health care providers should ask patients not only whether they are taking medication or following lifestyle advice, but also how difficult these tasks are, what interferes with them, and which recommendations feel realistic. Care plans should be individualized, simplified where possible, and developed collaboratively with patients so that self-care goals are specific, achievable, and compatible with daily life. Communication should avoid blame and should recognize that uncontrolled hypertension often reflects complex barriers rather than lack of concern. Patients may benefit from practical supports such as medication organization strategies, clear written instructions, pharmacist consultation, culturally appropriate dietary guidance, home monitoring education, and follow-up that helps them interpret readings without fear. Family involvement should be encouraged when supportive, but clinicians should also help families provide assistance in ways that preserve patient dignity and autonomy. Most importantly, hypertension care should aim not only to reduce blood pressure values but also to reduce the emotional, practical, and relational burden of living with long-term treatment demands.

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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 Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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 contributed to this article.

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