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The Relationship between Anxiety Disorders and Hypertension During Treatment at Healthcare Facilities in the Transition Period of the COVID-19 Pandemic: Literature Review

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***Abstract*—** *The COVID-19 pandemic has generated prolonged psychological distress that continues into the post-pandemic transition period, raising concerns regarding its impact on cardiovascular health, particularly hypertension. This literature review aims to synthesize empirical evidence on the relationship between anxiety disorders and hypertension during treatment at healthcare facilities in the COVID-19 transition phase. A review of international empirical studies published between 2021 and 2026 was conducted using academic databases with keywords related to anxiety disorders, hypertension, healthcare services, and pandemic transition. Eligible studies included cross-sectional, cohort, case-control, and longitudinal research published in English-language accredited journals. The findings consistently indicate that anxiety disorders are significantly associated with poor blood pressure control, increased risk of new-onset hypertension, and reduced adherence to antihypertensive treatment. Prolonged activation of physiological stress responses and maladaptive health behaviors, such as avoidance of medical visits and reliance on alternative therapies, were identified as key mechanisms linking anxiety and hypertension. Persistent psychological distress during the transition period further amplifies cardiovascular vulnerability across age groups. These findings highlight that anxiety is not merely a comorbid condition but a critical determinant of hypertension outcomes. Integrating mental health screening and psychosocial interventions into routine hypertension management within healthcare facilities is therefore essential to improve therapeutic effectiveness and long-term cardiovascular health in the post-pandemic era.*

***Keywords*—** *Anxiety disorders, COVID-19 transition period, Healthcare facilities, Hypertension.*

I. INTRODUCTION

The Coronavirus Disease 2019 (COVID-19) pandemic has exerted profound multidimensional impacts on global healthcare systems. Beyond the burden of infectious disease, the pandemic triggered a widespread mental health crisis across diverse clinical populations. The World Health Organization (2022) reported a global increase of more than 25% in the prevalence of anxiety disorders during the pandemic. Social restrictions, economic uncertainty, fear of infection, and disruptions in healthcare access contributed substantially to psychological distress. During the post-pandemic transition period, healthcare facilities continue to face new challenges in addressing long-term psychological consequences alongside chronic physical illnesses.

Anxiety disorders represent one of the most prevalent mental health conditions worldwide and have been consistently reported to rise during and after the COVID-19 pandemic. A meta-analysis by Santabárbara et al. (2021) indicated that the prevalence of anxiety in the general population exceeded 30% during the pandemic period. In clinical settings, patients receiving continuous medical care exhibit higher anxiety levels compared to the general population (Xiong et al., 2022). This phenomenon suggests that the post-pandemic transition phase has not eliminated psychological burdens but rather introduced a new adaptation stage for both patients and healthcare systems.

From a physiological perspective, anxiety disorders are closely associated with activation of the sympathetic nervous system and the hypothalamic–pituitary–adrenal axis, which play critical roles in blood pressure regulation. Chronic stress exposure increases cortisol and catecholamine secretion, contributing to vascular dysfunction and elevated blood pressure (Chrousos, 2021). Empirical evidence demonstrates that individuals with higher anxiety levels are at greater risk of developing hypertension or experiencing poor blood pressure control (Pan et al., 2022). These findings indicate that anxiety disorders have direct implications not only for mental health but also for cardiovascular outcomes.

Hypertension remains one of the leading contributors to global morbidity and mortality. Mills et al. (2020) estimated that more than 1.2 billion individuals worldwide live with hypertension, with a continually increasing trend. During the COVID-19 pandemic, hypertensive patients were categorized as high-risk groups for severe infection outcomes, intensifying health-related anxiety and concerns regarding treatment continuity (Flint et al., 2021). In the post-pandemic transition period, disruptions in healthcare services, modified consultation systems, and persistent fear of reinfection have further heightened psychological stress among patients with hypertension.

Healthcare facilities serve as the primary environment where the interaction between anxiety disorders and hypertension unfolds during the transition period of the pandemic. The rapid implementation of telemedicine, revised

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clinical procedures, and modified patient–provider interactions have reshaped healthcare experiences (Xiong et al., 2022). For many patients, these changes have generated uncertainty and reduced perceived accessibility to care, potentially intensifying anxiety and indirectly affecting blood pressure stability. This situation highlights the importance of understanding the psychological–physiological interplay within contemporary healthcare delivery contexts.

Although numerous studies have examined the rise of anxiety disorders and hypertension during the COVID-19 pandemic, empirical synthesis specifically addressing the relationship between these two conditions in healthcare settings during the post-pandemic transition period remains limited. Most existing research focuses on the acute pandemic phase or investigates anxiety and hypertension separately. A comprehensive synthesis of empirical findings is therefore necessary to clarify consistent patterns of association, measurement approaches, and contextual factors influencing both conditions.

Accordingly, this literature review aims to systematically examine empirical evidence concerning the relationship between anxiety disorders and hypertension during treatment in healthcare facilities in the transition period of the COVID-19 pandemic. This review seeks to identify prevailing trends, methodological approaches, and existing research gaps. The findings are expected to provide a conceptual foundation for developing integrated clinical strategies that align mental health interventions with cardiovascular disease management in the post-pandemic healthcare era.

II. Materials & Methods

This study employed a systematic literature review design to examine empirical evidence on the relationship between anxiety disorders and hypertension during treatment at healthcare facilities in the transition period of the COVID-19 pandemic. The review covered publications from 2022 to 2026 to capture recent evidence reflecting post-pandemic healthcare conditions. Article searches were conducted using structured keyword combinations and Boolean operators (AND, OR, AND NOT) across major academic databases, including Scopus, PubMed, ProQuest, ScienceDirect, and Google Scholar. The keywords used were "anxiety disorder," "anxiety symptoms," "hypertension," "blood pressure," "healthcare facilities," "clinical setting," "post-COVID-19," and "pandemic transition." Search terms were adapted to each database to ensure comprehensive retrieval of relevant studies.

Article selection was performed by applying predefined inclusion and exclusion criteria. The inclusion criteria were: (1) empirical studies assessing anxiety disorders or anxiety symptoms using validated psychological instruments; (2) studies measuring hypertension or blood pressure using clinical or medical record assessments; (3) study designs including cross-sectional, cohort, case–control, or experimental studies; (4) publications between 2022 and 2026; and (5) articles written in English and published in peer-reviewed journals indexed in Scopus or equivalent international databases.

The exclusion criteria were: (1) studies conducted outside healthcare facility settings (e.g., community-only surveys without clinical context); (2) articles that did not assess both anxiety and hypertension variables; (3) study designs such as systematic reviews, meta-analyses, narrative reviews, editorials, or expert opinions; (4) publications prior to 2022; and (5) articles written in languages other than English or published in non-indexed journals.

The keyword strategy was guided by the PICO framework. The Population (P) comprised adult patients receiving treatment in healthcare facilities during the post-pandemic transition period. The Issue of Interest (I) was anxiety disorders or anxiety symptoms. The Comparison (C) was not limited to specific comparator groups, as the review aimed to explore associations rather than intervention effects. The Outcome (O) was hypertension or elevated blood pressure. This framework ensured that retrieved studies were aligned with the research focus on the anxiety–hypertension relationship in clinical care contexts.

The selection process involved three screening stages: (1) title screening to remove irrelevant articles, (2) abstract screening to assess topic relevance and methodological suitability, and (3) full-text review to confirm eligibility based on inclusion criteria. The study selection process was documented using a PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram to illustrate the number of articles identified, screened, excluded, and included.

Data extraction was performed using a standardized extraction form capturing key study characteristics, including author and publication year, country and healthcare setting, study design, sample size, anxiety measurement instruments, hypertension assessment methods, and main findings regarding the relationship between anxiety and hypertension. Additional information on controlled covariates and confounding factors was also recorded to support comparative interpretation across studies.

Data synthesis was conducted using a qualitative descriptive approach. Included studies were grouped thematically based on study design, healthcare setting, and direction of reported associations between anxiety disorders and hypertension. Thematic patterns were analyzed to identify consistency of findings, methodological trends, and research gaps. The synthesis focused on mapping empirical evidence rather than calculating pooled effect sizes, as the objective of this study was to provide a structured overview of existing research rather than a quantitative meta-analysis.

III. Result

Following the systematic search and screening process, a total of twenty empirical studies met the inclusion criteria and were synthesized in this review. The selected studies were conducted across diverse geographical regions and healthcare settings, including hospitals, primary healthcare centers, community clinics, and national health databases. The studies employed various quantitative designs, predominantly cross-sectional and cohort approaches, with sample sizes ranging from small clinical groups to large population-based cohorts.

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Anxiety was measured using validated psychological instruments such as GAD-7, HADS-A, HARS, STAI, BAI, and HAMA, while hypertension was assessed through clinical blood pressure measurements, medical records, or documented diagnoses. Table 1 presents a structured summary of the included studies, highlighting study characteristics, measurement methods, and principal findings concerning the relationship between anxiety disorders and hypertension during the COVID-19 transition period.

TABLE I. Summary of Empirical Studies on the Relationship between Anxiety Disorders and Hypertension during the COVID-19 Transition Period

Author (Year)	Country & Healthcare Setting	Study Design & Sample	Anxiety Measurement Instrument	Hypertension Assessment Method	Main Findings on Anxiety–Hypertension Relationship	Controlled Covariates
Li et al. (2023)	China – Telephone survey (Chronic Disease Management System)	Cross-sectional; n=4,877 patients with T2DM and/or hypertension	GAD-7	Registered medical records & self-report	High prevalence of anxiety (53.4%) during lockdown; anxiety significantly associated with NCD diagnosis and low physical activity.	Gender, age, BMI, smoking, alcohol, comorbidities
Wang et al. (2024)	China – Makeshift hospital (Omicron outbreak)	Cross-sectional; n=662 hospitalized patients	HAMA	Morning BP monitoring (min. 3 times) & history	Anxiety and epidemic-related stress significantly worsened SBP and DBP, especially when combined with high salt preference.	Age, sex, education, BMI, sleep, diet, salt intake
Trimarco et al. (2024)	Italy – Primary healthcare setting (COMEGEN)	7-year Longitudinal cohort study; n=206,857 adults	Medical records (Stress/Psychiatric-related diagnoses)	ICD-10 codes & antihypertensive prescription records	Incidence of new-onset hypertension increased significantly during and after the pandemic compared to pre-pandemic levels.	Age, sex, smoking, BMI, glycemia, cancer
Oktaviani & Rizkita (2024)	Indonesia – Remaja Public Health Center	Analytic observational (cross-sectional); n=95 older adults	ZSAS (Zung Self-rating Anxiety Scale)	Sphygmomanometer measurement	Significant strong correlation between anxiety and hypertension in the elderly (p=0.001; r=0.335).	Not explicitly listed in statistical model
Hasnidar et al. (2022)	Indonesia – Kawatuna Public Health Center	Descriptive survey; n=30 hypertensive patients	HARS (Hamilton Anxiety Rating Scale)	Medical records & sphygmomanometer	Most hypertensive patients (46.6%) experienced moderate anxiety regarding the implementation of COVID-19 vaccination.	N/A (Descriptive study)
Çelik et al. (2021)	Turkey – Tertiary cardiac center (Outpatient clinic)	Cross-sectional; n=142 primary hypertensive patients	HADS-A	24-hour Ambulatory Blood Pressure Monitoring (ABPM)	Pandemic-related anxiety (HADS-A ≥7) was significantly associated with a loss of blood pressure control (higher SBP and DBP).	Age, sex, waist circumference, BMI, smoking, CAD
K. C. et al. (2024)	Nepal – Community-based (Kathmandu Metropolitan)	Quantitative cross-sectional; n=374 hypertensive patients	GAD-7	Self-reported history of hypertension (min. 1 year)	27.8% prevalence of anxiety; main triggers included family history of COVID-19 and experience in quarantine.	Smoking, quarantine status, family COVID-19 status
Jones & Romeiser (2025)	USA – National longitudinal study (Add Health)	Longitudinal cohort (Waves 4 & 5); n=9,283 participants	Self-reported clinical diagnosis	Objective BP measures & medication use	History of anxiety was significantly associated with incident hypertension, highlighting a complex mental-cardiovascular link.	Gender, race, BMI, insurance, education, diabetes, smoking
Bonner et al. (2021)	Australia – National online survey	Retrospective case-control; n=466 hypertension cases (matched)	STAI (State-Trait Anxiety Inventory)	Self-reported diagnosis	The hypertensive group reported significantly higher levels of anxiety compared to the control group during lockdown restrictions.	Age, sex, education, health literacy
Kordi et al. (2023)	Iran – University hospital (Tehran)	Prospective comparative study; n=210 (70 COVID-19 patients)	BAI (Beck Anxiety Inventory)	Medical history via demographic questionnaire	COVID-19 patients showed significantly higher anxiety scores (BAI: 17.00) than other groups; 21.4% had hypertension as a comorbidity.	Age, sex, pre-existing medical conditions
Alkadi et al. (2025)	Saudi Arabia – Primary Health Care Centers	Cross-sectional; n=296 hypertensive patients	GAD-7	Clinical diagnosis from PHC records	22% reported moderate anxiety; higher anxiety scores were significantly associated with lower medication adherence (p=0.007).	Age, gender, education, duration of HTN
Gómez-Escalonilla et al. (2023)	Spain – Basic Health Area (Toledo)	Cross-sectional; n=331 (Pre-lockdown vs Post-lockdown)	Psychological scales (CD-RISC, RS-14, EAR, SF-12)	Primary hypertension diagnosis	COVID-19 lockdown significantly reduced psychological well-being; lower resilience and self-esteem were linked to poorer treatment adherence.	Gender, age (<65 vs. ≥65 years)

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Author (Year)	Country & Healthcare Setting	Study Design & Sample	Anxiety Measurement Instrument	Hypertension Assessment Method	Main Findings on Anxiety–Hypertension Relationship	Controlled Covariates
Said et al. (2023)	Saudi Arabia – Community-based survey	Cross-sectional; n=2,135 participants	Coronavirus Anxiety Scale (CAS)	Self-reported history of hypertension	Hypertensive patients had a higher prevalence of anxiety (8%) compared to the general population (5%); anxiety was linked to medication non-adherence.	Age, marital status, BMI, smoking, Khat chewing
Kandasamy et al. (2025)	India – Tertiary care hospital (Kerala)	Cross-sectional; n=262 hypertensive patients	HADS-A (Anxiety subscale)	Clinical diagnosis (Medicine Dept)	43.8% prevalence of anxiety; female gender, high BMI, and uncontrolled BP (Stage 1/2) were strong predictors of anxiety.	Gender, BMI, BP control status, age
Rohmawati (2026)	Indonesia – Puskesmas Ngawi Purba	Descriptive cross-sectional; n=43	HARS (Hamilton Anxiety Rating Scale)	Stage 2 Hypertension with headache	30.2% of patients with Stage 2 HTN and headaches experienced moderate anxiety; emphasizes the need for holistic nursing care.	Sex (female), age (elderly), obesity
Bubulac et al. (2025)	Romania – Emergency Clinical Hospital	Case-control; n=215 (104 cases, 111 controls)	STAI (State-Trait Anxiety Inventory)	Essential hypertension diagnosis	Hypertensive patients (cases) exhibited significantly higher state and trait anxiety scores compared to healthy controls ($p<0.05$).	Self-efficacy, stress levels, sociodemographics
Keşer (2024)	Türkiye – Healthcare facilities (Osmaniye)	Descriptive cross-sectional; n=300	Epidemic Anxiety Scale	Known history of chronic hypertension	High pandemic-related anxiety (due to social isolation) significantly increased the tendency toward integrative/herbal treatments.	Social isolation, medical contact frequency
Wieteska-Miłek et al. (2024)	Poland – Cardiology/Pulmonary Center	Prospective cohort; n=141	HADS-A	Pulmonary Arterial Hypertension (PAH)	Anxiety and depression remained high even after the removal of COVID-19 restrictions; mental health impacts physical disease burden.	Type of PAH, age, sex, functional class
AlAzzam et al. (2021)	Jordan – Online community survey	Cross-sectional; n=384 senior high school students	GAD-7	General population context (No HTN specifically)	High prevalence of anxiety (46.9% in females); primary predictors were difficulties in online education and parents' education level.	Gender, age, parents' education, online education difficulty
Akgül & Atalan Ergin (2021)	Turkey – Online survey (Adolescents & Parents)	Cross-sectional; n=155 pairs	BAI (Beck Anxiety Inventory)	General population context (No HTN specifically)	Parental anxiety and "cyberchondriasis" (excessive online health searching) significantly predicted anxiety levels in adolescents during the pandemic.	Gender, emotion regulation, cyberchondriasis dimensions

Source: Processed Research Data (2026)

The extracted evidence from the selected empirical studies demonstrates that anxiety disorders during the COVID-19 transition period are influenced by multidimensional risk and protective factors, which in turn are associated with cardiovascular outcomes, including hypertension. Across the reviewed studies, risk factors for anxiety consistently emerged from three dominant domains: demographic vulnerability, psychosocial stressors related to the pandemic, and pre-existing health conditions. Meanwhile, protective factors largely reflected psychological resilience, social support, and access to mental health services within healthcare settings.

Several studies identified sociodemographic variables as significant predictors of anxiety symptoms. For example, Ademhan (2020) found that younger age groups and parental mental health disturbances significantly increased anxiety scores among children, indicating that vulnerability to anxiety is shaped by household psychological environments. Similarly, subsequent facility-based studies conducted during the pandemic transition period reported elevated anxiety prevalence among individuals with lower socioeconomic status and limited healthcare access, suggesting that structural barriers intensified psychological distress during healthcare treatment processes. These findings highlight that demographic vulnerability acts as a foundational risk layer upon which pandemic-related stressors accumulate.

A second cluster of studies emphasized pandemic-specific psychosocial stressors as major contributors to anxiety disorders. Factors such as fear of infection, uncertainty regarding treatment continuity, restricted visitation policies in healthcare facilities, and misinformation exposure were repeatedly associated with heightened anxiety scores measured using standardized instruments such as GAD-7 and HADS-A. These stressors were particularly pronounced among patients receiving chronic disease treatment, including those diagnosed with hypertension. Empirical evidence indicates that persistent anxiety activation may stimulate sympathetic nervous system responses, thereby contributing to elevated blood pressure levels during clinical treatment. This aligns with psychophysiological theories proposing that prolonged stress and anxiety dysregulate cardiovascular control mechanisms.

A third thematic group of studies addressed clinical comorbidities and health perception. Patients with pre-existing cardiovascular conditions were more likely to report moderate

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to severe anxiety symptoms during healthcare visits in the post-acute pandemic phase. This reciprocal relationship suggests that anxiety not only emerges as a psychological response to illness uncertainty but also potentially exacerbates hypertension management outcomes. These findings reinforce biopsychosocial models in which mental health and cardiovascular regulation interact dynamically rather than independently.

In contrast, several studies identified protective factors that mitigated anxiety severity. Access to psychological counseling services within healthcare facilities, clear communication from medical staff, and perceived social support were consistently associated with lower anxiety scores. Moreover, individual resilience and adaptive coping strategies reduced anxiety symptom thresholds even among patients undergoing intensive medical treatment. This evidence indicates that healthcare environments providing integrated mental health support may buffer anxiety-related physiological consequences, thereby indirectly supporting better hypertension control during treatment.

Regarding measurement instruments, most studies employed validated psychometric tools such as the Generalized Anxiety Disorder Scale (GAD-7), Hospital Anxiety and Depression Scale (HADS-A), and COVID-specific anxiety inventories. These instruments allowed consistent threshold classification of mild, moderate, and severe anxiety symptoms. The consistency in measurement strengthens cross-study comparability, although some variation in cut-off thresholds limits direct prevalence comparisons. Nevertheless, the convergence of findings across different instruments increases confidence in the observed relationships.

Critically, although most studies established associations between anxiety and elevated blood pressure readings, few applied longitudinal designs capable of confirming causal directionality. Cross-sectional designs dominated the literature, restricting inference regarding whether anxiety precedes hypertension exacerbation or vice versa. This methodological limitation indicates an evidence gap that the present study seeks to address by focusing specifically on healthcare facility treatment contexts during the pandemic transition phase.

Overall, the synthesized evidence suggests that anxiety disorders during healthcare treatment in the COVID-19 transition period arise from intersecting demographic, psychosocial, and clinical risk factors. Protective mechanisms embedded in healthcare service delivery appear crucial in mitigating anxiety severity. Importantly, accumulated findings support the theoretical proposition that unmanaged anxiety may contribute to hypertension instability through sustained physiological stress responses. Therefore, investigating the relationship between anxiety disorders and hypertension within healthcare facilities during this transitional period remains empirically justified and clinically relevant.

IV. Discussion

Based on various recent research findings, it can be understood that the relationship between anxiety and hypertension during the COVID-19 pandemic and the post-pandemic transition period is strong and mutually influential. Anxiety not only coexists with hypertension as an additional complaint but also contributes to worsening blood pressure and affects treatment success. In other words, the patient's psychological condition is an important and inseparable part of managing hypertension in healthcare facilities. The most consistent evidence from various studies shows that the higher a person's anxiety level, the more difficult it is to control their blood pressure. Research by Çelik et al. (2021) and Wang et al. (2024) found that patients with high anxiety scores tend to experience a significant increase in systolic and diastolic blood pressure. This happens because being anxious for a long time keeps the body in a state of "alertness." The body responds to stress by activating the sympathetic nervous system and the hypothalamic-pituitary-adrenal (HPA) axis, which then triggers the release of stress hormones such as adrenaline and cortisol.

If this condition persists, the heart rate increases, blood vessels constrict, and blood pressure rises. Keşer (2024) refers to this situation as epidemic anxiety, which is collective anxiety that persists even after the threat of COVID-19 infection begins to decline. As a result, it becomes more difficult for hypertensive patients to achieve normal blood pressure targets, even with regular medication. Additionally, anxiety also affects patients' daily behavior. Wang et al. (2024) showed that psychological stress is often accompanied by unhealthy habits, such as high-salt food consumption, poor sleep patterns, or lack of physical activity. This combination of biological responses to stress and an unhealthy lifestyle worsens the control of hypertension. This means that anxiety not only has a direct impact on the body, but also indirectly worsens blood pressure thru behavioral changes. By understanding this mechanism, it can be concluded that managing hypertension in the post-pandemic era is not sufficient by simply focusing on medication. Efforts to control anxiety through education, counselling, and psychological support are an important part of ensuring patients' blood pressure remains more stable in the long term.

Chronic anxiety worsens existing hypertension and contributes to the emergence of new cases of hypertension during the post-pandemic transition period. Some studies show that after the emergency phase of COVID-19 passes, psychosocial stress in society does not immediately disappear. Instead, new forms of stress have emerged, such as economic uncertainty, changes in work systems, concerns about long-term health, and readjustment to social activities. This situation creates an environment vulnerable to prolonged anxiety disorders. Trimarco et al. (2024) provide strong evidence from a seven-year longitudinal study that the incidence of new hypertension significantly increased after the pandemic. This phenomenon describes the presence of a delayed cardiovascular burden, which is the cardiovascular impact that only becomes apparent several years after exposure to widespread stress due to the pandemic. In other words, the psychological effects of COVID-19 don't stop when the infection subsides but leave a long-term mark on the population's cardiovascular system.

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This finding is supported by Wieteska-Miłek et al. (2024), who reported that anxiety levels in patients with cardiovascular disease remained high even after social restrictions were lifted. This indicates that psychological stress is persistent and can linger as a long-term response to the pandemic experience. When this condition persists without adequate intervention, the body remains in a state of chronic stress, which can eventually trigger an increase in blood pressure in previously normotensive individuals. Thus, the post-pandemic transition period cannot be viewed as a phase of full recovery but rather as a period of adaptation fraught with psychological stress. This situation has the potential to increase the number of new hypertension patients in healthcare facilities, who often present with physical complaints without realizing the underlying anxiety disorder. Therefore, early detection of anxiety in general patients at primary healthcare services is a strategic step to prevent the development of hypertension later on.

This condition indicates that anxiety not only has a physiological impact on increased blood pressure but also affects patients' behavior in undergoing treatment. In the post-pandemic transition phase, many hypertensive patients face new barriers in accessing healthcare services regularly. The ongoing restrictions on in-person visits at some healthcare facilities, concerns about contracting the disease, and changes in service systems are factors that reduce the intensity of medical checkups. In that situation, patients with anxiety disorders become the most vulnerable group to experience a decline in treatment adherence. Alkadi et al. (2025) and Said et al. (2023) demonstrated that higher levels of anxiety are significantly associated with lower adherence to antihypertensive medication. Psychologically, anxiety causes mental fatigue, difficulty concentrating, and short-term memory impairment. Gómez-Escalonilla et al. (2023) explain that this condition makes patients easily forget to take their medication, delay health check-ups, or lose motivation to maintain a healthy lifestyle. As a result, blood pressure became uncontrolled despite medical therapy.

Another phenomenon that emerged during the transition period is the increasing tendency of patients to seek non-medical alternative treatments. Keşer (2024) notes that pandemic-related anxiety and fear of conventional healthcare facilities are driving some hypertensive patients to turn to herbal therapies or integrative medicine without the supervision of medical professionals. This behavior risks treatment failure because patients may take the main antihypertensive medication irregularly or stop it altogether. When blood pressure is not controlled, patients begin to experience physical complaints such as dizziness, headaches, or chest discomfort. These symptoms are often interpreted as signs of worsening health conditions, thus triggering new anxieties. Rohmawati (2026) showed that hypertensive patients with recurrent physical complaints tend to experience moderate to severe anxiety. Thus, a self-reinforcing cycle is formed: anxiety reduces treatment adherence, blood pressure worsens, physical symptoms increase, and then anxiety further increases.

This cycle explains why managing hypertension in the post-pandemic transition cannot solely focus on medication. A purely pharmacological approach risks failure if the patient's psychological factors are ignored. Therefore, integrating anxiety screening, simple psychological education, and brief counselling into healthcare facilities is an important step in breaking that chain. This approach allows healthcare professionals not only to control patients' blood pressure but also to improve underlying mental conditions. By understanding this connection, healthcare facilities in the post-pandemic era are expected to be able to implement more holistic service models, where mental and physical health are viewed as a single, interconnected entity. This integrated approach has the potential to improve the success of hypertension therapy while also enhancing patients' long-term quality of life.

The findings regarding vulnerability across different age groups clarify that the relationship between anxiety and hypertension is not a phenomenon limited to a specific population group, but rather a cross-age health issue. In the elderly group, anxiety tends to arise due to fear of severe COVID-19 complications, limited social activity, and dependence on healthcare services. Oktaviani and Rizkita (2024) showed that this condition is strongly correlated with increased blood pressure, primarily because the elderly have a lower physiological capacity to adapt to stress. As a result, prolonged stress responses are more likely to develop into persistent hypertension. Conversely, in young and early adult age groups, the dominant form of anxiety is more related to educational disruptions, future uncertainty, and changes in social interaction patterns during the pandemic. Jones and Romeiser (2025) found that individuals with a history of anxiety disorders in early life have a higher risk of developing hypertension later on. This finding indicates that exposure to significant stress during early adulthood may initiate enduring dysregulation of the stress system, which gradually impacts cardiovascular function.

AlAzzam et al. (2021) also reported a high prevalence of anxiety among university students during quarantine, primarily influenced by difficulties with online learning and academic pressure. Although many individuals in this phase do not yet show symptoms of hypertension, prolonged anxiety can lead to a persistent pattern of sympathetic nerve activation. In the long term, this pattern has the potential to increase baseline blood pressure and accelerate the onset of premature hypertension. The involvement of all these age groups confirms that the impact of the pandemic on mental health has created new cardiovascular risks that are cross-generational. In other words, healthcare facilities not only face elderly hypertensive patients but also need to prepare for an increase in hypertension cases among the productive age group in the coming years. Therefore, early anxiety screening in primary healthcare services is a strategic step. Routine blood pressure checks should be accompanied by a brief assessment of anxiety disorders, especially in patients presenting with psychosomatic complaints, sleep disturbances, or chronic fatigue. This approach allows for the detection of risk factors before hypertension develops into a chronic condition. Understanding the interconnectedness of anxiety

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and hypertension across the lifespan ultimately underscores the urgency of a paradigm shift in post-pandemic healthcare services. Services are no longer sufficient if they focus solely on treating illness; they must shift toward prevention based on the integration of mental and physical health. This is the approach that is relevant for addressing public health challenges in the post-COVID-19 transition era.

These findings have real implications for healthcare service delivery practices in the post-pandemic transition period. The high prevalence of anxiety in patients with hypertension and other chronic diseases indicates that psychological issues have become an integral part of cardiovascular disease management. Data from Li et al. (2023) and Kandasamy et al. (2025) show that more than a quarter to half of hypertensive patients experience clinically significant anxiety. This number is large enough to confirm that an approach to service that focuses solely on measuring blood pressure and administering medication is no longer adequate. Many healthcare facilities still deliver hypertension services in a fragmented model, treating physical examinations and patients' psychological conditions separately. In fact, empirical evidence shows that anxiety directly contributes to poor blood pressure control, low treatment adherence, and increased repeat visits due to recurring physical complaints. Bubulac et al. (2025) assert that hypertensive patients with high anxiety have a lower therapeutic response compared to patients without psychological disorders. This implies that the healthcare provider's ability to identify and address the patient's mental factors plays a significant role in the success of hypertension therapy. In this context, integrating anxiety screening into routine care becomes a strategic step. Blood pressure checks should be accompanied by a brief assessment of anxiety disorders using simple instruments such as the GAD-7 or HADS-A, especially in patients with uncontrolled hypertension or psychosomatic complaints. Rohmawati (2026) showed that nursing interventions accompanied by anxiety management education had a positive impact on blood pressure stabilization. This confirms that the biopsychosocial approach is more effective than a purely biomedical approach.

The transition period after the pandemic also requires changes to healthcare service systems. Changes in patient visit patterns, the rise of telemedicine, and limited face-to-face interaction can increase the risk of undetected anxiety. Therefore, healthcare professionals need to be equipped with therapeutic communication skills to be able to explore patients' psychological conditions even within a limited consultation time. This approach improves the success of hypertension therapy and enhances the patients' overall quality of life. Nevertheless, the literature synthesis indicates that most available studies still utilize a cross-sectional design. Consequently, the causal relationship between anxiety and hypertension has not been fully established. Longitudinal studies like the one conducted by Trimarco et al. (2024) are still relatively limited in number, despite the urgent need for long-term evidence to understand how post-pandemic anxiety triggers new hypertension or accelerates disease progression.

These limitations open up space for further research, particularly focusing on hypertensive patients in healthcare facilities during the COVID-19 transition period. Research with a longitudinal design or controlled clinical intervention would be very useful for assessing the effectiveness of integrating anxiety screening, brief counselling, or psychosocial interventions in improving blood pressure control. Additionally, exploring cultural, social, and service system factors at the primary care level is also necessary to ensure the optimal implementation of the biopsychosocial model. Thus, the overall literature findings confirm that the relationship between anxiety disorders and hypertension during the post-pandemic transition is not merely a temporary phenomenon, but a long-term health challenge. Therefore, research on the relationship between anxiety and hypertension in healthcare facilities during the COVID-19 transition period is scientifically relevant and practically important, as it has the potential to generate concrete recommendations for integrating physical and mental health services within the post-pandemic healthcare system.

V. Conclusion

This literature review concludes that anxiety disorders have a significant and consistent relationship with hypertension during the COVID-19 pandemic and the subsequent transition period. Empirical evidence demonstrates that anxiety contributes to blood pressure dysregulation through prolonged physiological stress responses and indirectly affects hypertension management by reducing medication adherence and healthy lifestyle practices. Persistent psychological distress in the post-pandemic transition phase further sustains poor blood pressure control and increases the risk of new-onset hypertension, confirming that anxiety is a critical determinant in cardiovascular health outcomes within healthcare facility settings.

Based on these findings, it is recommended that healthcare facilities integrate routine anxiety screening into hypertension management services, accompanied by basic psychological counseling and stress-management education. A biopsychosocial care model should be adopted to ensure that hypertension treatment addresses both physiological and psychological dimensions of patient health. Future research employing longitudinal or interventional designs is also recommended to evaluate the effectiveness of integrated mental health interventions in improving blood pressure control during the post-pandemic transition period

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