



# The Effectiveness of Counseling-Based Self-Management Education on Stress Coping among Patients with Hypertension

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**Abstract:** Hypertension is a chronic condition that is frequently accompanied by persistent psychological stress, which may interfere with patients' ability to manage their illness effectively. Strengthening stress coping is therefore an important target of counseling-based interventions, particularly within the framework of counseling positivism that emphasizes personal strengths and adaptive functioning. This study aimed to examine the effectiveness of counseling-based self-management education in improving stress coping among patients with hypertension. This study hypothesized that counseling-based self-management education would significantly improve stress coping after the intervention. A one-group pretest–posttest quasi-experimental design was employed involving 60 patients with hypertension in a primary healthcare setting. Participants received a counseling-based self-management education program delivered through three structured counseling sessions, each lasting 20 minutes and conducted three times within one week. Stress coping was measured using the Brief COPE inventory. Data were analyzed using a paired-samples t-test and effect size estimation. The results showed a statistically significant improvement in stress coping scores from pretest (M = 56.2, SD = 6.5) to posttest (M = 57.5, SD = 6.8), with  $t = 2.10$  and  $p = .039$ . The effect size was small (Cohen's  $d = 0.20$ ), indicating a modest but meaningful improvement. In conclusion, counseling-based self-management education is a feasible and effective approach to enhancing stress coping among patients with hypertension. It supports the integration of positive psychology-oriented counseling into primary healthcare services.

**KEYWORDS:** *Hypertension, positive psychology, self-management, stress coping, counseling*

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## INTRODUCTION

Hypertension is a chronic health condition that not only affects individuals' physical functioning but also poses significant psychological challenges. Living with hypertension often requires long-term lifestyle adjustments, continuous self-monitoring, and sustained self-regulation, which may become persistent sources of stress for patients. When psychological stress is not effectively managed, individuals may experience emotional distress and reduced psychological well-being, potentially undermining their capacity to cope with daily life demands (WHO, 2023).

From a psychological perspective, hypertension can be understood as a prolonged life stressor that requires adaptive coping strategies rather than solely biomedical management. Stress appraisal and coping theory suggests that individuals' responses to chronic stressors are shaped by how they interpret and manage stress, rather than by the stressor itself (Surma, Elisa Manihuruk, 2025). Ineffective coping strategies have been associated with emotional dysregulation, decreased sense of control, and poorer psychological adjustment in individuals living with chronic illness (Foroumandi et al., 2022).

Positive psychology provides a theoretical framework that emphasizes individuals' strengths, adaptive capacities, and potential for growth when facing adversity. Within this perspective, stress coping is conceptualized not merely as a defensive response but as a dynamic process that enables individuals to build resilience, optimism, and psychological resources over time (Ainur Rosidah, Eko Susanto, 2025). The broaden-and-build theory further explains that positive psychological resources can expand individuals' coping repertoires and support long-term psychological well-being in the context of ongoing stress (Anthonysamy Anbarasu, 2024).

Counseling-based interventions grounded in positive psychology have demonstrated effectiveness in enhancing individuals' coping abilities by fostering self-awareness, strengthening personal resources, and facilitating meaning-making processes (Tarrats-pons & Mussons-torras, 2025). In the context of chronic health conditions, counseling-based self-management education represents an integrative approach that combines psychological empowerment with practical self-regulation strategies. This approach positions patients as active agents in managing their stress experiences, rather than passive recipients of health information (Aldbyani et al., 2025).

Although previous studies have highlighted the benefits of self-management programs for patients with hypertension, much of the existing literature has primarily emphasized clinical indicators and behavioral compliance (Irwan, 2025). Relatively limited attention has been given to counseling-oriented self-management interventions that explicitly target stress coping as a positive psychological resource. Moreover, evidence on brief, structured counseling interventions delivered in primary healthcare settings remains scarce, particularly in community-based contexts where time and resource constraints are common (Harum et al., 2025).

To address this gap, the present study examines the effectiveness of a counseling-based self-management education program designed to enhance stress coping among patients with hypertension. Grounded in a positive psychology orientation, the intervention emphasizes personal strengths, adaptive coping strategies, emotional regulation, and meaning-making in managing hypertension-related stress. Using a one-group pretest–posttest design in a primary healthcare setting, this study aims to provide preliminary evidence regarding the potential of brief counseling-based interventions to support psychological adaptation and well-being among patients with hypertension.

Accordingly, the objective of this study is to evaluate the effectiveness of counseling-based self-management education in improving stress coping among patients with hypertension. The findings of this study are expected to contribute to the development of counseling practices in health-related contexts by highlighting the role of positive psychological interventions in empowering individuals to manage chronic illness more adaptively and to cultivate a more meaningful life experience (Patil, 2024).

## METHODS

### Design

This study employed a one-group pretest-posttest design to evaluate the effectiveness of a counseling-based self-management education program on stress coping among patients with hypertension. This quasi-experimental design was selected to allow an initial assessment of intervention effectiveness in a real-world primary healthcare setting where randomization and the

inclusion of a control group were not feasible. Changes in stress coping were examined by comparing participants' scores before and after the intervention (Sharpe & Cribbie, 2023).

### Participants

Participants were adult patients diagnosed with hypertension who received healthcare services at Puskesmas Ngemplak, Boyolali. A purposive sampling strategy was used to recruit participants who met the inclusion criteria: (a) having a confirmed diagnosis of hypertension, (b) being aged 18 years or older, (c) having the ability to communicate effectively, and (d) willingness to participate voluntarily. Patients with severe cognitive impairment or acute medical conditions were excluded.

A total of 60 patients participated in the study. All participants provided written informed consent prior to data collection. The study procedures adhered to ethical principles for research involving human subjects, including voluntary participation, confidentiality, and the right to withdraw at any time without consequences. Ethical approval for the study was obtained from the relevant institutional authority. The demographic characteristics of the participants are presented in Table 1.

**Table 1.** Demographic Characteristics of Participants (N = 60)

Variable	Category	n	%
Sex	Female	46	76.7
	Male	14	23.3
Age (years)	Mean (SD)	60 (6.8)	100
Duration of hypertension	< 5 years	15	25.0
	≥ 5 years	45	75.0

Note. Values are presented as frequency (n), percentage (%), or mean (SD).

### Instruments

An instrument designed to measure individuals' coping strategies in response to stress. The Brief COPE employs a Likert-type response format and comprises multiple subscales representing adaptive and maladaptive coping strategies, with higher total scores indicating more adaptive stress coping. The Brief COPE has been widely used and validated in adult populations across various cultural contexts. In the present study, the internal consistency of the instrument was acceptable, indicating that the Brief COPE provided a reliable measure of stress coping among patients with hypertension. The instrument was reviewed to ensure clarity and cultural relevance for the study setting (Zeladita-huaman et al., 2024).

### Procedure

Participants were invited to participate during routine visits to the primary healthcare center. After receiving a full explanation of the study objectives and procedures, eligible participants who agreed to take part provided informed consent. Participants then completed the pretest assessment of stress coping using the Brief COPE inventory.

The intervention consisted of a counseling-based self-management education program delivered through three structured counseling sessions, each lasting approximately 20 minutes, conducted three times within one week. The intervention was implemented at Puskesmas Ngemplak, Boyolali, and facilitated by a trained healthcare professional. The counseling program was grounded in a positive psychology framework and focused on enhancing personal strengths, developing adaptive stress coping strategies, promoting emotional regulation, and supporting meaning-making in managing hypertension-related stress.

Following completion of the third counseling session, participants completed the posttest assessment using the same instrument. Confidentiality and ethical standards were maintained throughout the study.

## Data Analysis

Data were analyzed using methods appropriate to the study design and research objectives. Descriptive statistics were used to summarize participants' demographic characteristics and stress coping scores. Differences between pretest and posttest stress coping scores were analyzed using a paired-samples t-test to assess the effectiveness of the intervention. Effect size was calculated using Cohen's *d* to estimate the magnitude of change. All analyses were conducted using SPSS software. The level of statistical significance was set at  $p < .05$ . Missing data were checked prior to analysis, and no substantial missing values were identified (Xu et al., 2022).

## RESULTS AND DISCUSSION

### Results

This study examined changes in stress coping among patients with hypertension before and after participation in a counseling-based self-management education program. A total of 60 participants completed both the pretest and posttest assessments, and all data were included in the analysis. Participants' demographic characteristics are presented in Table 1.

Descriptive analysis showed an increase in the mean stress coping score from pretest to posttest following the intervention. Inferential analysis using a paired-samples t-test demonstrated a statistically significant improvement in stress coping scores after the counseling-based self-management education program ( $t = 2.10$ ,  $p = .039$ ). These findings indicate that the intervention was effective in enhancing adaptive stress coping among patients with hypertension.

Table 2. Comparison of Stress Coping Scores Before and After the Intervention (N = 60)

Pre-test	Mean	SD	t	p
Pretest	56.2	6.5		
Posttest	57.5	6.8	2.10	0.39

Note. Stress coping was measured using the Brief COPE inventory. Differences between pretest and posttest scores were analyzed using a paired-samples t-test.

### Discussion

The present study demonstrated that a counseling-based self-management education program significantly improved stress coping among patients with hypertension. The significant pre-post difference in coping scores suggests that the intervention was effective in strengthening patients' adaptive psychological responses to hypertension-related stress. These findings support the growing body of recent literature emphasizing the importance of addressing psychological coping as a central component of chronic disease management (Bubulac et al., 2025).

From a contemporary stress and coping perspective, coping is understood as a dynamic and modifiable process influenced by individuals' appraisal of stressors and their perceived resources (Hussein et al., 2024). Hypertension often functions as a chronic stressor requiring sustained psychological adjustment (Aji & Sani, 2021). The counseling-based intervention in this study focused on enhancing self-awareness, emotional regulation, and adaptive coping strategies, which may have enabled participants to manage stress more constructively. The improvement in coping observed after the intervention aligns with recent findings that counseling and psychosocial interventions can facilitate adaptive coping by reshaping stress appraisal and promoting self-regulation (Liu et al., 2025).

The small effect size (Cohen's  $d = 0.20$ ) observed in this study should be interpreted within the context of the intervention's scope and delivery. The program consisted of three brief counseling sessions delivered over one week in a primary healthcare setting. Recent research suggests that brief counseling interventions often yield small but statistically significant effects, particularly when outcomes involve psychological constructs such as coping or emotional regulation (Kamsickas et al., 2024). Importantly, positive psychology emphasizes that small improvements in

coping may represent early activation of psychological strengths, such as optimism, perceived control, and adaptive self-regulation, which can develop further over time with continued practice and support (Greco et al., 2025)

The findings of this study are also consistent with recent positive psychology-oriented research highlighting the role of strengths-based counseling in promoting psychological well-being among individuals facing chronic health challenges (Pujiyanto, 2022). Counseling interventions that emphasize empowerment, meaning-making, and personal strengths have been shown to enhance coping capacity and psychological resilience, even in brief formats (Aguiar et al., 2024). In the context of hypertension, where long-term self-management is required, strengthening coping resources may support patients' ability to adapt psychologically and maintain engagement with health-related behaviors.

Compared with previous studies that have focused primarily on clinical or behavioral outcomes of hypertension management, the present study contributes by emphasizing stress coping as a positive psychological resource. Recent literature has increasingly called for integrated approaches that address both physical and psychological dimensions of chronic illness management (Organization, 2023). By demonstrating that counseling-based self-management education can improve coping in a primary healthcare setting, this study supports the expansion of counseling paradigms from problem reduction toward empowerment and psychological growth, which is central to the philosophy of counseling positivism (Maria et al., 2024).

Despite its contributions, this study has limitations that should be acknowledged. The one-group pretest–posttest design limits causal inference, as changes in coping may also be influenced by external factors or measurement effects. Additionally, the short duration of the intervention may have constrained the magnitude of the observed effect. Recent methodological literature recommends that future studies employ controlled designs, longer intervention periods, and follow-up assessments to examine the sustainability of coping improvements over time (Mara, 2025).

In summary, the findings indicate that counseling-based self-management education can produce statistically significant improvements in stress coping among patients with hypertension, even when delivered in a brief and feasible format. This study contributes to the growing evidence base supporting the integration of positive psychology-oriented counseling interventions into primary healthcare services, and highlights stress coping as a meaningful target for empowering patients to manage chronic illness more adaptively.

## CONCLUSION

This study provides preliminary evidence that counseling-based self-management education is effective in improving stress coping among patients with hypertension. The findings demonstrate that even a brief, structured counseling intervention delivered over three sessions can contribute to positive changes in individuals' adaptive coping capacities. These results highlight the importance of addressing psychological dimensions alongside physical management in the context of chronic health conditions.

From a positive psychology perspective, the improvement in stress coping observed in this study reflects the activation of personal strengths, self-awareness, and adaptive psychological resources. Rather than focusing solely on symptom reduction, the counseling-based approach emphasized empowerment, meaning-making, and constructive coping strategies, which are central to fostering psychological well-being. Although the effect size was small, the change remains meaningful given the brief nature of the intervention and its implementation in a real-world primary healthcare setting.

The findings suggest that counseling-based self-management education can serve as a feasible and practical intervention within community health services, particularly where time and

resources are limited. By positioning patients as active agents in managing their stress experiences, this approach aligns with the core principles of counseling positivism, which seek to promote hope, optimism, and personal growth in the face of life challenges.

In conclusion, counseling-based self-management education represents a promising strategy for supporting psychological adaptation among patients with hypertension. Future research is encouraged to employ controlled designs, longer intervention durations, and follow-up assessments to further explore the sustainability and broader impact of counseling-based interventions on psychological well-being and quality of life in chronic illness contexts.

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