

Original Research Article

Developing a targeted and tailored social support intervention model for hypertension management: Findings from a focus group study

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Abstract

Purpose: To obtain in-depth feedback from relevant stakeholders to refine and improve the learning module of targeted and tailored social support interventions, to increase its clarity, practicality, and applicability in real-life implementation contexts.

Methods: This was a qualitative study using a focus group discussion (FGD) approach, involving pharmacists, the head of geriatric services primary healthcare center, local policymaker, intern and academic. The FGDs were documented through audio recordings, which were transcribed verbatim for data processing. Thematic content analysis was applied to the transcripts, leading to the identification of themes, subthemes, and categories. A shared coding tree was developed after coding the transcripts.

Results: There was a unanimous support for the implementation of the targeted and tailored social support intervention model. However, some constraints may affect its implementation, including healthcare workers' limited time, lack of consultation rooms, and patients' perception that medication alone suffices without the need for comprehensive education.

Conclusion: Despite these challenges, interventions tailored to individual needs models enhance users' sense of value and understanding, thereby increasing patient satisfaction and experience.

Keywords: Elderly, Hypertension, Medication adherence, Model, Social support

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INTRODUCTION

Medication non-adherence is influenced by several factors, including lack of social support. It is recognized as an important contributor to poorly controlled hypertension [1]. A study evaluating medication adherence among elderly patients with hypertension at the Klungkung 1 Community Health Center found adherence to be low, with a rate of 63.9 %. Several factors significantly affect adherence, including

knowledge ($p = 0.015$), motivation ($p = 0.02$), staff support ($p = 0.048$), and family support ($p = 0.000$) [2].

Social support is assistance provided by others to an individual, which facilitates the achievement of their needs or goals. It can be in the form of material and moral, expressed either verbally or non-verbally, and obtained from social relationships such as friends, neighbours, and family [3]. Furthermore, social support originates

from two key aspects, which include informal environments such as family, friends, coworkers, superiors, and the formal assistance environment, including health workers and humanitarian service workers. This support manifests in four different forms: emotional support, instrumental support, information support and assessment support [4].

Pharmacists play a crucial role in improving medication adherence through patient-centered strategies. These include reviewing the patient's medication history – the use of other medications and traditional medicine – assessing the patient's knowledge of their therapy (therapeutic goals, dosage, timing, and potential side effects), evaluating motivation, and reinforcing correct medication administration techniques [5]. Maintaining a normal blood pressure level is important for one's health. Adherence is defined as the extent to which a patient follows the treatment protocols prescribed by healthcare providers [6]. It reflects an individual's commitment to follow healthcare experts' advice, modify eating habits, and generally improve their quality of life [7]. A study involving pharmacist-led interventions for hypertensive patients with diabetes mellitus demonstrated significant improvements in adherence when tailored to the patients' needs ($p = 0,008$) [8].

This study aims to obtain in-depth feedback from relevant stakeholders to refine and improve the learning module of targeted and tailored social support intervention, to increase its clarity, practicality, and applicability in real-life implementation contexts. By implementing a systematic and participatory approach, this model is expected to be adaptable and applicable to healthcare centers.

METHODS

This qualitative study employed a focus group discussion (FGD) approach. Participants included two pharmacists from primary healthcare centers, two heads of geriatric services from primary healthcare centers, as well as representatives from local policymakers of geriatric services, an internist (Internal Medicine Physician), and an academic. Purposive sampling was used for participant selection. Participants were selected based on the relevance of their expertise to the research topic, ensuring a more focused and high-quality discussion. The number of participants aligned with the methodological requirements for a focus group discussion [9]. The study was conducted in September 2024 in Lamongan, East Java, Indonesia. This study employed semi-structured

group discussions, following a predefined guide. However, the researchers could elicit more information. Participants received a draft of the Targeted and Tailored Social Support Intervention (TASSI) one week before the focus group discussion for review. Focus group discussions were documented through audio recordings, which were transcribed verbatim for data processing. Confidentiality was ensured by anonymizing all transcripts through the removal of participant identifiers and related information before conducting qualitative data analysis.

The researcher informed participants about the purpose, benefits, and procedures of the study at the start of the focus group discussion. Those who agreed to participate signed a consent form. This Study was approved by the Ethics Commission of the Faculty of Nursing, Airlangga University, 3092-KEPK in February 2024.

Statistical analysis

Data were analyzed using thematic analysis. The FGD recordings were transcribed verbatim and anonymized prior to analysis. Initial codes were generated inductively, grouped into categories, and synthesized into overarching themes. Coding was performed independently by multiple researchers, with disagreements resolved through consensus. As a qualitative study, no statistical hypothesis testing was applied.

RESULTS

Participant demographic data

The demographic characteristics of the participants are presented in Table 1.

Developing the model

The focus group discussion played a critical role in the development of the TASSI intervention to improve medication adherence in elderly patients with hypertension. Through in-depth discussions, participants shared their insights and experiences, leading to the identification of key themes, sub-themes, and categories central to the design of the TASSI model. These thematic elements emerged from a systematic analysis of the dialogue, revealing the health center conditions and strategies to improve medication adherence in elderly patients with hypertension, as viewed from the diverse perspectives of the stakeholders involved. The results of the thematic analysis, which capture the core ideas and patterns from the FGDs, are summarized and comprehensively presented in Table 2.

DISCUSSION

The implementation of social support in the primary healthcare center has been carried out, but it remains unstructured. Social support for elderly patients is provided by healthcare workers and family members. This support includes the provision of education by healthcare workers to patients, with the accompaniment of their families. Healthcare workers involve the patient's family because most elderly patients have difficulty understanding the education provided. A systematic review showed that family members could enhance patient adherence. This

indicates that healthcare providers should consider whether patients have adequate social support to help them follow and benefit from treatment recommendations [1]. The family is capable of making appropriate decisions regarding healthcare actions, accompanying patients to healthcare services, helping with medical expenses, reminding them to take medication, and maintaining a home environment that supports health and emotional well-being. Family members can provide support and show care to other family members suffering from hypertension [10].

Table 1: Demographic characteristics of the participants

Characteristic	Pharmacist	Head of geriatric services of primary healthcare centers	Local policymaker of geriatric services	Internist	Academic
Age (years)					
17-25					
26-35	2	2		1	
36-45			1		
46-55					
56-65					1
Education					
Pharmacist	1				
General practitioner		2	1		
Internist				1	
Master	1				
Doctor					1
Tenure (years)					
2-5	2	2		1	
6-10					
>10			1		1

Table 2: Classification of Themes and Sub-themes of the Feasibility of implementing the model

Theme	Sub-theme	Category	Verbatim quote (Informant)
Feasibility of implementing the model	Opportunity	Social support required	For example, if we find less compliant patients, we can re-educate them and their family or companion about this disease (DS01) When the patient is the one who can answer, I have to ask if someone is accompanying them. If so, I will call the family outside the clinic and ask them to come in (DR02)
	Constraint	Healthcare workers' limited time	It's not ideal. We also have to serve outside the building. We have to divide our time accordingly (APT02) All of us are already in service. Even on certain days at the beginning of the month, we cannot do this because we will definitely be busy making reports, procuring goods, and receiving (APT01)
	Implementation Strategies	Need for coordination among parties	There is a WhatsApp group, perhaps coordinated by the midwife or the head of <i>Prolanis</i> , to notify us if they don't come. Usually, the family will take them there (DR01)

DS: Internist (Medical doctor who specializes in internal medicine), DR: **Head of Geriatric Services**, primary healthcare centers, APT: Pharmacist, *Prolanis*: a health program under government social security in Indonesia designed to help patients with chronic diseases

Table 3: Classification of themes and sub-themes of model implementation preparedness

Theme	Sub-theme	Category	Verbatim Quote (Informant)
Model Implementation Preparedness	Supporting Factors	Some patients have only received social support in the form of transportation to the health center.	... actually, the patient's family also provides a lot of social support, especially for those around 30 years old and older. They accompany the patient during examinations (DR02)
		Cadres who can support the implementation of social support	Cadre are best suited to receive a solid education because they are the closest to the community in the surrounding environment (DR02)
	Barrier factors	No room for consultation	Ladies and gentlemen, I don't have a consultation room. For example, in the pharmacy, we use the glass so that the patient and I can stand and provide explanations related to the drug. However, for consultations, it may not be comfortable (APT01)
		Patient's Characteristics	Education and counselling for patients or their families is often overlooked in practice. Patients do not always receive education from pharmacists. Sometimes patients feel that if they receive medicine from the pharmacy, they don't need information from pharmacists (APT02)
Social Support	Implementation	Support from Health Office	The agency usually supports us by checking our equipment or medicine (APT02)
			We go to the family's room of the family because they are less active. Maybe after this, you can provide us with the latest information that can be entered into the system in Lamongan Regency. Thank you. We can implement it in Lamongan Regency (DD01)
		WhatsApp group for collaboration	So, we created a forum where they can ask how to take the medicine. Then, there will be a <i>Prolanis</i> forum where they can ask about what clothes to wear, what orders are not understood, and other such questions (DR01)
		Cadres who can support the implementation of social support	Generally, the health promotion program at the community health centers targets cadres because they have a strategic position in the community, have time to convey information, and have the opportunity to be heard. They also know how to educate because they come from the area. What the delivery of communication to patients should be like (APT02)
		Pharmacists are ready to intervene with non-compliant patients.	If this is done one by one with all hypertensive patients, there may not be enough time. However, if a selection is made, it can be done (APT01)

DS: Internist (Medical doctor who specializes in internal medicine), DD: **Local policymaker of Geriatric Services**, DR: **Head of Geriatric Services** primary healthcare centers, APT: Pharmacist, Cadres: Local volunteers guided by village midwives or Public Health Center staff

Receiving social support affects medication adherence, especially in the elderly with hypertension [11]. Family support helps patients feel more motivated and confident in managing their health conditions [12]. The feasibility of health care workers to provide social support faces constraints, particularly due to limited-

service time. In addition to patient care, healthcare workers are responsible for administrative tasks, including preparing periodic reports and managing other operational activities. Limited time and heavy workloads prevent healthcare workers from providing detailed education to patients, resulting in

patients having a limited understanding of their treatment [13].

Coordination among healthcare workers (general practitioner, pharmacist, nurse), patients and their families can be enhanced through the use of social media platforms such as WhatsApp. Technology offers effective pharmaceutical services to improve adherence of hypertensive patients [14]. Good coordination between patients and healthcare workers is a key factor in promoting patient adherence to treatment and care plans. Through effective communication, patients gain better understanding of therapy, become more aware of the consequences of non-adherence, and develop a trusting relationship with their healthcare providers [15].

For some patients, social support is primarily provided by family members who accompany them to primary healthcare centers, as well as by community health cadres who assist in delivering additional support. Social support has a positive impact on optimal treatment outcomes for hypertension patients at the community level [16]. It encompasses four distinct forms: emotional support, instrumental support, information support, and appraisal support [4]. Delivering the patient to the hospital is only instrumental support and represents a small part of it. Without emotional, information, and appraisal supports, the patient remains at risk of non-adherence to treatment.

Inhibiting factors in the readiness for implementing the model include barriers such as a lack of facilities to support interventions, specifically limited consultation room and patient-related factors, such as the perception that they only need medication without requiring detailed education. Providing consultation room is not merely a matter of infrastructure, but also a crucial element in supporting effective communication, patient education, and the development of strong therapeutic relationships, all of which significantly impact patient compliance with treatment and medical instructions [17]. Providing information about treatment can enhance patients' skills, self-care, and adherence to therapy. Patient education is a fundamental right, and healthcare workers are responsible for ensuring that patients receive this information. Healthcare workers play a crucial role in educating patients with accurate and appropriate information [18].

The implementation of the TASSI model is supported by several key factors, including support from the **local policymaker of geriatric services**, the use of social media (WhatsApp

group) to facilitate coordination, cadres who can support both patients and healthcare workers, and the willingness of pharmacists to provide interventions for special populations, such as non-adherent elderly patients with hypertension. As a patient-centered approach, the TASSI model is intervention tailored to patient needs. A study on pharmacist-led interventions customized to patient needs demonstrated significant improvements in medication adherence ($p = 0.008$) [8].

CONCLUSION

The TASSI model adopts a personalized, patient-centered intervention approach, considering individual goals for non-adherent patients with chronic diseases. Interventions tailored to individual needs make users feel more valued and understood, thereby increasing patient satisfaction and experience. Compared to general interventions, targeted approaches have a more significant impact because they focus on the groups most in need. Focusing on patients who need the most support helps reduce unnecessary interventions and maximizes the impact of available resources.

DECLARATIONS

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Ethical approval

None provided.

Use of Artificial intelligence/Large language models

We also declare that we did not use Generative artificial intelligence (AI) and AI-assisted technologies in writing the manuscript.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Conflict of interest

No conflict of interest is associated with this work.

Contribution of authors

We declare that this work was done by the author(s) named in this article, and all liabilities pertaining to claims relating to the content of this article will be borne by the authors.

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