



ORIGINAL ARTICLE

## From resistance to rescue – patients' shifting attitudes to antihypertensives: A qualitative study

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### Abstract

**Objective.** The objective of this study was to gain a deeper knowledge and understanding of experiences of antihypertensive drug treatment. **Design.** Interview study. **Setting.** A primary health care centre in western Sweden. **Method.** Qualitative interviews and analyses through systematic text condensation described by Malterud. **Subjects.** Ten informants in pharmacological treatment for high blood pressure (six men and four women). **Main outcome measure.** Experiences of hypertension drug treatment. **Results.** The findings revealed a process starting with resistance to drug treatment related to lack of control, side effects, and unwanted awareness of impaired health. These negative feelings then changed into a positive desire for lifestyle changes caused by a fear of cardiovascular disease which in turn changed the attitude towards drugs into seeing them as a rescue remedy and something normal and this then evoked health care trust. **Conclusion.** Despite initial resistance to treatment, the experience of antihypertensive drug treatment became more positive with time. Confidence in the health care system is important for adherence to treatment. General practitioners have a key role in this regard.

**Key Words:** Attitude to health, health behaviour, hypertension, patient acceptance of health care, patient compliance, process, general practice, Sweden

### Introduction

High blood pressure is common in the population. With the current definition of hypertension 1.8 million people in Sweden suffer from this condition; ~27% of the population over 20 years [1]. High blood pressure is a well-known risk factor for developing cardiovascular diseases such as stroke or myocardial infarction, and studies have shown that by increasing systolic blood pressure by 20 mmHg or the diastolic blood pressure by 10 mmHg, the risk of dying from a cardiovascular disease doubles [1].

In a Swedish study, 23% of the population claimed to have a chronic disease in 1980. In 2000, this figure had almost doubled to 39.5% [2]. Studies have shown that a person's self-reported health is a protective factor in avoiding heart disease, early death, and functional disease [3]. When patients are treated for a risk they may confound the risk for an illness [2].

Compliance with pharmacological treatment has been consistently reported as low in several studies. Merely 50–60% of patients in hypertension treatment take drugs as prescribed [4]. High blood pressure is commonly revealed by routine examination. Usually an elevated blood pressure is not connected with symptoms [5] though in some cases headache, light dizziness, and altered sensations in limbs have been reported [6]. However, the awareness of having hypertension may cause the patient to feel uncertainty and worry even without having any symptoms [7]. A review study of patients with hypertension treatment showed that participants disliked treatment and its side effects, and feared addiction. These findings were consistent across countries and ethnic groups [7].

Though the number of studies showing the effects of different drugs for blood pressure treatment is

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- Hypertension is common and a well-known risk factor for diseases such as myocardial infarction or stroke.
- Initially, most patients are resistant to anti-hypertensives but attitudes change if they are well informed and if they have confidence in the health care system.
- Before treatment is started the individual's gain in risk reduction for serious events should be considered.

immense, studies regarding the patient experience of blood pressure treatment are few. Qualitative studies showed that compliance was influenced by a complexity of factors such as fear of antihypertensive drugs, lack of basic knowledge of hypertension [8], and widespread caution regarding taking medicine [9]. Furthermore, palpable effects of hypertension treatment are common [10]. Understanding patients' experiences of blood pressure treatment, thereby enabling flexibility and individualized patient consultation, could be crucial for drug compliance. Thus, the objective of this study was to describe the experiences of antihypertension drug treatment.

### Material and methods

Qualitative interviews were chosen to illuminate the experience of pharmacological treatment for high blood pressure. The setting was the workplace of five general practitioners, four resident physicians, one intern physician, 10 nurses, and four assistant nurses, a rural public medical centre in western Sweden. A thoughtful purposive sample to increase transferability was aimed for to achieve variation in gender, age, and treatment duration among individuals with hypertension currently on antihypertensive drug treatment. Besides the hypertension condition, the participants had no other medical problems. A total of 10 participants were asked to participate by their general practitioner or nurse. All agreed and were, upon providing written informed consent, included in the study (see Table I). Malterud's Systematic Text Condensation (STC) was used as scientific method implying a step-wise analysis and recruitment procedure [11,12]. The final sample size of 10 was hence a result of a process to achieve data sufficient to elucidate the aim [13].

#### Data collection

The first author (FH is a physician) interviewed the individuals in a separate room at the medical centre. FH was in no way involved in the care of the

Table I. Data for the 10 informants.

Informant	Gender	Age	Treatment duration	Occupation
1	M	56	2 months	Journalist
2	F	56	Many years	Worker
3	M	39	15 months	Consultant
4	M	68	1 1/2 months	Salesman
5	M	47	12–15 years	Fire-fighter
6	M	45	8 years	Carpenter
7	M	43	10 years	Computer consultant
8	F	63	5 months	Preschool teacher
9	F	66	5 years	Clerk
10	F	51	5–10 years	Assistant nurse

individuals included in the study. Interviews lasted between 35 and 65 minutes.

The informants were asked to describe their experiences of pharmacological treatment for high blood pressure. Follow up questions such as “tell me more about that...?”, and “how did that make you feel...?” served to enrich and deepen data collection. Besides these standard questions no specific interview guide was used. The researcher asked the informants to elaborate on their accounts when necessary. Interviews were recorded and transcribed by a secretary.

#### Analysis

Data were analysed through systematic text condensation (STC) as described by Malterud [11,12]. This method was chosen because it aims to express the experiences of the participants as presented by themselves, not trying to explore underlying meaning [12]. STC is an elaboration of Giorgi's principles but with a limited level of philosophical commitment. Specific instructions for condensation have been followed as truthfully as possible [12]. Before analysis began, all authors identified their preconceptions to enable bracketing of previous ideas and knowledge regarding the phenomenon. The analysis incorporated four steps. First, all interviews were read by all authors in order to obtain an overall impression of the material; thereafter preliminary themes were formed. This step is described as “from chaos to themes” [12]. Second, units of meaning were identified, representing different aspects of the experience of blood pressure treatment, and coded, “from themes to codes”. The third step was formation of subgroups, followed by content reduction, a condensate, “from code to meaning” [12]. The original terminology, applied by the participants, was kept as far as possible. In the last step, the condensates were summarized by generalizing descriptions and concepts of the experience of blood pressure treatment, “synthesizing – from condensa-

tion to descriptions and concepts". A new cross-case story was developed and the results concentrated under the category and subcategory headings. The categories are not just organizing entities but also statements expressing the essence of the condensed meaning units [12].

To increase validity, all authors participated in the analysis and categories and subcategories were discussed until consensus was achieved. The following interviews also functioned as validation, as central issues from the first interview were taken up again by most informants.

**Results**

Details concerning the 10 informants are provided in Table I. Six men (aged 39–68, average 50 years old), and four women (aged 51–66, average 59 years old) participated. Treatment duration was between 1 1/2 months and 15 years.

*Adaption process*

The experience of receiving hypertension medication in this study seemed to be dependent on the duration of the treatment. An adaption process and a gradual acceptance of the situation as a hypertension patient with prescribed medicine were noted. It mostly took a while for the informants to learn to handle and incorporate the fact that they were supposed to take medicine daily. The informants' feelings concerning their new situation were characterized by a sense of vulnerability and their attitudes to medicines underwent several phases. The process started with resistance to drug treatment caused by side effects, lack of control, and unwanted awareness of impaired health. It was difficult to accept that the body was no longer perfect and that the inevitable ageing process had made a great leap. These negative attitudes eventually changed into a positive desire for lifestyle changes caused by a fear of cardiovascular disease, which in turn changed the attitude towards drugs into seeing them as a rescue remedy and eventually something normal.

I realize that if I do not take these tablets I shall get a stroke, brain bleeding or heart infarction. In the beginning, the tablets were the enemy, now they are friends. (IP1)

All respondents but one (IP8) followed the same pattern. If warned by family members who had hypertension, the adaptation became easier.

The adaption process was facilitated by a growing confidence in health care. Confidence in health care is exemplified by the following informant:

Good communication, good discussions, and continuity make you feel confident that you have the right treatment. That you don't have to run to different places and meet different people, but you are treated well and feel safe with the pharmacological treatment, maybe that's half the treatment. (IP10)

Besides the adaptation process, two categories were identified (Figure 1): vulnerable body awareness with four subcategories (health worries, side effects, lack of autonomy, and desire for life style changes); and attitudes to medication with three subcategories (resistance to medication, medication as assurance and rescue, and medication as normal).

*Vulnerable body awareness*

*Health worries.* Several participants described a feeling of impaired health when diagnosed with hypertension and prescribed pharmacological treatment. Five had a genetic disposition but most of them were diagnosed many years before their parents and this augmented their feeling of getting old.

It's just that I suddenly felt weak. You realize you are getting old and infirm. That you are no longer 26, but 56, and I haven't accepted that, because in my mind I don't feel like 56. (IP1)

The pharmacological treatment was proof that something was wrong.

I wouldn't use medicine if I was healthy. Something's not working properly, otherwise I wouldn't have to use medicine. (IP2)

Worries about health were frequent.

I have these thoughts every day now, of me having high blood pressure. How do I feel today? I think of this every day. (IP7)

*Side effects.* Several participants experienced negative side effects of the medication. For example, tiredness, nausea, sexual impairment, and urgency of

PROCESS	CATEGORIES	SUBCATEGORIES
ADAPTION	Vulnerable body awareness	Health worries. Side effects. Lack of autonomy. Desire for life style changes.
	Attitudes to medication	Resistance to medication. Medication as assurance and rescue. Medication as normal.

Figure 1. Overview of process, categories, and subcategories.

urination were mentioned. One man felt like a completely different person when on medication, with less energy and a lower capacity. He therefore chose not to take the medication for a period of time.

So if I didn't take the medicine, I had a completely different energy level. I had a stronger will and was more creative. That's why I didn't take them. (IP7)

Some participants described how they were uncertain whether they experienced side effects of the medication or if something else was wrong, and several were concerned about how the antihypertensives affected their bodies.

Then you wonder, what does it really do to your body? I mean, sometimes I'm cold and sometimes I sweat. Sometimes in the middle of the night I feel sick, and wonder, is it the medicine, or is it something else. I feel like I don't know what is what in my body any more. (IP8)

Some participants experienced negative side effects from one medication but not from another, and finding the right medicine was important for accepting treatment.

*Lack of autonomy.* When diagnosed with hypertension and prescribed pharmacological treatment people became patients, and several described a feeling of losing control.

I feel weak and dependent, I don't like that. I want to be strong and capable. It feels like I am dependent on the medication, since I don't dare stop taking it. (IP8)

Furthermore, they felt at a disadvantage due to their limited medical knowledge. Some did not completely understand the consequences of hypertension and effects of the medicine. Others did not understand why they had to take more than one pill. Lack of medical knowledge made it difficult to question the doctors.

If the doctor tells you your blood pressure is too high, you must take medication, then that's just how it is. You can't ask any questions, because you don't know what to ask. (IP2)

One participant thought her job was the reason for her high blood pressure and was unhappy with the fact that she had to take medication while her situation at work had not changed.

*Desire for lifestyle changes.* Pharmacological treatment contributed to increased motivation for lifestyle

changes, as the patients in fact wished to be free from medication.

It woke me up, and perhaps I should be grateful, but the challenge is to get going and be rid of the medication. (IP3)

For some this led to a healthier way of living, but for others these thoughts led only to low self-esteem and existential distress.

I get so disappointed in myself, being too wretched and weak to fix this. (IP9)

#### *Attitudes to medication*

The attitudes to drugs changed with time, beginning with resistance, followed by seeing them as a rescue remedy, and thereafter as something normal.

*Resistance to medication.* Varying degrees of resistance to pharmacological treatment were experienced, especially in the initial treatment phase. Pharmacological treatment was considered unnatural and unpleasant. Starting pharmacological treatment was a personal defeat.

Well, taking pills, it's a defeat. You don't want to do that. Nobody wants to do that, obviously. To be dependent on them, when you know there is another solution. (IP1)

Self-image could be affected.

It is like, if you can express it in this way, that a part of my halo fades ... I am just like anybody else. (IP4)

A woman who had grown up with a mother who used large amounts of medication for depression claimed that it was a psychological trauma for her when she started with pharmacological treatment herself.

I think it's really hard, mentally, psychologically it's hard. I have a strong resistance to pills, and it's really hard for me to accept having high blood pressure ... my mother has always taken pills, all her life, and I hate pills ... just the sight of a medicine jar is hard for me. (IP8)

Some participants also mentioned the negative practical aspects of pharmacological treatment such as having to remember to take the pills every morning, attending pharmacy stores, and taking medicine on travels.

*Medication as assurance and rescue.* The responders became more concerned about their health, and

pharmacological treatment was seen as a kind of necessary insurance.

It's an insurance policy for the body to feel good in the long run ... so what's the alternative? High blood pressure, a shorter life, perhaps a heart attack or a stroke. (IP5)

Some participants were happy they were under care and mentioned the positive effects of pharmacological treatment for high blood pressure. A woman who suffered from headaches and palpitations due to her high blood pressure felt much better when she started pharmacological treatment and her blood pressure was lowered. Other participants who were aware of the risks of hypertension felt confident as their blood pressure decreased due to treatment.

And it's great because the medication perhaps allows me to avoid hypertension, stroke and other severe consequences. (IP3)

The feeling of being in control was important to a woman who had decided to take her pills in the evening rather than in the morning.

I think I'm in control of my blood pressure, my blood pressure doesn't control me. (IP10)

*Medication as normal.* Some participants had no problem in accepting pharmacological treatment. They considered it perfectly normal and common. One man had been expecting treatment for a long time, because hypertension treatment was frequent in his family and his blood pressure had been high for many years. Others did not reflect on it that much.

No, when I've got a headache, I'll take two aspirin. When I've got high blood pressure, I'll have medication for it ... it never bothers me, I don't think that much about it. (IP6)

Gradually the practical aspects of pharmacological treatment became less bothersome. Taking pills became a part of the daily routine.

It's easy and I don't have any problems with it any more. It's like brushing your teeth, you just do it. (IP1)

## Discussion

Initially, after having been diagnosed with hypertension, most informants felt old and vulnerable but gradually the situation became less bothersome. The attitudes to medicines underwent several phases

starting with resistance to treatment, affected self-image, and health worries and ending up with acceptance and confidence in health care. The experiences expressed by the informants seemed dependent on different factors such as earlier personal experience (IP8), attitudes to pharmacological treatment (IP1, IP8), level of medical knowledge (IP2), and confidence in the doctor and in the health care system (IP10).

### *Strengths and weaknesses of the study*

Participants included in the study were acceptably diversified in age and gender, enabling a wide description of the phenomenon. All patients asked to participate agreed, which could also indicate that the aim and design of the study indicated no controversy. All authors participated in the analysis. Having different occupations, physician, dentist, and physiotherapist, a wide analytic space was created enabling deepening discussions, simultaneously increasing validity.

Recruitment procedure and number of participants have been widely discussed in the literature on qualitative research methods. A large number of informants can make the material difficult to survey and the analysis superficial [11]. The number depends on the complexity of the research question [11]. According to Malterud, it is deceptive to think that the whole picture is reached by a certain number of participants. Rather, the strength of the method is to gain new understandings to as yet unknown areas and deepen knowledge regarding the phenomenon [12].

In qualitative studies, it is important that all stages of the research process are validated. The researchers have attempted to adhere consistently to guidelines of the STC research method. FH identified his preconceptions prior to the interviews and the other authors prior to analysis. Nevertheless, there is always the possibility of a deficit in bracketing affecting results.

Limitations of the investigation include that the sample was selected in a limited area of western Sweden with a relatively homogeneous Swedish population, and the result might not be generalizable to other areas or to patients with other cultural backgrounds. Findings in a qualitative study such as this could bring new approaches to the subject, but cannot be taken as evidence.

### *Findings in relation to other studies*

Pharmacological treatment has a significant impact on identity, and the main reasons why people do not take their medicine as prescribed are concerns about

negative effects of the medication [9], and lack of medical knowledge [14]. A lack of autonomy was reported in the present study, which is in line with the results of other studies [15]. A desire for lifestyle changes was expressed, which has also been reported elsewhere [16]. Similar to our participants, most patients in treatment for hypertension understand that hypertension leads to serious complications such as stroke and heart disease; this is often a source of fear, and by taking drugs anxiety and worries decrease [7]. In the present study, confidence in health care seemed to positively affect the experience, which is in line with other results showing that trust in the doctor was an important factor for taking prescribed drugs [17] whereas negative side effects may affect adherence to treatment [10]. Our result that patients tended to accept treatment over time is in contrast with the increasing fear of developing a tolerance or addiction to the drug found in other studies [7].

Qualitative studies have shown that a poor relationship between doctor and patient was a negative factor for compliance and that the essential meaning of falling ill is a fight not to become one's illness but to remain the same person as before – although now having a disease [18].

Negative impacts on health resulting from medical interventions have also been shown among women undergoing bone scans [19]. Awareness of osteoporosis risk may cause a feeling of uncertainty and worry, which is a serious side effect of health promotion. This is in line with findings of Hagström et al. (2006) who noted that as health care intensifies the treatment of healthy patients with risk factors, these persons tended to feel sicker than before treatment start [2]. Risk can be presented for the individual in different ways. If a treatment gives a relative risk reduction for a major cardiovascular event by 50% in a population the benefit to society seems obvious even though absolute risk reduction is low for the individual [20]. Whether a drug reduces mortality from 2% to 1% or from 40% to 20% is essential. Thus, a more person-centred approach by general practitioners is warranted [19,20]. The individual with hypertension medication often loses life quality and this loss should be weighed against the individual's gain in risk reduction for serious events, not against the society's gain [20].

#### *Meaning of the study*

This study is one among several studies illuminating the experience of and perspectives on pharmacological treatment for hypertension. This knowledge is important for health care providers to keep in mind, not only to improve adherence to medication but to understand why pharmacological treatment sometimes

does more harm than good. Further investigations are warranted in order to better understand how health care providers can improve health without reducing quality of life.

#### *Conclusion and future research*

The conclusion of this study is that the experience of pharmacological treatment for high blood pressure is diverse, and dependent on factors such as the patient's or family members' earlier experience of pharmacological treatment, general attitude to pharmacological treatment, level of medical knowledge, and confidence in health care system. It is important to take this into account when starting pharmacological treatment, and when benefits and risks of treatment are discussed. Well-informed patients and continuity in health care might influence the experience positively and increase compliance with treatment. However, before treatment is started the individual's gain in risk reduction for serious events should be considered.

Future studies could focus on quantitatively exploring the positive and negative consequences of hypertension treatment.

#### **Ethical approval**

All participants received written and oral information before entering the main study. The regional ethics committee of Gothenburg University approved the study.

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#### **Declaration of interest**

There are no conflicts of interest in connection with the paper. The authors alone are responsible for the content and writing of the paper.

#### **References**

- [1] Moderately elevated blood pressure. A systematic review. Report number 170/1U. Stockholm: Swedish Council on Health Assessment; 2007.
- [2] Hagström B, Mattsson B, Wimo A, Gunnarsson R. More illness and less disease? A 20-year perspective on chronic disease and medication. *Scand J Public Health* 2006;34: 584-8.

- [3] Idler EL. Self-assessment of health: The next stage of studies. *Research on Aging* 1999;21:387–91.
- [4] Hagström B, Mattson B, Rost I-M, Gunnarsson R. What happened to the prescriptions? A single, short, standardized telephone call may increase compliance. *Fam Pract* 2004; 21:46–50.
- [5] McAlister FA, Levine M, Zarnke KB, Campbell N, Lewanczuk R, Leenen F, et al. Canadian Hypertension Recommendations Working Group. The 2000 Canadian recommendations for the management of hypertension: Part one – therapy. *Can J Cardiol* 2001;17:543–59.
- [6] Sånggren H, Rewentlow S, Hetlevik I. Role of biographical experience and bodily sensations in patients' adaption to hypertension. *Patient Education and Counseling* 2009;74: 236–43.
- [7] Marshall IJ, Wolfe CD, McKeiv C. Lay perspectives on hypertension and drug adherence: Systematic review of qualitative research. *BMJ* 2012;345:e3953.
- [8] Gascón JJ, Sanchez-Ortuño M, Llor B, Skidmore D, Saturno PJ. Why hypertensive patients do not comply with treatment: Results from a qualitative study. *Fam Pract* 2004;21:125–30.
- [9] Pound P, Britten N, Morgan M, Yardley L, Pope C, Daker-White G, et al. Resisting medicines: A synthesis of qualitative studies of medicine taking. *Soc Sci Med* 2005; 61:133–55.
- [10] Benson J, Britten N. What effects do patients feel from their antihypertensive tablets and how do they react to them? Qualitative analysis of interviews with patients. *Fam Pract* 2006;23:80–7.
- [11] Malterud K. Kvalitativa metoder i medicinsk forskning [Qualitative methods in medical research]. *Studentlitteratur* 1998.
- [12] Malterud K. Systematic text condensation: A strategy for qualitative analysis. *Scand J Public Health* 2012; 40:795.
- [13] Kuzel AJ. Sampling in qualitative inquiry. In: Crabtree BF, Miller WI, editors. *Doing qualitative research*. Newbury Park, CA: Sage Publications; 1996, p. 176–86.
- [14] Saleem F, Hassali M, Shafie A, Atif M. Drug attitude and adherence: A qualitative insight of patients with hypertension. *J Young Pharm* 2012;4:101–7.
- [15] Lluch-Canut T, Puig-Llobet M, Sánchez-Ortega A, Roldán-Merino J, Ferré-Grau C. Assessing positive mental health in people with chronic physical health problems: Correlation with socio-demographic variables and physical health status. *BMC Public Health* 2013;5:13:928.
- [16] Lee SG, Jeon SY. The knowledge, attitude and practice of blood pressure management from the patient's viewpoint: A qualitative study. *J Prev Med Public Health* 2008;41: 255–64.
- [17] Benson J, Britten N. Patients' decisions about whether or not to take antihypertensive drugs: qualitative study. *BMJ* 2002; 325:873.
- [18] Johansson K, Ekebergh M, Dahlberg K. A lifeworld phenomenological study of the experience of falling ill with diabetes. *Int J Nurs Stud* 2009;46:197–203.
- [19] Hvas L, Reventlow S, Jensen HL, Malterud K. Awareness of risk of osteoporosis may cause uncertainty and worry in menopausal women. *Scand J Public Health* 2005;33: 203–7.
- [20] Hagström B, Gunnarsson R, Rosenfeld M. Presenting the improved possibility for staying well might be better than talking about change in risk: Use of the Non-Occurrence Probability Increase (NOPI). *Scand J Primary Health Care* 2013;31:138–40.