# The influence of interpersonal communication on compliance behavior of hypertension patients in puskesmas cempae, parepare city

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## Abstract

Adherence to hypertension treatment is a major factor of therapeutic outcome. Adherence to hypertension treatment affects blood pressure and prevents complications. Interpersonal communication aims to learn, build relationships with others, influence others, and help others. Counseling is a planned effort to disseminate messages, instill confidence, so that people are not only aware, know and understand, but also want and can do a recommendation that is expected to improve health status, prevent disease, maintain health status, maximize the function and the role of sufferers during illness, and help sufferers and families overcome health problems. This review is to determine the effect of interpersonal communication on the treatment of compliance in hypertensive patients at the Cempae Health Center, Parepare City. The research method is a quasi experiment, with a randomized pre test post test control group design. This research was conducted for approximately one month in the Cempae Health Center working area of Parepare City. The sample in this study using the sample size formula amounted to 78 hypertensive patients. The results of statistical tests using thethe wilcoxon test showed that with each p value = 0.000, there were differences in knowledge, attitudes, and actions of hypertensive patients towards treatment compliance before and after interpersonal communication interventions and counseling at the Cempae Health Center.

**Keywords:** Hypertension, Interpersonal Communication, Compliance.

## 1. Introduction

Hypertension is a degenerative disease which is a serious problem today.Uncontrolled hypertension can cause dangerous complications, such as coronary heart disease [1], stroke, kidney and vision problems. Nationally the results of the 2018 Riskesdas show that the prevalence of people with high blood pressure is 34.11%[2]. Hypertension increases from year to year. Not only in Indonesia, but also in the world. The incidence of hypertension worldwide reaches more than 1.3 billion people, which figure describes 31% of the world's adult population which has increased by 5.1% greater than the global prevalence in 2000-2010 [3]. The prevalence of hypertension or high blood pressure in Indonesia is high, but most sufferers are undetected [4]. The prevalence of hypertension in the province of South Sulawesi is 31.68 percent and based on the diagnosis of taking antihypertensive medication in people aged ≥18 years it is 7.77 percent [5].

Causes of hypertension include consumption of salty foods, caffeine, consumption of monosodium glutamate (flavors, soy sauce, shrimp paste) [6]. Excessive consumption of salt has been shown to increase blood pressure and increase the prevalence of hypertension. The results of Surnisyyah, A. Arsunan, Wahiduddin, et.all's research (2023) show that there is a risk of salt consumption with the incidence of hypertension in communities in the coastal area of Baubau City [7] Interpersonal communication is verbal and nonverbal interaction between two or sometimes more than two people who are mutually dependent on one another [8]. Interpersonal communication aims to learn, build relationships with others, influence others, and help others. Counseling is a planned effort to spread messages, instill confidence, so that people are not only aware, know and understand, but are also willing and able to carry out recommendations that are expected to improve health status, prevent disease, maintain health status,

maximize functions and roles. sufferers during illness, and help sufferers and families overcome health problems [9]. Compliance with the treatment of hypertensive patients is important because hypertension is a disease that cannot be cured but must always be controlled or controlled so that complications do not occur which can lead to death [10]. The cost of treating hypertension effectively is enormous. The use of a combination therapy between amlodipine and telmisartan has better cost-effectiveness than the use of monotherapy in lowering blood pressure and reducing the occurrence of side effects [11]. The problem of non-adherence is commonly encountered in the treatment of chronic diseases that require long-term treatment such as hypertension. Adherence to treatment is a major factor in the outcome of therapy. Therefore measuring the level of adherence to drug use is very important to determine the success of treatment [12] Adherence to hypertension treatment affects blood pressure and prevents complications [13]. The problem of non-adherence is commonly encountered in the treatment of chronic diseases that require long-term treatment such as hypertension. Adherence to treatment is a major factor in the outcome of therapy. Therefore measuring the level of adherence to drug use is very important to determine the success of treatment [12] Adherence to hypertension treatment affects blood pressure and prevents complications [13]. The problem of non-adherence is commonly encountered in the treatment of chronic diseases that require long-term treatment such as hypertension. Adherence to treatment is a major factor in the outcome of therapy. Therefore measuring the level of adherence to drug use is very important to determine the success of treatment [12] Adherence to hypertension treatment affects blood pressure and prevents complications [13]. Based on data from the Poly Census of theCempae Health Center in Parepare City, shows that in 2019 the number of hypertension sufferers who came for treatment was 24,885 out of 7,180 old cases and 17,611 new cases, and in 2020 hypertension sufferers who came for treatment were 13,936 out of 4375 old cases and 9528 new cases[14]. Looking at the data for the last 2 years, in this case those who come for treatment tend to decrease in hypertension sufferers, so researchers want to see interpersonal communication and counseling in the Cempare health center area.

## 2. Methods

The research method used in this study was a quasi-experimental, with a randomized pre-test-posttest control group design. This research was conducted for approximately one month in the working area of the Cempae Community Health Center, Parepare City. The sample in this study used a large sample formula of 78 hypertensive patients divided into each interpersonal communication intervention group and the control group was 39 hypertensive patients. Collecting data using a questionnaire with a pre and post test distance of 30 days.

## 3. Results

Table 1 shows that the age group with the most respondents in this study was theThe 56-65 year age group with 21 respondents (53.8%) in the intervention group and the 46-55 year age group with 30 respondents (76.9%) in the

control group. Respondents based on gender in the two study groups were more female, 27 respondents (69.2%) in the intervention group, while in the control group there were 25 respondents (64.1%). Respondents with blood pressure in both study groups had more grade 1 hypertension as many as 29 respondents (74.4%) in the intervention group and the control group. Respondents with a body mass index based on body weight and height in both study groups were more normal as many as 19 respondents (48.7%) in the intervention group while in the control group there were 22 respondents (56.4%). The characteristics of respondents based on education in the two research groups were more high school graduates, 32 respondents (82.1%) in the intervention group, while in the control group there were 28 respondents (71.8%). Most of the respondents' sources of information came from friends/relatives/family in the two research groups, namely 14 respondents (35.9%) in the intervention group while in the control group there were 16 respondents (41.0%). The most frequent respondents' inspection visits once a month were in the two research groups, namely 38 respondents (97.4%) in the intervention group and the control group. The characteristics of respondents based on education in the two research groups were more high school graduates, 32 respondents (82.1%) in the intervention group, while in the control group there were 28 respondents (71.8%). Most of the respondents' sources of information came from friends/relatives/family in the two research groups, namely 14 respondents (35.9%) in the intervention group while in the control group there were 16 respondents (41.0%). The most frequent respondents' inspection visits once a month were in the two research groups, namely 38 respondents (97.4%) in the intervention group and the control group. The characteristics of respondents based on education in the two research groups were more high school graduates, 32 respondents (82.1%) in the intervention group, while in the control group there were 28 respondents (71.8%). Most of the respondents' sources of information came from friends/relatives/family in the two research groups, namely 14 respondents (35.9%) in the intervention group while in the control group there were 16 respondents (41.0%). The most frequent respondents' inspection visits once a month were in the two research groups, namely 38 respondents (97.4%) in the intervention group and the control group. Most of the respondents' sources of information came from friends/relatives/family in the two research groups, namely 14 respondents (35.9%) in the intervention group while in the control group there were 16 respondents (41.0%). The most frequent respondents' inspection visits once a month were in the two research groups, namely 38 respondents (97.4%) in the intervention group and the control group. Most of the respondents' sources of information came from friends/relatives/family in the two research groups, namely 14 respondents (35.9%) in the intervention group while in the control group there were 16 respondents (41.0%). The most frequent respondents' inspection visits once a month were in the two research groups, namely 38 respondents (97.4%) in the intervention group and the control group. Table 2 shows that there is a difference in the average knowledge score in the intervention group which is 1.85 and the control group is 1.64.

**Table 1:** Distribution of Respondents Based on Characteristics in Interpersonal Communication Intervention Group and  Control Group Counseling on Medication Compliance in Hypertension Patients At the Cempae Health Center, Parepare City

| Characteristics of Respondents (n=39) | Interpersonal Communication Intervention | | Extension Control | |
|---|---|---|---|---|
| | **n** | **%** | **n** | **%** |
| **Age group** | | | | |
| Early elderly 46-55 years | 17 | 43,6 | 30 | 76.9 |
| Late elderly 56 – 65 years | 21 | 53,8 | 7 | 17,9 |
| Seniors >65 years | 1 | 2,6 | 2 | 5,1 |
| **Gender** | | | | |
| Man | 12 | 30,8 | 14 | 35,9 |
| Woman | 27 | 69,2 | 25 | 64,1 |
| **Blood pressure** | | | | |
| Pre-Hypertension | 10 | 25,6 | 10 | 25,6 |
| Grade 1 hypertension | 29 | 74,4 | 29 | 74,4 |
| **BMI** | | | | |
| Normal | 19 | 48,7 | 22 | 56,4 |
| BB More | 9 | 23,1 | 9 | 23,1 |
| Obesity | 11 | 28,2 | 8 | 20.5 |
| **last education** | | | | |
| No school | 0 | 0 | 5 | 12,8 |
| Middle school graduate | 4 | 10,3 | 3 | 7,7 |
| Graduated from high school | 32 | 82,1 | 28 | 71.8 |
| Graduated PT | 3 | 7,7 | 3 | 7,7 |
| **Resources** | | | | |
| TV/Radio | 8 | 20.5 | 0 | 0 |
| Friends / Relatives / Family | 14 | 35,9 | 16 | 41.0 |
| Internet | 0 | 0 | 5 | 12,8 |
| **Social Media**(IG/FB/WA/Twitter) | 0 | 0 | 6 | 15,4 |
| Health workers | 17 | 43,6 | 12 | 30,8 |
| **Examination Visit** | | | | |
| 1 time a month | 38 | 97.4 | 38 | 97.4 |
| 2 times a month | 1 | 2,6 | 1 | 2,6 |

**Table 2. Respondents' Knowledge Scores in the Intervention Group and Control Group during the Pre Test, Post Test in Bukit Harapan Village And the Bukit Indah Village, City of Parepare in 2023**

| | Knowledge Score | | | | |
|---|---|---|---|---|---|
| | **N** | **Means** | **SD** | **Mean Differences** | **P-values** |
| **Intervention Group** | | | | | |
| Pre-test | 39 | 6.97 | 2,121 | 1.85 | |
| Post-test | 39 | 8,82 | 0.970 | | **0.000** |
| **Control Group** | | | | | |
| Pre-test | 39 | 7.00 | 1,806 | 1.64 | |
| Post-test | 39 | 8,64 | 1,088 | | **0.000** |

**Table 3. Respondents' Attitude Scores in the Intervention Group and Control Group During the Pre Test, Post Test in the Bukit Harapan Village And the Bukit Indah Village, City of Parepare in 2023**

| | Attitude Score | | | | |
|---|---|---|---|---|---|
| | n | Means | SD | Mean Differences | p-values |
| **Intervention Group** | | | | | |
| Pre-test | 39 | 23,67 | 3,436 | 12.46 | |
| Post-test | 39 | 36,13 | 6,642 | | **0.000** |
| **Control Group** | | | | | |
| Pre-test | 39 | 23,77 | 3,414 | 9.51 | |
| Post-test | 39 | 33,28 | 2,982 | | **0.000** |

**Table 4. Respondents' Action Scores in the Intervention Group and Control Group during the Pre Test, Post Test in Bukit Harapan Village and Bukit Indah Urban Village, Parepare City in 2023**

| | Action Score | | | | |
|---|---|---|---|---|---|
| | n | Means | SD | Mean Differences | p-values |
| **Intervention Group** | | | | | |
| Pre-test | 39 | 4,13 | 1,689 | 3.51 | |
| Post-test | 39 | 7,64 | 0.668 | | **0.000** |
| **Control Group** | | | | | |
| Pre-test | 39 | 4,41 | 1,697 | | |
| Post-test | 39 | 7,77 | 0.627 | 3,36 | **0.000** |

**Table 5. Results of Difference Analysis of Intervention and Control Groups**

| Variables | | Average | | | DifferenceAverage |
|---|---|---|---|---|---|
| | | Intervention Group | DifferenceAverage | Control Group | |
| **Knowledge** | Pre-test | 6.97 | 1.85 | 7.00 | 1.64 |
| | Post-test | 8,82 | | 8,64 | |
| **attitude** | Pre-test | 23,67 | 12.46 | 23,77 | 9.51 |
| | Post-test | 36,13 | | 33,28 | |
| **action** | Pre-test | 4,13 | 3.51 | 4,41 | 3,36 |
| | Post-test | 7,64 | | 7,77 | |

The statistical test results obtained a value of p=0.000 (p<0.05) which indicates that there is a significant difference in the mean score of pre-test and post-test knowledge in the intervention group and control group on adherence to taking medication in hypertensive patients at the Cempae Health Center, Parepare City. Based on statistical tests, the two groups were both significant and there was a difference in the mean attitude of the intervention group which was higher than the control group, as well as the score for the higher scores in the intervention group.So it can be concluded that interpersonal communication is more influential than counseling on medication adherence knowledge in hypertensive patients at the Cempae Health Center, Parepare City. This is in line with the results of a study by Ekarini's research (2014) showing that there is a relationship between knowledge and treatment compliance in hypertensive patients with (p=0.002) [15]. Table 3 shows that there is a difference in the average attitude score in the intervention group which is 12.46 and the control group is 9.51. The statistical test results obtained a value of p=0.000 (p<0.05) which indicates that there is a significant difference in the mean score of pre-test and post-test attitude in the intervention group and control group on adherence to taking medication in hypertensive patients at the Cempae Health Center, Parepare City. Based on statistical tests, the two groups were both significant and there was a difference in the mean attitude of the intervention group which was higher than the control group, as well as the score for the higher scores in the intervention group. So it can be concluded that interpersonal communication is more influential than counseling on medication adherence attitudes in hypertensive patients at the Cempae Health Center, Parepare City. This is in line with the results of a study by Septi et al. which showed that attitude is the factor that most often appears in influencing adherence to taking antihypertensive medication. A good attitude can support adherence to taking antihypertensive medication. With interpersonal communication, one of the strategies to improve attitudes towards obedience is to improve communication [16]. Table 4 shows that there is a difference in the average action score in the intervention group which is 3.51 and the control group is 3.36. The statistical test results obtained a value of p=0.000 (p<0.05) which indicates that there is a significant difference in the mean score of pre-test and post-test action in the intervention group and control group on adherence to taking medication in hypertensive patients at theCempae Health Center, Parepare City. Based on statistical tests, the two groups were both significant and there was a difference in the mean attitude of the intervention group which was higher than the control group, as well as the score for the higher scores in the intervention group. So it can be concluded that interpersonal communication is more influential than counseling on medication adherence attitudes in hypertensive

patients at the Cempae Health Center, Parepare City. The process of conveying information in communications provided by health workers when respondents are examining hypertension will influence the behavior and actions of these respondents in preventing an increase in blood pressure. Communication that can be easily understood by respondents will encourage respondents to do things according to the information provided. Based on table 5, the results of the difference analysis for the knowledge variable in the intervention group were greater, namely 1.85 and the mean difference in the control group was 1.67. The difference in the attitude variable in the intervention group was 12.45 and the mean difference in the control group was 9.51. The difference for the action variable in the intervention group was greater, namely 3.51 and the mean difference in the control group was 3.36. This shows that there was a higher increase in the intervention group compared to the control group.

## 4. Discussion

Compliance with drug use is one of the efforts to achieve therapeutic success. Interpersonal communication of a health worker can provide complete information to increase patient knowledge, so that it is hoped that it can improve patient adherence in carrying out therapy [17]. Attitude is a person's behavior and tendencies. Hypertension sufferers must have a good attitude for hypertension management to be effective. Attitudes that control or lack of trust in hypertensive patients towards therapy are often obstacles/obstacles in anti-hypertensive therapy [18]. With the existence of interpersonal communication, one of the strategies to improve attitudes towards obedience is to improve communication. To improve the interaction of health workers with patients, good communication is needed by health workers[19]. The process of conveying information in communications provided by health workers when respondents are examining hypertension will influence the behavior and actions of these respondents in preventing blood pressure increases. Communication that can be easily understood by respondents will encourage respondents to do things according to the information provided. Respondents will diligently control blood pressure every month because they feel comfortable consulting health workers. Health workers who explain in detail the importance of preventing an increase in blood pressure, the patient will understand it easily so that the patient will prevent an increase in blood pressure[18]. The test results in the interpersonal communication intervention group and the counseling control group for the variables of knowledge, attitudes, and actions obtained a value of p = 0.000 (p <0.05) which indicated that there was a significant difference in the scores of pre-test and post-test measures on adherence to treatment in patients hypertension at the Cempae Health Center, Parepare City. Based on statistical tests, the two groups were both significant and there were differences in the mean knowledge, attitudes, and actions of the intervention group which were higher than the control group. So it can be concluded that interpersonal communication is more influential than counseling on medication adherence in hypertensive patients at the Cempae Health Center, Parepare City. Compliance with treatment of hypertensive patients is important because hypertension is a disease that cannot be cured but must always be controlled or controlled so that complications do not occur which can lead to death [11], [20].

## 5. Conclusions

There are differences in the knowledge, attitudes, and actions of hypertensive patients towards medication adherence before and after the intervention of interpersonal communication and counseling at the Cempae Health Center, Parepare City. Interpersonal communication is more influential than counseling on knowledge, attitudes and actions towards medication adherence in hypertensive patients at the Cempae Health Center, Parepare City.

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