



Effect of Cognitive Behavioral Therapy on the Behavior of Elderly

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Abstract

Background: There are 972 million (24.4%) of the world's population suffer from hypertension and the risk of hypertension increases with age. Likewise, in the working areas of Baruah Gunuang Community Health Center, throughout 2020 there were 321 (54.68%) elderly people with hypertension. This study aimed to determine the effect of cognitive behavior therapy on the behavior and blood pressure of elderly hypertensives

Methods: The type of this research was pre-experimental with one group pre-test post-test design. It was carried out in January - February 2023 with all elderly hypertensives, namely 321 people. By using purposive sampling technique, 30 respondents were chosen as the samples. The data were collected through observation sheets and behavioral questionnaires. Data analyzed by using Wilcoxon test.

Results: There is difference average behavior control pressure blood respondents between before and after intervention with an average difference 2.63 and based on the Wilcoxon test results, the p value = 0.000, where happen enhancement behavior after intervention.

Conclusion: It can be concluded that cognitive behavior therapy had a significant effect on reducing blood pressure and increasing behaviour in elderly hypertensives. It is hopefully that Baruah Gunuang Community Health Center will be capable to take advantages of cognitive behaviour therapy interventions US one of the hypertension interventions programs in PTM MSS.

Keywords:

CBT, Behaviour, Elderly

Introduction

According to data *World Health Organization* (WHO) show throughout world around 972 million person or 24.4% resident world suffering from illness hypertension with comparison 26.6% man And 26.1% woman. This figure possibility increase become 29.2% in year 2025 , From 972 million sufferer hypertension,

333 is at in Country proceed . the rest berda in Country develop including Indonesia. Data statistics latest state that there is 24.7% resident Asia Southeast And 23.3% of the Indonesian population aged 18 years and over suffers from hypertension on 2014 (WHO, 2015). Hypertension or High blood pressure is a serious medical condition in a way significant increase risk



heart, brain, kidney, And disease other. Estimated 1.28 billion adults aged 30-79 years in the whole world suffers from hypertension, the majority (two thirds) live in country income low And intermediate. Estimated (46%) person Adults with hypertension are unaware that they have the condition the. Not enough from half person mature (42%) with hypertension diagnosed And treated. Around 1 from 5 person mature (21%) with hypertension can control it.

Hypertension is reason main death early in all over world. Wrong One target global disease No infectious is reducing the prevalence of hypertension by 33% between years 2010 and 2030 (WHO, 2021). Based on 2018 Rikerdas data, the prevalence of hypertension is the highest based on The measurement results for the population were aged 55-64 years (55.2%), followed by age 45-54 years (45.3%), age group 31-44 years (31.6%). From the prevalence of hypertension of (34.1%) it is known that (8.8%) were diagnosed with hypertension and (13.3%) people were diagnosed hypertension does not take medication and (32.3%) do not regularly take medication.

This matter shows that the majority of hypertension sufferers do not know that himself hypertension so that do not get treatment. Prevalence hypertension in Sumatra West ie 25.16% with amount 176,169 case Which detected through measurement pressure blood. CityPadang is the highest region in West Sumatra with the number of cases hypertension amounted to 44,330 cases, followed by Solok district with the number case 30,863 cases (DKD, 2018). Hypertension called as murderer quietly “ *silence killer*” . When symptoms really do occur, they can include

early morning headaches, nosebleeds, rhythm heart No regular, change vision, And ear buzzing. Severe hypertension can cause fatigue, nausea, vomiting, confusion, anxiety, chest pain, and muscle tremors.

The only way to detect hypertension is to have a healthcare professional measure blood pressure Hypertension can prevented And controlled with civilize healthy living behavior. Healthy living behaviors include consuming foods with balanced nutrition that meet nutritional needs elements rich in fiber, low in fat and low in sodium (less than 6 grams of sodium per day), exercising in a way regular, Rest Which Enough, think positive. One of the ways For increase obedience behavior on sufferer hypertension is via *Cognitive Behavior Therapy*. *Cognitive Behavior Therapy* is a short-term intervention Which aim change habit think distorted, negative or No rational. In context therapy behavior cognitive, restructurisation cognitive is approach Which help evaluate thought, challenge, And change more rational response (Dossey, Keegan, 2013).

The advantage of the *Cognitive Behavior Therapy approach* is that it works handle problem Which experienced counseling, effective, focused, and practical overcome certain problems, it is not difficult and complicated to overcome the counselee overcome the problem, the time spent in the counseling process is more relatively short (Leahy in Septinisa, 2017). Not smoking and not consuming alcohol can increase the risk hypertension (Wahid, 2008). Wrong One method For cope problem health is with prevention, the occurrence of hypertension in society in general and prevention recurrence on sufferer hypertension on specifically. Prevention recurrence or control

hypertension need done by all hypertensive sufferers to prevent an increase in blood pressure which is worse with changes in behavior according to your lifestyle hypertensive sufferers, so every hypertensive sufferer must do behavioral changes to implement appropriate lifestyle patterns. One of the ways For increase obedience behavior on sufferer hypertension is via *Cognitive Behavior Therapy*.

Cognitive Behavior Therapy is a short-term intervention Which aim change habit think distorted, negative or No rational. In context therapy behavior cognitive, restructurisation cognitive is approach Which help evaluate thought, challenge, And change more rational response (Dossey, Keegan, 2013). The advantage of the *Cognitive Behavior Therapy approach* is that it works handle problem Which experienced counseling, effective, focused, and practical overcome certain problems, it is not difficult and complicated to overcome the counselee overcome the problem, the time spent in the counseling process is more relatively short (Leahy in Septinisa, 2017). Whereas Results study Which done by (Chew, 2019), about "The Suitability Of Motivational Interviewing Versus Cognitive Behavioral Interventions On Improving Self-Care In Patients With Hearts Failure", effective For increase behavior maintenance self.

Use *Cognitive Behavior Therapy (CBT)* therapy has been successful for adults, However Not yet try it to elderly. On basically *Cognitive Behaviour Therapy (CBT)* has been carried out on the elderly for diabetes mellitus will tested on elderly with hypertension. Work area Baruah Gunuang Community Health Center has distribution resident Which equally every

nagari, with circumstances demographics as The following population is 7733 people, with details of 3735 men and Woman 3998 people. Number density population is 71 souls/km. From the results of the initial survey conducted by researchers on the 8th June 2022 data will be obtained at the Baruah Gunuang Community Health Center age category unproductive 60 years and over as many as 990, which is divided into two Nagari, namely Nagari Baruah Gunuang, has a total of 587 men 261 and the number of women is 326. Nagari Sungai Naniang in total is as much 268 the number of men was 115 and the number of women was 153.

Based on these findings, the number of elderly people with disabilities was found with high blood pressure checks, the total was 321, the number man 121 and the number of women is 200. Hypertension including something condition Which can prevented or controlled. However on results observation data that elderly sufferer hypertension the more increase every the year hamper throughout world give rise to problem health public global Which contribute, to burden disease heart, stroke, fail kidney, disability, And death early. His height case hypertension in Public health center Baruah Gunuang can caused by several factors, namely, the public already knows about the hypertension he was suffering from but no action was taken control Which done. So that behavior public Which always done can give rise to them suffer disease hypertension. Based on description on so researcher interested For do research on "The Effect of *Cognitive Behavior Therapy* on Behavior." And Blood Pressure in Elderly People with Hypertension in Work Areas UPTD Baruah Gunuang Community

Health Center Year 2022 “.

RESEARCH METHODS

This type of research is *pre-experimental* with a *first approach group pre test – post test design* , which involves one intervention

group that carries out pre and measurements post test. The treatment given was *the Cognitive Behavior Test* , given for four weeks with a total of 8 meetings twice a week to the sample with an inclusion criteria limit of 30 samples.

Result

A. Description General Respondent

Study about influence *cognitive behaviour therapy* (CBT) on blood pressure and behavior of hypertensive elderly people has been carried out on 30 respondents in the Baruh Gunuang Community Health Center area with descriptions characteristics respondents as follows:

Table 1. Frequency Distribution of Respondent Characteristics in Work Areas Public health center Baruah Gunuang in 2022

Characteristics Respondent	F	%
Type Sex		
1. Man	6	20
2. Woman	24	80
Education		
1. Elementary School	6	20
2. Junior High School	14	46.7
3. Senior High School	9	30
4. Bachelor Degree	1	3.3
Work		
1. Housewives	23	76.7
2. Farmer	4	13.3
3. Civil Servants	2	6,7
4. Private Employee	1	3.3
Obesity		
1. No Obesity	29	96.7
2. Obesity	1	3.3
Long hypertension		
1. < 5 years	5	16.7
2. ≥ 5 years	25	83.3

Table 1 show that characteristics respondents based on The majority of respondents (80%) were elderly by gender For women, characteristics in terms of education were found to have the highest frequency is respondents with level education Junior High School

that is as much 14 (46.7%), from work aspect found part big respondents (76.7%) were housewives, for the characteristics of facet obesity found part big respondents (96.7%) No obesity And majority respondents (83.3%) is patient with long suffer hypertension ≥ 5 years.

Behavior Pressure Control Blood Before and After Intervention

Table 2. Average Blood Pressure Control Behavior Score of Respondents \Before and After Intervention in Working area Public health center “Baruah Gunuang”

Variable	N	Mean
Pre Test	30	3.93
Post Test	30	6.56

Table 2 show that average behavior score control pressure blood respondents before intervention is 3.39 and the average after intervention is 6.56.

Table 3. The Influence of *Cognitive Behavioral Therapy* on Elderly Behavior Hypertension in Region Baruah Community Health Center ““Baruah Gunuang”

Variable	Mean	Mean Different	P value
Pre-Test	3.93	2.63	0.0000
Post Test	6.56		

Table 3 shows that the average control behavior score pressure blood respondents before intervention is 3.93 And average behavior control pressure blood after intervention is 6.56. There is difference average behavior control pressure blood respondents between before and after intervention with an average difference 2.63 and based on the *Wilcoxon* test results, the p value = 0.000, where happen enhancement behavior after intervention. So can stated that giving *cognitive behaviour therapy* influential significant on blood pressure control behavior in hypertensive elderly in region Work Public health center Baruah Gunuang year 2022.

Discussion

Results study show that average score behavior control pressure blood respondents before intervention is 3.39 with a standard deviation of 1.25. Lowest behavior score before intervention is 2 and the highest 7.. Behavior control pressure blood including Wrong One forms of health behavior in hypertensive elderly who aim to controlling blood pressure to prevent complications from occurring

hypertension Which where objective end from action This is For increase degrees health on sufferer hypertension. Matter This in accordance with the theory which states that health behavior is all action Which done individual For prevent incident Sick And disease Which aim For increase degrees health individual (Notoatmodjo, 2012). Control pressure blood on sufferer hypertension can done with application *self management* Which Good, Because hypertension or pressure blood tall can controlled with several ways, namely complying with medical therapy, changing style life, and behavior health Which positive (Akhter, 2010). In line with previous research conducted by Harmanto, et al (2020) regarding the influence of cognitive behavior therapy on self-care behavior of elderly people with hypertension in the work area Public health center Buton South, results study

This show that before the intervention of providing *cognitive behavior therapy*, more than part (56.6%) respondents with *self care behaviour* including category not enough Good. The researcher's assumption is that before the intervention provides *cognitive*

behaviour therapy in a way general respondents show behavior control pressure blood Which not enough Good, Where in a way whole respondents state No consume drug anti hypertensive in a way regular And in a way whole respondents say No do activity physique (sport) in a way routine. Problem behavior other Which found is majority respondents state No routine do inspection pressure blood, No consume fruit And vegetable every day as well as No Always consult a doctor if you experience increasing symptoms pressure blood. Behavioral problems in controlling blood pressure in elderly sufferer hypertension in region Work Public health center Baruah Gunuang related with habit And knowledge health, Where lack of knowledge about hypertension cause respondents were less motivated to make lifestyle changes after diagnosed hypertension And condition

This Also influence Health behavior in undergoing hypertension treatment. Phenomenon Which found on elderly sufferer hypertension in region Work Public health center Baruah Gunuang is exists habit For visit facility health as well as consume drug anti hypertension If has feel symptoms enhancement pressure blood Which Already bother to activity daily, If symptom Which felt the more heavy so on stage This new respondents visited health service facilities to obtain handling more carry on to complaint Which felt And consume drug anti hypertension Which given Which Then will stop it If symptom Which felt Already start reduce or lost. Meanwhile, the implementation of physical activity was also found to be all respondents were hypertensive patients who did not activity physique routine (sport) And matter This on basically related with the employment

factor that the majority of farmers consider No Again need activity physique (sport) as effort control pressure blood. Furthermore behavior control Blood pressure also appears to be low in indicators of fruit consumption and vegetable And matter This related factor habit And lack of respondents' understanding of the importance of consuming fruit and vegetables to hypertensive patients.

Results study show that average score behavior The respondent's blood pressure control after the intervention was 6.56 with a standard deviation of 1.97. Lowest behavior score after intervention is 3 and the highest 10. Change style life is matter fundamental Which must done by every patient hypertension in effort control blood pressure, because hypertension can only be prevented and controlled with civilize behavior life Healthy. Behavior life Healthy, among other things, such as consuming food with balanced nutrition fulfills nutritional needs with elements rich in fiber, low in fat and low sodium (less than 6 grams of sodium per day), exercise regularly, get enough rest, think positively, don't smoke and No consume alcohol Which can increase risk hypertension (Wahid, 2008). The application of the concept of *cognitive behavior therapy* is considered appropriate in effort change behavior on patient hypertension, Because *cognitive behaviour therapy* as approach counseling Which designed For finish problem client with method do restructurisation cognitive And behavior Which deviate.

Approach *cognitive behaviour therapy* based on formulation cognitive, beliefs and behavioral strategy which is annoying. Process counseling is in line with previous research conducted by Harmanto, et al (2020) regarding the influence of cognitive

behavior therapy on self-care behavior of elderly people with hypertension in the work area Public health center Buton South, results study This show that after the intervention of *cognitive behavior therapy*, the majority (88.9%) respondents with *self care behavior* included category Good. The researcher's assumption is that after providing *cognitive behavior therapy* in general, respondents showed improved behavior control pressure blood If compared to with before intervention.

Change behavior control pressure blood seen on indicator inspection pressure blood, consumption drug anti hypertension And consumption fruit And vegetable, whereas change Lowest seen on indicator activity physique or sport in a way routine. After intervention is known that almost part from The respondent stated that he had had his blood pressure checked facility service health whereas Which other state will carry out routine blood pressure checks at the facility health as well as always consumption drug antihypertensive as effort control pressure blood, more from part respondents Also state has consume fruit And vegetable every day For meets fiber needs which also affects pressure blood.

Influence *Cognitive Behavioral Therapy* To Behavior

Results study show that average score behavior The respondent's blood pressure control before the intervention was 3.93 and The average blood pressure control behavior after the intervention was 6.56. There are differences in the average blood pressure control behavior respondents between before and after intervention with an average difference 2.63 and based on the *Wilcoxon* test results, the p value = 0.000, where happen enhancement behavior after

intervention. So can stated that giving *cognitive behaviour therapy* influential significant on blood pressure control behavior in hypertensive elderly in region Work Public health center Baruang Gunuang. Behavior is all activity man Good Which can observed directly or indirectly observed by outside parties (Notoatmodjo, 2012). Behavior is a human reaction resulting from cognitive, affective and activities psychomotor. These three aspects are interconnected, if one aspect experience obstacles, then other aspects of behavior are also disturbed (Zan, 2010). *Cognitive behavior therapy* is one of the therapies with method counseling Which aim For reconstruct behavior from aspect cognitive Which is realm main For formation *open behaviour* Which adaptive, including in modification style life on patient hypertension. Because Wrong One aspect Wrong One aspect important For formation behavior somebody is realm cognitive (knowledge) (Notoatmodjo, 2012). This is also supported by the theory put forward by Nursabila (2018) which states that the *cognitive behavior therapy approach* based on cognitive formulations, beliefs and behavioral strategies bother. Process counseling based on conceptualization or understanding client on faith specifics and patterns of behavior client. Focus approach *cognitive behaviour therapy* is change Which can produce changes in individual behavior (Idat Muqadas, 2016) in matter This is change behavior Which adaptive in efforts to control blood pressure. Deep CBT applications Efforts to change health behavior in hypertensive elderly people are by embed suggestion about benefit application pattern life Healthy, implementing a hypertension diet, compliance and discipline in drug

consumption, activity physique as well as loss If No apply pattern life in accordance with hypertension management. In line with study previous Which has done by Manuntung (2017) regarding the Influence of Cognitive Behavioral Therapy (CBT) on Self Efficacy and Self Care Behavior in Hypertension Patients.

Results study This state that giving CBT influential significant impact on changes in *self-care behavior* in hypertensive patients, in a way statistics obtained p value = 0.000. Assumption researcher that giving *cognitive behaviour therapy* has a significant effect on changes in health behavior in the elderly hypertension in region Work Public health center Baruah Gunuang, Where found exists enhancement behavior control pressure blood after intervention. Change respondent behavior toward which are more inner positive controlling blood pressure is related to the main goal of implementation *cognitive behavior therapy* is to reconstruct behavior from aspects cognitive to give birth to adaptive *open behavior*, in this case it is behavior control pressure blood. In the application application *cognitive behaviour therapy* more emphasize on aspect behavior which is associated with increased blood pressure and negative impacts enhancement pressure blood to health. Then continue by reconstructing maladaptive behavior towards adaptive behavior, namely with leave all habit Which increase risk increasing blood pressure and implementing appropriate healthy living behavior with *self-management* of hypertension to prevent the condition from increasing pressure blood. Intervention CBT in change behavior health elderly hypertension is by examining findings of maladaptive behavior respondents related

to risk factors for increasing blood pressure, especially from in terms of consumption patterns, physical activity, medication compliance, examinations blood pressure and lifestyle or habits. Providing therapy in the form of emphasis impact negative from behavior maladaptive to blood pressure and health status, then explain what actions should be taken done For lower risk hypertension as well as giving suggestion that respondents Can do change behavior in matter control pressure blood. Intervention This done in a way repeated so that respondents can understand and accept the intervention process given so that give effect change behavior in control blood pressure becomes more positive.

Conclusion

Based on the research results, it was concluded that providing *cognitive behavior therapy* influenced the behavior of clients with hypertension to control their blood pressure, so that there was an increase in efforts to prevent hypertension in samples that had been given treatment compared to behavior before treatment. It can be suggested to future researchers to look at other factors that also influence health behavior. It can be recommended to use *cognitive behavior therapy* as a therapy to improve health behavior, especially in maintaining behavior towards, checking blood pressure.

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