

THESIS

**THE EFFECT OF *BRAIN GYM* THERAPY AND *PUZZLE THERAPY* ON
IMPROVING COGNITIVE FUNCTION IN THE ELDERLY IN THE
WORKING AREA OF THE JEMBATAN KECIL HEALTH CENTER
BENGKULU CITY IN 2026**



COMPILED BY:

MUHAMMAD BIMA

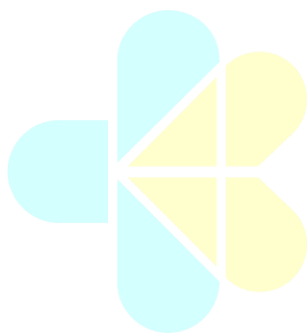
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**MINISTRY OF HEALTH OF THE REPUBLIC OF INDONESIA
HEALTH POLYTECHNIC OF THE MINISTRY OF HEALTH BENGKULU
DEPARTMENT OF NURSING STUDY PROGRAM
BACHELOR OF APPLIED NURSING
YEAR 2026**

THESIS TITLE PAGE

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BENGKULU CITY IN 2026**

This thesis is submitted as one of the requirements
To obtain an Applied Bachelor of Nursing (S. Tr Kep)



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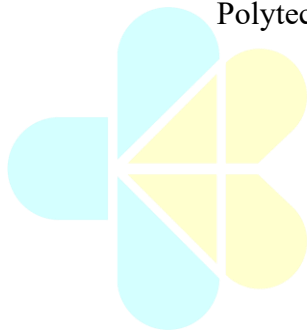
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BENGKULU CITY IN 2026**

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WORKING AREA OF THE JEMBATAN KECIL HEALTH CENTER
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MOTTO AND PRESENTATION

"If Allah knows that there is good in your heart, He will surely give you something better than what has been taken from you and He will forgive you.

God is Forgiving and Merciful.

(QS. Al-Anfal : 70)

"When you sincerely accept all the disappointments of life, then Allah will fully compensate for your disappointments with thousands of goodnesses"

-Ali Bin Abi Thalib-

MOTTO:

"The highest point of self-respect is not to put ourselves as a choice in anyone's life. If it's not the goal, just stop, we don't need to win, we just need to survive"

PRESENTATION:

I present this thesis to:

- ❖ To the absolute owner of all matter and the universe, who governs, regulates, and has power over all things. Allah SWT, the Owner of Direction. Thank you for being the only home I went to when the world was so noisy and dark. Thank you for keeping my sanity and pace, even when the author has almost forgotten the reason to stay alive.
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behavior that tests patience, you are the one who taught the author a lot about what it means to accept and love as a brother. You are the mandate that the writer will always guard, your presence is a motivation in every step of this struggle, including in completing this thesis.

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- ❖ To someone who has not been able to write his name clearly here, in which part of the world are you present? Whether we have crossed paths or have never met. If Allah permits, I offer this work as a first step to prepare myself as well as possible to be with you in the future. Without fear, has someone in this waiting period entered your mind? Hopefully it's just a test. As B. J. Habibie said "if you think he was born for me, you can do it upside down" hopefully we will be given the opportunity to meet first before his call comes. *Amen.*
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pray, may the steps of your little feet always be strengthened, surrounded by great people, and your dreams one by one will be answered.



STATEMENT OF ORIGINALITY

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Stating that this thesis is my own work (ORIGINAL), and the content of this thesis does not contain any work that has ever been submitted by others to obtain an academic degree in an educational institution, and to the best of my knowledge there are also no works or opinions that have been written and/or published by others, except those that are referred to in writing in this manuscript and mentioned in the bibliography.

Thus this statement and if in the future it is proven in the thesis that there is an element of plagiarism, then I am willing to take responsibility in accordance with the applicable provisions.

Bengkulu, 01 July
2026

Which states,



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FOREWORD

Praise be to God Almighty who has given His grace and gifts, so that the author can complete this thesis with the title "The Effect of *Brain Gym* Therapy and *Puzzle* Therapy on the Improvement of Cognitive Function in the Elderly in the Working Area of the Jembatan Kecil Health Center in 2026". Writing this thesis is one of the requirements for obtaining an applied bachelor's degree in nursing (S.Tr.Kep).

In completing this thesis, the author received a lot of help, both material and moral, from various parties, for which the author would like to thank the:

1. Mrs. Linda, SST., M.Kes as the Director of the Health Polytechnic of the Ministry of Health of Bengkulu.
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The author is fully aware that in the preparation of this thesis there are still many errors and mistakes both from the writing and the preparation and methodology, therefore the author expects suggestions and guidance from various parties so that the author can work better and optimally in the future. The author hopes that this thesis can be a reference for further research and can be useful for

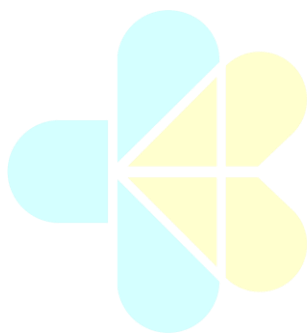
all parties and can bring positive changes, especially for the author himself and students of the Department of Nursing, and others.

Bengkulu, 01 July 2026

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Muhammad Bima



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THE EFFECT OF *BRAIN GYM* THERAPY AND *PUZZLE THERAPY* ON IMPROVING COGNITIVE FUNCTION IN THE ELDERLY IN THE WORKING AREA OF THE JEMBATAN KECIL HEALTH CENTER BENGKULU CITY IN 2026

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ABSTRACT

Impaired cognitive function is one of the problems that often occur in the elderly due to the aging process that can affect the ability to remember, think, concentrate, and carry out daily activities. Nonpharmacological efforts that can be made to improve cognitive function are Brain Gym therapy and Puzzle therapy. This study aims to determine the effect of Brain Gym therapy and Puzzle therapy on improving cognitive function in the elderly in the working area of the Jembatan Kecil Health Center of Bengkulu City in 2026. This study uses a quasi-experimental design with a pre-test and post-test with control group design approach. The research sample amounted to 44 respondents which were divided into an intervention group of 22 respondents and a control group of 22 respondents. The intervention group was given Brain Gym therapy and Puzzle therapy 4 times for 2 weeks, while the control group was given memory training. Cognitive function measurement using the *Mini Mental State Examination* (MMSE) instrument before and after the intervention. Data analysis was conducted using the Wilcoxon Signed Rank Test, Paired T-Test, and Mann-Whitney tests. The results showed that in the intervention group there was an increase in the median cognitive function score from 21.50 to 24.00 with a value of $p = 0.000$ ($p < 0.05$). The results of the Mann-Whitney test showed a value of $p = 0.000$ ($p < 0.05$) with a median difference in cognitive function score of 4.00 in the intervention group and 1.00 in the control group. This shows that Brain Gym therapy and Puzzle therapy have a significant effect on improving cognitive function in the elderly. It can be concluded that Brain Gym therapy and Puzzle therapy are effective in improving cognitive function in the elderly so that they can be used as an alternative nonpharmacological intervention to maintain and improve the quality of life of the elderly.

Keywords: *Brain Gym*, *Puzzle*, cognitive function, elderly, MMSE.

**THE EFFECT OF BRAIN GYM AND PUZZLE THERAPY ON IMPROVING
COGNITIVE FUNCTION IN ELDERLY PEOPLE IN THE WORKING
AREA OF JEMBATAN KECIL PUBLIC HEALTH CENTER,
BENGKULU CITY, 2026**

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ABSTRACT

Cognitive impairment is one of the common problems experienced by older adults due to the aging process, affecting memory, thinking ability, concentration, and daily activities. Non-pharmacological interventions that can be used to improve cognitive function include Brain Gym and Puzzle therapy. This study aimed to determine the effect of Brain Gym and Puzzle therapy on improving cognitive function among elderly people in the working area of the Jembatan Kecil Public Health Center, Bengkulu City, in 2026. This study employed a quasi-experimental design with a pre-test and post-test control group design. A total of 44 respondents participated in the study, consisting of 22 respondents in the intervention group and 22 respondents in the control group. The intervention group received Brain Gym and Puzzle therapy four times over a two-week period, while the control group received memory training. Cognitive function was measured using the Mini Mental State Examination (MMSE) before and after the intervention. Data were analyzed using the Wilcoxon Signed Rank Test, Paired T-Test, and Mann-Whitney Test. The results showed that the intervention group experienced an increase in the median cognitive function score from 21.50 to 24.00 with a p-value of 0.000 ($p < 0.05$). The Mann-Whitney test revealed a p-value of 0.000 ($p < 0.05$), with a median difference score of 4.00 in the intervention group and 1.00 in the control group. These findings indicate that Brain Gym and Puzzle therapy had a significant effect on improving cognitive function in older adults. In conclusion, Brain Gym and Puzzle therapy are effective in improving cognitive function among elderly individuals and may serve as an alternative non-pharmacological intervention to maintain and enhance their quality of life.

Keywords: Brain Gym, Puzzle Therapy, Cognitive Function, Elderly, MMSE.

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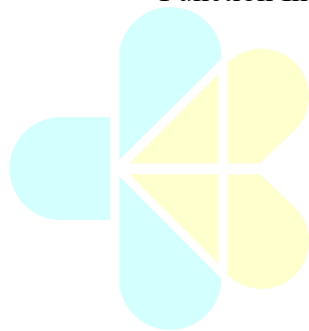
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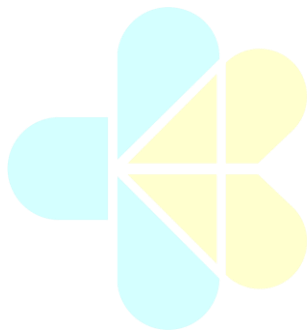


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ABBREVIATION LIST

BPS	: Central Statistics Agency
DKK	: And my friends.
<i>IQ</i>	: <i>Intelegentia Quotion</i>
MMSE	: <i>Mini Mental Status Examination</i>
WHO	: <i>World Health Organization</i>
MCI	: <i>mild cognitive impairment</i>



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