



THE EFFECTIVENESS OF HYPNOTHERAPY MOVEMENT AND AFFIRMATION (HYMA) ON ANXIETY STATUS WITH A REVIEW OF CHANGES IN BLOOD PROFILES AND CORTISOL HORMONE LEVELS IN SCHIZOPHRENIA PATIENTS

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ABSTRACT

Schizophrenia is a condition characterized by abnormal social behavior and an inability to understand reality. Mental health Schizophrenia is a severe and serious mental disorder that can become chronic from a young age because it involves changes in physical, psychological and socio-cultural aspects. Inappropriate treatment of schizophrenia patients will always have an impact on anxiety conditions, slurred or confused thinking, decreased auditory hallucinations, reduced social involvement and emotional expression, and lack of motivation. Management is carried out with pharmacological and non-pharmacological complementary, one of which is Hypnotherapy Movement And Affirmation. Objective: The study aims to analyze the effect of Hypnotherapy Movement And Affirmation (HYMA) On Anxiety Status With A Review Of Blood Profile Changes and Cortisol Hormone In Schizophrenia Patients. Method: The research design used quasi-experimental with a pretest - posttest approach with control group design. The research population was Schizophrenia patients with purposive sampling. The sample in this study was 18 respondents, divided into an experimental group of 9 respondents and a control group of 9 respondents. The experimental group was given Hypnotherapy Movement and Affirmation with the implementation of the action carried out for 2 weeks and each session was carried out for 20 minutes, while the control group only received basic treatment from the Health Center. Result: Based on the Mann Whitney test of the experimental group of cortisol measurements obtained significant results of 0.017 ($p < 0.05$), Erythrocyte measurements obtained significant results of 0.507 ($p > 0.05$), and Leukocyte measurements 0.930 ($p > 0.05$). It can be concluded that there is a significant difference in the Complementary Hypnotherapy Movement And Affirmation (HYMA) combination group on cortisol hormone measurements, while there is no significant difference in the measurements of erythrocytes and Leukocytes of respondents. Conclusions: Combination of Hypnotherapy Movement And Affirmation (HYMA) therapy is able to reduce anxiety scale and cortisol hormone levels. Although the profile of Erythrocyte and Leukocyte values has not shown significant changes and associations with schizophrenia in the experimental group or the control group.

Keywords: anxiety status; blood profile; cortisol; hypnotherapy movement and affirmation; schizophrenia

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INTRODUCTION

Schizophrenia is a condition characterized by abnormal social behavior and an inability to understand reality. Schizophrenia is a severe and serious mental disorder that can become chronic from a young age because it involves changes in physical, psychological and socio-cultural aspects. Inappropriate treatment of schizophrenia patients has an impact on anxiety, confused thinking, auditory hallucinations, reduced social involvement and emotional expression and lack of motivation. Based on observations on human behavior and experience, schizophrenia is not a mental illness that cannot be cured, proper treatment and care and examination are needed to cure the disease (Pratama, D. A. P. H, 2022).

Pharmacological therapy is defined as the treatment of schizophrenia with chemicals such as antipsychotics, the most widely used being the combination of risperidone - clozapine, the use of which has side effects, namely extrapyramidal effects in the form of tremors, hypersalivation, and rigidity (Indriani, A., Ardiningrum, W., & Febrianti, Y.2020). Therefore, complementary therapy is needed to be an option as a non-pharmacological therapy for schizophrenia sufferers that can be applied with mind exercises or with hypnotherapy methods. Hypnotherapy can change sensations, perceptions, thoughts, feelings or behavior after being given suggestions (Amiyan.,2020). The brain that has been influenced by suggestions will order the central nervous system to stimulate the Reticular Activating System to reduce its performance so that it has an impact on the release of serotonin from specific cells in the pons and brainstem, namely the BSR (Bulbar Synchronizing Region) so that it reduces excessive anxiety or anxiety. After treatment, there are certainly measurement results or evaluations to determine the achievement of schizophrenia treatment, physical examination results, HARS (Hamilton Anxiety Rating Scale) observations can be carried out to complement this, proven by the results of blood and hormone diagnostic tests, until now there has been no specific laboratory examination (Townsend, M. C.,2018).

Based on the results of previous studies on the effectiveness of hypnotherapy in reducing anxiety levels in patients with mental disorders measured by the HARS (Hamilton Anxiety Rating Scale), there is a difference in anxiety levels before and after hypnotherapy (Puspitasari.,2021). The results of the synthesis of several articles explain that nursing therapy in the form of specialist therapy and complementary therapy has a very important role in non-pharmacological management and has been able to overcome depression in schizophrenia patients (Kumalasari, D. N., 2021). The following study provides an illustration that hypnotherapy affects the results of blood and hormonal tests in diabetic patients, blood sugar can be controlled with hypnotherapy (Zulkarnain, Z., 2023). Meanwhile, hypnotherapy has an effect on reducing cortisol levels through the Chemiluminescent microparticle immunoassay (CMIA) method in post-cesarean section patients (Rizkiani, I., 2021).

The results of other studies with anxiety problems showed that Range of Motion intervention was able to reduce anxiety in chronic kidney disease patients with restless legs syndrome in the hemodialysis room (Hevy Mustika, Y., 2023). Psychosocial Nursing Care with the provision of five-finger hypnosis therapy can reduce anxiety (Anjeliana, V., & Yani, S. 2022). The results of nursing analysis in cases of schizophrenia with low self-esteem problems after being given positive affirmations were able to show changes in patients "saying they are calmer and more relaxed and more confident because they can complete their work well" (Astuti, A. Y.2024). There is an effect of positive affirmation therapy on the quality of life of patients with low self-esteem in schizophrenia (Surantini, N. W., 2023). Abdominal breathing techniques and positive affirmations in love cards reduce stress and cortisol hormone levels in pregnant women (Nurchayani, A. S., 2020). Based on the results of research that show the relationship between anxiety and blood and hormonal examinations, there is a relationship between metabolic effects and cortisol hormones in patients with anxiety disorders (Nuralita, N. S. 2023). Postpartum cortisol hormone levels provide an overview of anxiety levels (Anggraeni, N. P. D. A., 2021). There is a relationship between cortisol levels and maternal anxiety in childbirth in the setting of the birthing environment (Lestari, L., & Heryani, H. 2020). There is a difference in total cholesterol levels in the use of haloperidol and risperidone in schizophrenia patients (Syahputra, I., & Nuralita, N. S. 2022). Based on the results of the studies reviewed, aspects of schizophrenia, especially treatment with antipsychotics and the course of schizophrenia itself can affect the blood profile, especially the metabolic profile (Radyaputri, A. 2020).

The novelty in this study is implementing a combination of hypnotherapy, Range Of Motion (ROM) and positive affirmations to obtain maximum benefits in reducing anxiety levels, formulated by naming the intervention Hypnotherapy Movement And Affirmation (HYMA). The addition of other measurement variables, namely measuring the picture of blood test results, in addition to providing a direct picture between the relationship between anxiety and blood profiles. The results of this blood profile can develop the results of schizophrenia diagnosis examination through blood profile examination because there has been no research that provides a picture of schizophrenia diagnosis through blood profile examination. The study aims to analyze the effect of Hypnotherapy Movement And Affirmation (HYMA) On Anxiety Status With A Review Of Blood Profile Changes and Cortisol Hormone In Schizophrenia Patients.

METHOD

The type of research used is analytical observational research, namely research that explains the influence between variables through hypothesis testing. The research design is a Quasy experiment with a pretest - posttest with control group design approach. The population of the study was Schizophrenia patients at the mental health polyclinic of Sungai Rangit Health Center, sampling using Purposive sampling technique, the sample in this study amounted to 18 respondents, divided into an experimental group of 9 respondents and a control group of 9 respondents. The experimental group was given Hypnotherapy Movement and Affirmation with the implementation of the action carried out for 2 weeks and each meeting session was carried out for 20 minutes, the action started from Pre-Interaction, Preparation of patients and the environment, work stages and Termination / Evaluation and Documentation. While the control group only received basic treatment from the health center. The intervention was carried out by 3 enumerators with the requirement of having an education, having (STR) a nurse registration certificate or a certificate of expertise in their respective fields. The Main and Second Researchers Have STR and Complementary Therapy Action Skills Certificate (Hypnosis) The Third Researcher is a nurse in the Mental Health polyclinic, has a basic understanding of hypnotherapy and is able to perform venous blood sampling procedures. Conducting an Anxiety Level, Blood Profile and Cortisol Hormone Examination Before administering the Hypnotherapy Movement and Affirmation Intervention (Pre-Test), then measure the level of anxiety using the Zung Self-Rating Anxiety Scale questionnaire, Blood Profile and Cortisol Hormone Examination After administering the Hypnotherapy Movement and Affirmation Intervention (Post-Test). The researcher has taken care of Ethical Clearance at the Health Research Ethics Commission of the Faculty of Dentistry, Sultan Agung Islamic University (No. 224/ VII /2024/Komisi Bioetik). Submitted a research permit to the Mendawai Health Center. Respondents were given information about the objectives and procedures of the research to be carried out, then asked to become research respondents by signing the informed consent sheet.

RESULT

The following is a description of research results related to the Hypnotherapy Movement And Affirmation (HYMA) On Anxiety Status With A Review Of Blood Profile Changes and Cortisol Hormone In Schizophrenia Patients:

Based on the table 1, it shows that the youngest age in the experimental and control group is 27-28 years and the oldest age is 57 years. Gender characteristics in the experimental and control groups were mostly male, namely 66.7% and 55.6%. Educational characteristics show that the level of education in the experimental group and control group was almost half elementary school (44.4%) and (33.3%), and high school (33.3%). Meanwhile, the type of work in the experimental group was mostly private employees (66.7%), while in the control

group almost half were private employees (44.4%). And based on the table above shows that the length of time respondents experienced Schizophrenia in both groups is almost the same at an average age of 3 years of experiencing Schizophrenia and the longest respondent diagnosed with Schizophrenia is 6 years.

Table 1.
Respondent characteristics based on age, gender, education, occupation, treatment and length of schizophrenia (n= 18)

Research group	Age of respondent			
	F	Minimum (Year)	Maximum (Year)	Mean (Year)
Experiment	9	28	57	40,89
Control	9	27	50	38,11
Gender	Group			
	Experiment		Control	
	F	%	F	%
Male	6	66,7	5	55,6
Female	3	33,3	4	44,4
Total	9	100%	9	100%
Education	Group			
	Experiment		Control	
	F	%	f	%
Elementary school	4	44,4	3	33,3
Junior high school	1	11,1	2	22,2
Senior high school	2	22,2	3	33,3
College	2	22,2	1	11,1
Total	9	100%	9	100%
Occupation	Group			
	Experiment		Control	
	f	%	f	%
Farmer	1	11,1	3	33,3
Civil servant	1	11,1	0	0
Employes	6	66,7	4	44,4
Housewife	1	11,1	2	22,2
Total	9	100%	9	100%
Treatment	Group			
	Experiment		Control	
	F	%	f	%
Active	7	77,8	6	66,7
Stopped	2	22,2	3	33,3
Total	9	100%	9	100%
Length of schizophrenia	Group			
	Experiment (Year)		Control (Year)	
Mean	33,3		3,11	
Median	2		3,00	
Minimum	1		1	
Maximum	6		6	

Table 2.
The Effect of HYMA on the Anxiety Scale of Respondents Per Group

The Effect of HMMF on the Anxiety Scale of Respondents Per Group										
Anxiety Scale	Experiment Group				sig	Control Group				sig
	Pre		Post			Pre		Post		
	f	%	F	%		f	%	f	%	
Not Anxious	0	0	0	0	0.005	0	0	3	33.7	0.025
Mild Anxiety	8	88,9	7	77,8		7	77,8	6	66.3	
Moderate Anxiety	1	11,1	2	22,2		2	22,2	0	22,2	

Severe Anxiety	0	0	0	0	0	0	0	0
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Based on the table 2, the pretest-posttest shows that almost all of the respondents in the experimental group (88.9%) and the control group (77.8%) experienced mild anxiety levels. The Wilcoxon test results obtained a significance result of 0.005 ($p < 0.05$) indicating that there is an effect of the combination of Complementary Hypnotherapy Movement and Affirmation (HYMA) on the anxiety status of respondents.

Table 3.
The Effect of HYMA on Cortisol Hormones, Erythrocytes and Leukocytes in Groups

Data group	Group											
	Experiment						Control					
	Cortisol		Erythrocytes		Leukocytes		Cortisol		Erythrocytes		Leukocytes	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Mean	11.07	7.47	4.96	5.02	7.31	7.27	10.2	9.21	5.61	5.62	6.96	7.3
Minimum	9	3.70	4.50	4.60	3.90	4	6.7	6.4	4	4.2	3.9	4
Maximum	14.20	11.50	5.80	5.80	9.60	9.20	14.2	15.7	7.8	8.9	9.6	9.4
Std. Deviation	1.63	2.74	0.39	0.35	1.71	1.63	2.03	2.8	1.3	1.49	1.68	1.74
Mean Difference	3.6		0.06		0.04		0.01		0.01		0.34	
Sig (p)	0.018		0.257		0.713		0.092		0.575		0.400	

Based on the table 3, it shows that the average posttest cortisol hormone in the experimental group was 7.47 ug/dL and 9.21 ug/dL in the control group. The average pretest erythrocyte value of the experimental group was $5.02 \times 10^6/\mu\text{L}$ and $5.62 \times 10^6/\mu\text{L}$ in the control group. The average leukocyte value in the experimental group was $7.27 \times 10^3/\mu\text{L}$ and $7.3 \times 10^3/\mu\text{L}$ in the control group. From the results of the Wilcoxon test, the experimental group of cortisol measurements obtained significant results of 0.018 ($p < 0.05$), Erythrocyte measurements obtained significant results of 0.257 ($p > 0.05$), and Leukocyte measurements 0.713 ($p > 0.05$). It can be concluded that there is an effect of the combination of Complementary Hypnotherapy Movement and Affirmation (HYMA) on anxiety status with cortisol hormone measurements, while the respondents' Erythrocyte and Leukocyte measurements have no significant effect

Table 4.
Differences in Cortisol, Erythrocyte and Leukocyte Hormones of Respondents in Each Group

Data Group	Experiment and Control					
	Cortisol		Erythrocytes		Leukocytes	
	Post	Post	Post	Post	Post	Post
Mean	7.47	9.21	5.02	5.62	7.27	7.3
Minimum	3.70	6.4	4.60	4.2	4	4
Maximum	11.50	15.7	5.80	8.9	9.20	9.4
Std. Deviation	2.74	2.8	0.35	1.49	1.63	1.74
Selisih Mean	1.74		0.6		0.03	
Sig (p)	0.017		0.507		0.930	

Based on the table 4 from the results of the Mann Whitney test, the experimental group of cortisol measurements obtained significant results of 0.017 ($p < 0.05$), Erythrocyte measurements obtained significant results of 0.507 ($p > 0.05$), and Leukocyte measurements 0.930 ($p > 0.05$). It can be concluded that there is a significant difference in the Complementary Hypnotherapy Movement And Affirmation (HYMA) combination group on cortisol hormone measurements, while there is no significant difference in the respondents' Erythrocyte and Leukocyte measurements.

DISCUSSION

Description (Pretest) of Anxiety Status, Cortisol Levels and Erythrocyte and Leukocyte Profiles

The fact of the research results shows that the pre-test anxiety status in the experimental group Hypnotherapy Movement and Affirmation and the control group anxiety status is mostly at the mild anxiety level. Based on the table the pretest shows that almost all of the respondents in the experimental group (88.9%) and the control group (77.8%) experienced mild anxiety levels. And the results of the study showed that the average pre-test cortisol hormone in the experimental group was 11.07 ug / dL and 10.2 ug / dL in the control group. The average pre-test erythrocyte value of the experimental group was $4.96 \times 10^6 / \mu\text{L}$ and $5.61 \times 10^6 / \mu\text{L}$ in the control group. The average leukocyte value in the experimental group was $7.31 \times 10^3 / \mu\text{L}$ and $6.96 \times 10^3 / \mu\text{L}$ in the control group. In accordance with the results of other studies on the effectiveness of providing guided imagery therapy to reduce anxiety levels in patients with schizophrenia, the level of anxiety before undergoing guided imagery therapy, on average, patients experienced moderate anxiety levels (Ajuan, O., 2022). In the study, it was found that the level of anxiety in schizophrenia patients was 70.6% or 24 patients had anxiety levels that were included in the moderate category and 29.4% or 10 patients were included in the mild anxiety level category (Hudaya, M. I. H., Widodo, A., & Teguh, S. 2015).

Schizophrenia is a disease that experiences disorders in psychosis in the form of chaos in the process of thinking and personality, with the presence of fantasy, hallucinations, regression, social isolation from the environment and delusions. Schizophrenia is caused by multifactors, meaning that many factors can cause individuals to experience schizophrenia, one of which is anxiety. Schizophrenia sufferers experience anxiety caused by feelings of excessive fear and deep worry (Trisyani, F., 2024). Schizophrenia patients are prone to experiencing affective disorders that can cause disorders in assessing individual reality (Hermisih, A. R., 2017). Anxiety in schizophrenia patients often appears with various behaviors that cannot be controlled properly. Emotional and fearful behavior occurs simultaneously and excessive stress can hurt oneself and hurt others, the most common thing that can happen to schizophrenia patients is violent behavior.

The factors causing anxiety are divided into two factors, namely internal factors (individual) and external factors. Internal factors are those that come from the individual's attitude and personality traits such as gender, age, level of education, and length of schizophrenia, while external factors come from the environment such as family support in medication compliance. The results of the study showed that the gender in the experimental and control groups was mostly male. Based on the theory of women and men have different stress responses, women have very high stress levels compared to men, Gyllenten suggests that gender is a demographic characteristic that can also play an important role in stress levels. Although exposed to the same stressors, most women are more likely to experience anxiety, feelings of guilt, sleep disorders, and eating disorders, compared to men (Pratama, D. A. P. H, 2022). Based on research and journal results, researchers assume the relationship between gender and schizophrenia involves various factors, ranging from incidence, symptom manifestation, prognosis, to response to treatment. Men are more often diagnosed with schizophrenia and experience onset at a younger age, with symptoms that tend to be more severe and aggressive. Meanwhile, women tend to experience a later onset, with more subtle symptoms and a more stable course of the disease. Estrogen in women has a neuroprotective effect that plays a role in reducing the severity of symptoms, while testosterone in men may be associated with increased susceptibility to psychotic disorders. Although women have a

better prognosis overall, social, hormonal, and biological factors still influence the experience of schizophrenia.

Another causal factor is age, the results of the study showed that the youngest age was 28 years and the oldest age was 57 years. Overall, the relationship between age and schizophrenia is very significant. Young age is the most vulnerable time for the first onset of schizophrenia, especially in men, with symptoms that tend to be more severe. Adolescence and young adulthood are critical periods in brain development. The shrinkage of brain tissue (such as decreased volume of the hippocampus and prefrontal cortex) that often occurs in schizophrenia patients, may begin at a young age and continue over time. Earlier-onset cases of schizophrenia often have more dramatic brain shrinkage, which is associated with greater cognitive impairment. Disturbances in brain development, associated with incomplete maturation of neurotransmitter systems (especially dopamine and glutamate), may be one of the main reasons why schizophrenia is more common in young adults. In later life (especially after 40-50 years), schizophrenia shows a different prognosis pattern, often referred to as "late onset". In patients with late onset, psychotic symptoms tend to be milder and less accompanied by serious cognitive impairment.

The results of the study showed that almost half of the educational levels in the experimental and control groups were elementary school. Education can be used as a benchmark for the ability to overcome problems effectively. Educational factors affect the ability to overcome and resolve problems faced, so that the anxiety of someone with a high education in dealing with a relapse of a client with a mental disorder is at a mild stage. Overall, education has a significant influence on the incidence of schizophrenia and its prognosis. Low education can be a risk factor that increases the likelihood of someone experiencing schizophrenia, through socio-economic factors, limited access to health care, and higher levels of stress. Higher education can be a protective factor by improving coping skills, access to better care, and slowing cognitive decline associated with schizophrenia. Education also plays a role in reducing stigma and discrimination against people with schizophrenia to support the recovery process (Livana, Susanti, & Putra, 2018).

The fact of the research results shows that some respondents in the experimental group and the control group have jobs as private employees. The relationship between work and the incidence of schizophrenia is very complex and can be influenced by various factors, including type of work, socio-economic conditions, social support, and stress related to work. Stable and meaningful work can act as a protective factor that improves quality of life and supports recovery in individuals with schizophrenia. While stressful jobs or socio-economically inadequate jobs can worsen a person's mental condition and increase the risk of schizophrenia symptoms. Jobs that are friendly to individuals with mental disorders, as well as supportive work reintegration programs, are essential in facilitating recovery and improving the well-being of individuals with schizophrenia. Therefore, it is important to create an inclusive, supportive work environment that provides equal opportunities for individuals with schizophrenia to work and thrive.

Another factor that can affect the level of anxiety of respondents is the length of suffering, showing that the length of time respondents experienced Schizophrenia in both groups was almost the same at an average age of 3 years, the length of time experiencing Schizophrenia and the longest respondent diagnosed with Schizophrenia was 6 years. The length of treatment of respondents will affect positive self-adjustment because self-adjustment takes quite a long time. So that they are able to face tension, conflict and frustration within themselves with a positive attitude so that harmony is created. Positive self-adjustment is characterized by the ability to learn, no emotional tension in solving problems, having rational

considerations and being realistic and objective (Pulungan, Z. S. A., 2022). The duration of the disease for more than 3 years significantly affects the psychological burden experienced by respondents and their families. This is related to the psychotic symptoms experienced by respondents. Psychotic symptoms that occur for the first time are more frightening for respondents and their families because they occur unexpectedly. In this situation, feelings of helplessness, fear, and despair are often felt by respondents and their families, which has an impact on the anxiety experienced by respondents (Nasriati, R., 2020).

Researchers concluded from the facts of the research results that there are many factors that can influence the emergence of schizophrenia such as age, gender, education level, occupation, and duration of schizophrenia. Anxiety in schizophrenia patients is a complex problem and is interrelated with the psychotic symptoms they experience, which is manifested through increased cortisol hormone in the body can be closely related to anxiety (anxiety) in schizophrenia patients produced by the adrenal glands and known as the "stress hormone" because of its role in the body's response to stress. So that the symptoms of psychosis and anxiety in respondents with schizophrenia often appear with various behaviors that cannot be controlled properly. Anxiety is characterized by feelings of fear or fear that are very and can appear in the form of physical symptoms such as palpitations, nausea, dizziness, shortness of breath, tremors, sweating. Another impact of anxiety is that it can affect the stimulation of the sympathetic nervous system, which increases blood frequency, cardiac output, in addition to spurring the heart to beat faster and stronger.

Description (Posttest) of Anxiety Status, Cortisol Levels and Erythrocyte and Leukocyte Profiles

The fact of the research results shows that the posttest anxiety status in the Hypnotherapy Movement and Affirmation experimental group and the control group anxiety status is mostly at the mild anxiety level. And the results of the study showed that the average cortisol hormone posttest in the experimental group was 7.47 ug / dL and 9.21 ug / dL in the control group. Anxiety in schizophrenia patients is a complex problem and is interrelated with the psychotic symptoms they experience. Anxiety can appear in various forms, ranging from general anxiety to social and existential anxiety. This anxiety can worsen the quality of life, increase social isolation, and worsen the symptoms of schizophrenia. Therefore, the management of anxiety in schizophrenia patients requires a holistic approach, including pharmacological treatment, psychosocial therapy, and adequate social support.

The results of the study are in accordance with previous studies by providing hypnotherapy intervention to 18 respondents of mental disorder patients who experience anxiety, the results of the Post-test analysis showed that there was a difference in anxiety levels between the pretest and posttest. The results of the t-test analysis using a paired sample test significance value of 0.002, a positive paired sample test value indicates that the pre-test value is higher than the post-test. It can be concluded that there is a decrease in anxiety scores after hypnotherapy (Puspitasari, R. P., 2021). Hypnotherapy can reduce cortisol levels and anxiety in a very effective way because physiologically when someone enters hypnotic relaxation, their mind waves enter the alpha waves with a frequency of 7-14 hertz or deeper into theta waves with a frequency of 4-7 hertz (Mardiani, D. E., 2020). When someone's mind enters this wave, humans produce natural endorphins that produce a comfortable sensation, and the body becomes relaxed. And in this hypnosis state, the body's metabolic system becomes much better and the body is free from tension (Wang, J. Z., Li, L., 2015). After relaxation, positive affirmations are given using a series of words that are arranged either only in thoughts or poured into writing and spoken repeatedly (Novandri, S. E., 2020). The purpose of positive affirmations is so that someone can program their subconscious, when the brain waves reach

the alpha-theta condition which is in a relaxed condition, the critical area of the conscious mind becomes inactive and there will be a sense of calm, comfort and peace (Hapsari, 2019). Supported by previous research, the average cortisol level in the treatment group that received combination therapy of Range of Motion exercises, holding rubber balls and warm compresses had higher changes compared to the control group. Range of motion (ROM) is a measure of how far the body's joints can move in various directions. Various types of exercises or movements that increase ROM can play a role in reducing anxiety or stress. Physical activity that increases ROM can stimulate the parasympathetic nervous system, which is responsible for the body's relaxation response. When this system is active, the body will feel more relaxed and calm, reducing symptoms of anxiety (Supriani & Indrawati, 2022).

The results of the study showed that the average value of erythrocytes and leukocytes pretest-posttest experimental group and control group did not show any significant changes and based on the results of the examination were still within normal limits. Based on the researcher's assumption, the erythrocyte and leukocyte profiles have not been able to describe the relationship with the incidence and prognosis of schizophrenia patients. Several studies have shown that individuals with schizophrenia have increased levels of several inflammatory markers in their blood, including leukocytes. Continuous inflammation in the body can affect the central nervous system and neurotransmitter function in the brain, and trigger changes associated with mental disorders, including schizophrenia. The link between erythrocytes (red blood cells) and the occurrence of schizophrenia is not as clear as the relationship with leukocytes (white blood cells) or other inflammatory markers. Some studies have suggested that disturbances in blood flow and oxygen metabolism may be associated with schizophrenia. Although these associations do not always directly affect the number of erythrocytes, it is possible that these disturbances can lead to changes in the blood profile, including erythrocyte levels.

Based on the facts, theories and journals above, researchers argue that the combination of Hypnotherapy Movement and Affirmation (HYMA) therapy carried out for 2 weeks and each meeting session is carried out for 20 minutes, is able to reduce the anxiety scale and cortisol hormone levels. Although the profile of Erythrocyte and Leukocyte values has not shown significant changes in either the experimental or control groups. And the results of the study have not shown significance to clarify whether there is a clearer relationship between erythrocytes, leukocytes and schizophrenia, and how this biological mechanism can affect the diagnosis or treatment of schizophrenia.

The Effectiveness of Hypnotherapy Movement and Affirmation (HYMA) on Cortisol Levels and Erythrocyte and Leukocyte Profiles

Facts from the research results based on the Wilcoxon test and the Mann Whitney difference test obtained results ($p < 0.05$) indicating a significant difference in the Complementary Hypnotherapy Movement And Affirmation (HYMA) combination group on anxiety status and cortisol hormone levels of respondents. Cortisol levels in the body can be closely related to anxiety in schizophrenia patients. When someone faces a situation that is considered stressful, the adrenal glands will release cortisol into the bloodstream. Cortisol functions to prepare the body to face threats by increasing energy, changing metabolism, and increasing alertness. High cortisol levels can also affect psychotic symptoms in schizophrenia patients. Schizophrenia is a complex mental disorder that affects many aspects of life, including cognition, feelings, and behavior. In addition to medical treatment with antipsychotic medications, non-pharmacological interventions such as movement relaxation therapy and positive affirmations can play an important role in helping schizophrenia patients manage symptoms, reduce stress, and improve quality of life.

Based on previous research that hypnotherapy can reduce anxiety and cortisol hormone images in pregnant women, gain self-calmness and plant positive thoughts in the subconscious mind because during the hypnotherapy process the respondents experience deep physical relaxation, focused attention, and increased sensory abilities (Mahanani, S. W., 2022). When someone is hypnotized, there is stimulation of the reticular activating system in the brain, causing an autonomic nervous response, namely a decrease in pulse, blood pressure and breathing rate. If given good suggestions, it will provide a therapeutic effect as well as relaxation. Therefore, hypnotherapy can be used as an alternative to reduce signs and symptoms such as anxiety so as to reduce cortisol hormone levels (Gloede, M. E., 2021). Based on the assumption of researchers when relaxation therapy movement and positive affirmation are combined, it can strengthen and provide a greater positive impact on schizophrenia patients. Calming physical movements can reduce anxiety and stress, while positive affirmations can strengthen a healthy and optimistic mentality, helping patients face mental challenges better. Anxiety can cause a decrease in endorphin hormones that are naturally produced in the body. According to some studies, endorphins are 200 times stronger than morphine. Increased endorphin production can be obtained by creating a calm condition in the body through hypnosis. Relaxation will inhibit the increase in sympathetic nerves, so that the body's dysregulated hormones are reduced. The parasympathetic nervous system has the opposite function to the sympathetic nerves to slow down the internal physiology in the body, so that there is a decrease in heart rate, breathing rhythm, blood pressure, metabolic rate, muscle tension and inhibit the release of stress hormones. Hypnotherapy interventions, ROM and positive affirmations physiologically reduce the scale of anxiety and cortisol hormone levels through the feelings of relaxation that arise.

From the research facts showing that the measurement of the Erythrocyte and Leukocyte profiles in the experimental and control groups showed significant results ($p > 0.05$), it can be concluded that there is no significant effect on respondents who experience schizophrenia. Neuroinflammation in the brain is one of the potential causes of schizophrenia. Leukocytes, especially the microglia type, are associated with brain inflammation. When microglia are activated, they will release inflammatory cytokines that affect neurotransmission and cause brain tissue damage. Several studies have linked leukocyte levels to the severity of schizophrenia symptoms. The relationship between Schizophrenia and erythrocytes is related to dysfunction of neurotransmitters, including dopamine, serotonin, and glutamate, which affect the cardiovascular system and erythrocyte formation. Some drugs used to treat schizophrenia, especially antipsychotic drugs, can affect blood profiles, including erythrocytes. Side effects of drugs include changes in the number of red blood cells, although this effect tends to be less common than its impact on leukocytes or platelets.

Based on the researcher's overall assumption, the results of the study have not been able to provide a picture to understand the exact mechanism behind the relationship between leukocytes, erythrocytes and schizophrenia, the existing evidence suggests that inflammation, reflected in high leukocyte counts, may play a role in the development or severity of schizophrenia. However, this relationship is complex and involves many other factors, including genetics, environment, and other biological factors. In general, although there are some indications that erythrocytes and related conditions, such as anemia, may affect the severity or development of schizophrenia symptoms, the direct relationship between erythrocytes and the occurrence of schizophrenia is still less clear. More obvious associations tend to be found in studies that observe changes in the immune system, oxygen metabolism, and the side effects of drugs used to treat this disorder. Based on the facts, theories and journals above, it is concluded that the combination of complementary interventions

Hypnotherapy Movement and Affirmation (HYMA) carried out for 2 weeks for 20 minutes has a significant effect on anxiety status and changes in cortisol hormone levels. Although the profile of Erythrocyte and Leukocyte values has not shown significant changes in either the experimental or control groups. Relaxation therapy, movement and positive affirmations offer significant benefits for schizophrenia patients in managing anxiety, reducing psychotic symptoms, and improving overall quality of life. Both of these interventions can be used as part of a holistic approach involving medical support and psychotherapy in the management of schizophrenia. By integrating both into the treatment routine, patients can gain greater benefits in stress management, strengthening self-confidence, and long-term recovery.

CONCLUSION

Combination of Hypnotherapy Movement And Affirmation (HYMA) therapy is able to reduce anxiety scale and cortisol hormone levels. Although the profile of Erythrocyte and Leukocyte values has not shown significant changes and associations with schizophrenia in the experimental group or the control group. Based on the results of the study have not been able to provide a picture to understand the exact mechanism behind the relationship between leukocytes, erythrocytes and schizophrenia, the existing evidence suggests that inflammation, reflected in high leukocyte counts, may play a role in the development or severity of schizophrenia.

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