

PROGRESSIVE MUSCLE RELAXATION THERAPY IN PATIENTS AT RISK OF VIOLENT BEHAVIOR: A CASE STUDY

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ABSTRACT

Risk of Violent Behavior is one of the responses toward stressor dealt by an individual who experiences the decline of ability in solving problem, being oriented in time, place or person and feeling anxious. The purpose of this study case is to acknowledge the symptoms and signs of patients with risk of violent behavior before and after they receive exercise of progressive muscle relaxation. Symptoms of violent behavior experienced on patient I were: he was angry, yelled and slam something, because he cannot stand of being farmer and poor. Symptoms of violent behavior experienced on patient II were: Pasien was angry and violent. He threw objects at home, hit his parents, had sleep difficulty, felt anxious, walked randomly and intended to burn house since 5 days ago. The patient's diagnosis was schizophrenia with violent behavior. Intervension in this study used progressive muscle relaxation (PMR). Intervention was done for four days. It was given once a meeting and progressive muscle relaxation was done for 30 minutes. The difference of symptoms and signs before and after progressive muscle relaxation therapy was given can be seen based on the result of pre and post in both subjects. A decrease in symptoms and signs after progressive muscle relaxation therapy is a success of this therapy in controlling violent behavior, but this therapy must be carried out on cooperative patients.

Keywords: case study; progressive muscle relaxation; risk of violent behavior

INTRODUCTION

Schizophrenia is a mental disorder that is marked by positive symptom and negative symptom affecting multiple functional domain of individual such as occupation, interpersonal relations and self treatment. Positive symptoms consist of delusion and hallucination. Negative symptoms are expressed in form of emotional expression or violent behavior, which include social withdrawal, affective flattening, abulia, anhedonia, avolition or others (American Psychiatric Association, 2013);(Kahn et al., 2015). In Indonesia, the highest prevalence of schizophrenia is in Bali with 11,0%, Yogyakarta with 10%, NTB with 10%, Aceh with 9,0%, Central Java with 9,0% (Kemenkes RI, 2018). According to the data in one of Mental Hospitals in Semarang from October until December in 2021, there were 1266 individuals who suffer mental disorder. 45% of them had risk of violent behavior.

Risk of Violent Behavior is one of responses toward stressor dealt by an individual. This response may be harmful to an individual, others and environment. An individual who has risk of violent behavior often displays changes in behavior such as threatening; being reckless, hyperactive, anxious and aggressive; talking loud in high tone; having intense expression; uttering passionately (Cho et al., 2019). An individual who has risk of violent behavior experiences deficiency in ability to solve problem, be oriented in time, place and person (Pardede, 2020); (Kandar & Iswanti, 2019).

Impact caused by risk of violent behavior is losing self-control to the point of hurting the individual itself, others and environment. Some efforts to handle violent behavior include direct problem solving and defense mechanism for self-protection (Musmini, 2019). The settlement with non-pharmacology technique can be done to overcome symptoms of violent behavior by giving progressive muscle relaxation therapy to help controlling anger and to motivate patients so they are able to express anger with violence.

Progressive muscle relaxation dis one of self-manage technique based on method of sympathetic and para-sympathetic nervous system. The result of previous research by (Destyany et al., 2023), stated that progressive muscle relaxation helped to decline symptoms and signs in risk of violent behavior. Supported result of research by (Salfiana et al., 2022) there was a decline in symptoms and signs of violent behavior. Besides, patients testified that they were no longer feeling angry and felt easier to express anger well after progressive muscle relaxation. Relaxation is beneficial because it lowers blood pressure, helps breathing, relaxes tensed muscle, increases self-consciousness, gives peaceful feeling, brings out period of relaxed awareness, keeps an individual awake (Amin et al., 2021).

METHOD

Symptoms of violent behavior experienced on patient I were: he was angry, yelled and slam something, because he cannot stand of being farmer and poor. Symptoms of violent behavior experienced on patient II were: Pasien was angry and violent. He threw objects at home, hit his parents, had sleep difficulty, felt anxious, walked randoomly and intended to burn house since 5 days ago. The patient's diagnosis was schizophrenia with violent behavior. Intervension in this study used progressive muscle relaxation (PMR). Intervention was done for four days. It was given once a meeting and progressive muscle relaxation was done for 30 minutes.

RESULT

Table 1.

Demographic information patient I	
Data	Information
Name	Mr. S
Age	20 years old
Gender	Male
Religion	Moeslem
Occupation	Farmer
Marital Status	Single
Frequency of Admission	2 (two) times, in 2021 and 2022
Reason of Admission	The patient was taken by his family into mental hospital because he was often angry and yelled because he cannot stand of being farmer and poor
Pre-disposition Factor	History of mental disorder in 2021
Precipitation Factor	Patient discontinued medication for 2 (two) months
Physical Check	Blood Pressure : 100/71 mmHg, Vein: 90 x/minute, Body Temperature: 36,7 °C, Respiratory Rate: 20x/minute, Height: 140 Cm, dan Weight: 47 Kg.

Symptoms of violent behavior experienced on patient I were: yelled and slam something, because he cannot stand of being farmer and poor. Therefore the patient was taken to a psychiatric hospital by his family. The patient I (one), he has a history of mental disorders since 2021 and has been treated in a mental hospital 2 times in 2021 and 2022. The patient has a medical diagnosis of schizophrenia and no history of other diseases. Patient's family history, none of the patient's family had mental disorders. While the patient is hospitalized, the patient takes medication regularly and is given interventions such as active therapy. The intervention given to patients is able to control violent behavior. But when the patient returned home, the patient did not take the medication regularly which caused the disease to recur.

Table 2.
 Demographic information pasien II

Data	Information
Name	Mr. Y
Age	31 years old
Gender	Male
Religion	Moeslem
Occupation	Merchant
Marital Status	Married
Frequency of Admission	3 (tri) times in 2019, 2020 and 2022
Reason of Admission	Patient was angry and violent. He threw objects at home, hit his parents, had sleep difficulty, felt anxious, walked randomly and intended to burn house since 5 days ago
Pre-disposition Factor	History of Mental Disorder in 2019
Precipitation Factor	Patient discontinued medication for 1(one) months
Physical Factor	Blood Pressure: 130/90 mmHg, Vein: 100x/menit, Respiratory Rate: 20x/minutes, Body Temperature 36,8 °C, Height: 162 Cm, dan Weight: 56 kg

Symptoms of violent behavior experienced on patient II were: Patient was angry and violent when he was first taken to a mental hospital. He threw objects at home, hit his parents, had sleep difficulty, felt anxious, walked randomly and intended to burn house since 5 days ago. The patient II (two), he has a history of mental disorders since 2019 and has been treated in a mental hospital 1 times due to drug withdrawal. The patient has a medical diagnosis of schizophrenia and no history of other diseases. The patient's family history, his mother has suffered from schizophrenia since 2013 and has been hospitalized several times. While the patient is hospitalized, the patient takes medication regularly and is given interventions such as active therapy. The intervention given to patients is able to control violent behavior. However, when the patient returned home, the patient did not regularly take medication and went to the hospital for control, causing the disease to recur.

TIME, CLINICAL FINDINGS AND DIAGNOSTIC ASSESMENT

This case study was done for four days in February at one of mental hospitals in Semarang. The patient has a medical diagnosis of schizophrenia and the nursing diagnosis is based on the negative symptoms that appear, namely violent behavior. To find out the violent behavior experienced by the patient, we carried out an examination using a questionnaire. It was marked by (V) if they were present and the score was 1 (one), it was left blank if they are not present and the score was 0 (zero). There were 15 items of symptoms and signs marked in patients with risk of violent behavior such as threatening, swearing with rude words, talking harshly and angrily, attacking people, walk anxiously, hurting the person itself and others, damaging environment, being violent and aggressive, staring, looking sharply, holding fist, closing jaws, face turning red and stiff body. This instrument was taken from the previous research by (Musleha et al., 2022).

THERAPEUTIC INTERVENTION

Intervension in this study used progressive muscle relaxation (PMR). Progressive muscle relaxation is included in relaxation therapy. Intervention was done for four days. It was given once a meeting and progressive muscle relaxation was done for 30 minutes. This therapy is provided in accordance with standard operational procedures (SOP). 1). First, prepare the tools and explain the goals of therapy to the patient. 2) Position the patient as comfortable as possible, for example lying down or sitting back (semi fowleer). 3) Guide the patient to do deep breathing exercises and inhale through the nose and exhale from the mouth like a whistle. 4) Clench both palms, then tighten the biceps and forearms for 5-7 seconds, encourage the patient to feel, and fully tense the muscles then relax for 12-30 seconds. 5) Furrow your forehead upwards at the same time, pressing your head perhaps to back, turn

clockwise and vice versa, then advise the patient to contract the muscles like a walnut, namely squint, blink the eyes, lean forward, press the tongue to the ceiling and bend the shoulders for five to seven seconds. Guide the patient to the area of muscle tension, encourage the client to think about how it feels, and tense the muscle completely then relax for 12-30 seconds. 6) Arch your back while taking a deep breath in and out of your stomach, hold it, then relax. Take a deep breath, press out your stomach, hold, relax. 7) Pull your feet and thumbs back towards your face, hold, relax. Fold the thumbs simultaneously, tighten the calves of the thighs and buttocks for five to seven seconds, guide the patient to the tense area, then encourage the patient to feel it and tense the muscles completely, then relax for 12-30 seconds. 8) While performing relaxation techniques, note the patient's nonverbal responses. If the patient becomes uncomfortable, stop the exercise, and if the patient seems to be having difficulty, relaxation is carried out only on parts of the body that the patient is able to do. Slow down the pace of the exercise and concentrate on tense areas of the body. It was given once a meeting and progressive muscle relaxation was done for 30 minutes. The evaluation results obtained are Signs of risk of violent behavior in both subjects decreased after being given progressive muscle relaxation therapy for four days which was given 1 time per meeting for 30 minutes.

FOLLOW-UP AND OUTCOMES

According to table 3 above, there were 5 symptoms and signs with percentage 33.3% before Progressive Muscle Relaxation. On the first day, the numbers of symptoms and signs declined into 4 with percentage 26,6%. On the second day, they became 3 with percentage 20%. On the third day, they declined into 2 with percentage 13%. On the fourth day, they became 1 with percentage 6,6%.

Table 3.
 Symptoms and Signs in Risk of Violent Behavior Before and After Progressive Muscle Relaxation Patient 1

NO	Symptoms and Signs	Patient's Response				
		Pre-test		Post-test		
		D0	D1	D2	D3	D4
1	Threatening	-	-	-	-	-
2	Swearing with rude words	-	-	-	-	-
3	Talking loudly	√	√	-	-	-
4	Talking angrily	√	√	√	√	√
5	Attacking people	-	-	-	-	-
6	Walking anxiously	√	√	√	-	-
7	Self-hurting or others	-	-	-	-	-
8	Damaging environment	-	-	-	-	-
9	Behaving violently	-	-	-	-	-
10	Glaring	-	-	-	-	-
11	Starring	√	-	-	-	-
12	Holding fists	-	-	-	-	-
13	Closing jaws	-	-	-	-	-
14	Showing red face	-	-	-	-	-
15	Looking stiff physically	√	√	√	√	-
Scores (%)		33,3%	26,6%	20%	13%	6,6%

According to table 4 above, there were 6 symptoms and signs with percentage 40% before Progressive Muscle Relaxation therapy was done. On the first day, the symptoms and signs declined into 5 with percentage 33,3%. On the second day, they declined into 3 with

percentage 20%. On the third day, they declined into 2 with percentage 13%. On the fourth day, they became 1 with percentage 6,6%.

Table 4.
 Symptoms and Signs in Risk of Violent Behavior Before and After Progressive Muscle Relaxation Patient II

NO	Symptoms and Signs	Patient's Response				
		Pre-test		Post-test		
		D0	D1	D2	D3	D4
1	Threatening	-	-	-	-	-
2	Swearing with rude words	-	-	-	-	-
3	Talking loudly	√	√	-	-	-
4	Talking angrily	√	√	√	√	√
5	Attacking people	-	-	-	-	-
6	Walking anxiously	√	√	√	-	-
7	Self-hurting or others	-	-	-	-	-
8	Damaging environment	-	-	-	-	-
9	Behaving violently	-	-	-	-	-
10	Glaring	-	-	-	-	-
11	Starring	√	√	-	-	-
12	Holding fists	√	-	-	-	-
13	Closing jaws	-	-	-	-	-
14	Showing red face	-	-	-	-	-
15	Looking stiff physically	√	√	√	√	-
Scores (%)		40%	33,3%	20%	13%	6,6%

The effect of progressive muscle relaxation therapy carried out on schizophrenic patients with violent behavior has a positive impact because it can control the anger and violent behavior experienced by the patient. In this study, there were no adverse events experienced by the research team and patients. This intervention went well and the patient consistently followed this therapy.

DISCUSSION

Gender

Gender of Patient I and Patient II is male. Gender is not significant in terms of violent behavior risk since both male and female tend to have risk of violent behavior. Both gender could express anger as response toward anxiety which is felt as threat (Muhit, 2015). Based on the result of resarch, gender was related with violent behavior. The number of male is more doubled than female (Destyany et al., 2023). Male has more risk twice than female because they have more tendency to have high emotional degree (Agnecia et al., 2021).

Age

The data displayed that Patient I is 20 years old and Patient II is 21 years old. Schizophrenia with risk of violent behavior may occur to male in 15-44 year-old (Anisa et al., 2021). At this productive age, an individual is demanded to achieve good self-actualization that is from the individual, family and environment. Adulthood is mature period in the aspects of cognitive, emotion and behavior. A failure experienced by an individual to achieve the level of maturity will cause difficulty for the individual to fulfill development needs and it may lead to mental disorder (Kandar & Iswanti, 2019).

Occupation

One of factors that cause violent behavior is occupation. It is closely related with income and economy status of individual (Musleha et al., 2022). In line with previous research, job loss, unemployment and low income can trigger the risk of violent behavior (Caqueo-Urizar et al., 2016). There is a similarity between theory and finding in both subjects about symptoms and signs in risk of violent behavior. According to the data, Patient I is a farmer and Patient II is a merchant. As adults, there is a lot of stressor coming from workplace, home, society that make individual stressful easily. The individual, then, has risk to be violent (Malfasari et al., 2020).

Symptoms and Signs of Violent Behavior Risk Before and After Progressive Muscle Relaxation Therapy

The difference of symptoms and signs before and after progressive muscle relaxation therapy was given can be seen based on the result of pre and post in both subjects. Before progressive muscle relaxation, data on both subjects displayed symptoms and signs in Patient I like talking loudly, angrily, starring, walking anxiously and looking stiff physically. On Patient II, the symptoms and signs were talking loudly, angrily, holding fist, starring, walking anxiously and looking stiff physically. There was one difference between Patient I and Patient II in their symptoms and signs. According to the previous research by (Netrida, 2015), it was concluded that there were 59 patients or respondents (100%). Patients who talked in high and loud voice had risk of violent behavior. This is in line with the result of another research that holding fist and looking stiff physically were symptoms and signs in risk of violent behavior. Holding fist is angry reaction from physiology response by patients who show their emotion clearly to others that they are being angry by fisting hands (Malfasari et al., 2020). Supported by the result of other research by (Susilowati & Widodo, 2015), An individual who is unable to release anger may display symptoms and signs of talking loudly, walking anxiously and looking stiff physically as the release of emotion inside.

Relaxation technique is a simple clinical rehabilitation technique which can be done in short time. One of relaxations that can be used is progressive muscle relaxation (Vancampfort et al., 2013). Response of relaxations could hinder autonomic nervous system and central nervous system. It also increases parasympathetic activity by decrease in skeletal muscle, heart muscle tone and interrupts neuroendocrine function. Relaxation consists of complex response in motoric, visceral and behavioral level. Motoric and visceral response involve group of muscle toning during inhaling, holding it for 15 seconds and exhaling (Melo-Dias et al., 2019). Progressive muscle relaxation involves main muscle relaxation systematically to relax physics and mental (Wang et al., 2015).

According to the result of previous research, progressive muscle relaxation could reduce symptoms and signs of violent behavior (Destyany et al., 2023). Supported by other research, progressive muscle relaxation is effective to reduce emotional pressure, to increase coping, to improve ability in handling stressful situation and to supporting self-control in emotional pressure (Wang et al., 2015); (Vancampfort et al., 2013). Relaxation practice can lower the level of anger and it is effective in controlling anger (Icell & Basogul, 2021). In line with other research, this therapy certainly affected patient's emotional state in cognitive aspect, affective aspect, social aspect and behavioral aspect. By practicing this progressive muscle relaxation, whole organs may be relaxed when they are tensed so patients with risk of violent behavior could control it when they are angry (Pardede, Simanjuntak and Laia, 2020). Focusing in therapy of progressive muscle relaxation is the main core in this therapy. The result is that respondents were able to follow the therapy and to do it independently. This is in accordance

to the change in risk of violent behavior after doing therapy.

The conclusion in this case study is symptoms and signs in risk of violent behavior in patient I and patient II declined after progressive muscle relaxation for four days. It was given once a meeting for 30 minutes. Suggestion for next research is that quasi-experimental method is possible to identify effectiveness of progressive muscle relaxation with more samples. Limitation in this case study case is that patients often have mood-swing condition during interventions. Therefore, it will take time for a while so their mood is getting better. The main 'take-away' lessons of this case report is progressive muscle relaxation is very effective in reducing violent behavior in schizophrenic patients. Therefore, progressive muscle relaxation should be recommended as routine treatment to patients with schizophrenia in acute inpatient units.

CONCLUSION

The patient was very enthusiastic when given therapy, not only taking medication but also being given other therapy, namely progressive muscle relaxation therapy because it can help control his emotions so that the patient can recover quickly and go home. Patients hope that this therapy can be given every day in the hospital.

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