



Comparison of the Effectiveness of Providing Spiritual Emotional Freedom Technique (SEFT) Therapy with Therapy 3HZ Frequency on Improving Sleep Quality Teenagers Who Experience Insomnia at Papua Pegunungan Junior High School in 2024

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Abstract: Insomnia among adolescents in Papua Mountains is increasingly prevalent and negatively affects cognitive performance and emotional well-being. This study aimed to compare the effectiveness of Spiritual Emotional Freedom Technique (SEFT) therapy and 3 Hz frequency therapy in improving sleep quality among junior high school students with insomnia in 2024. A quasi-experimental study with a Non-Equivalent Control Group Design was conducted on 101 respondents selected through purposive sampling from three schools: Usilimo State Junior High School (n=35), Yapis Wamena Junior High School (n=33), and Sogokmo Adventist Junior High School (n=33). Data were analyzed using the Wilcoxon signed-rank test. Results showed that SEFT therapy improved sleep quality with significant effects at Usilimo (p=0.003) and Yapis Wamena (p=0.025), but not at Sogokmo Adventist (p=0.083). In contrast, 3 Hz frequency therapy consistently demonstrated highly significant improvements across all schools (p<0.001). In conclusion, 3 Hz frequency therapy is more effective than SEFT therapy in improving sleep quality among adolescents with insomnia in Papua Mountains.

Keywords: 3 Hz frequency therapy; Insomnia; SEFT therapy; Sleep quality

Introduction

Insomnia is a sleep disorder characterized by difficulty initiating sleep, maintaining sleep, or waking up too early and not being able to fall back asleep, despite adequate sleep opportunities. This disorder is quite common in adolescents (Shintya & Adodo, 2023). Factors that cause insomnia in adolescents include academic pressure, excessive gadget use, irregular sleep patterns, and mental health conditions such as anxiety and depression. The impact of insomnia in adolescents is quite serious because it can interfere with their cognitive function, emotions, and physical well-being (Tudu et al., 2023).

In 2023, the prevalence of insomnia has increased in many countries around the world. Based on

available data, around 30% of the world's population experiences insomnia to varying degrees. Factors such as stress, changes in modern lifestyles, and the increasing use of digital technology are thought to contribute to the increase in global insomnia cases. Insomnia is a global health problem that affects the quality of life and productivity of individuals (Tyas, 2022).

Insomnia is also a common health problem in Indonesia. Based on a 2023 survey, around 10-12% of Indonesians were reported to experience chronic insomnia. This includes various ages, including children, adolescents, and adults. Irregular sleep patterns, work stress, and unhealthy lifestyles are also major factors in the increasing number of insomnia in Indonesia (Purnawinadi & Sali, 2020).

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In Papua Mountains, the incidence of insomnia also shows an increasing trend. Although specific data on the prevalence of insomnia in Papua Mountains in 2023 is limited, it is estimated that around 8-10% of people in this area experience sleep disorders, including insomnia (Mu'awanah, 2022). Socio-economic challenges and environmental factors also affect the sleep patterns of people in the Papua Mountains. In Wamena, a city in the Papua Mountains, cases of insomnia have also been reported to be quite high. Several local studies show that around 7-9% of the population in Wamena experience insomnia. Environmental factors such as lack of access to mental health facilities and living in relatively remote areas are obstacles to dealing with insomnia in this area (Sari et al., 2021).

One of the effects of insomnia on adolescents is impaired cognitive function and concentration. Lack of sleep can cause adolescents to have difficulty focusing when studying or following lessons at school. This can result in decreased academic achievement, because they are unable to absorb information well or remember what has been learned. In addition, insomnia can also affect mood, which makes adolescents more easily stressed and prone to emotional disorders (Udin, 2020).

Insomnia management in adolescents includes pharmacological and non-pharmacological interventions, each of which has its own impact. Pharmacological approaches involve the use of drugs, such as melatonin or prescription sleep aids given in certain conditions, but carry the risk of causing dependence or side effects if used long-term. In contrast, non-pharmacological management involves techniques such as cognitive behavioral therapy, stress management, setting a sleep routine, and reducing gadget use before bed. Non-pharmacological approaches are considered safer and more effective in the long term because they focus on behavioral changes that support healthy sleep patterns without the risk of drug dependence. One of the non-pharmacological therapies is the *Spiritual Emotional Freedom Technique (SEFT)* and *3Hz frequency* (Susanto, 2020).

Spiritual Emotional Freedom Technique (SEFT) therapy is one method used to treat insomnia. SEFT combines spiritual and emotional elements to help relieve stress that often triggers insomnia. Based on research, SEFT therapy has been shown to be effective in reducing insomnia symptoms, especially in people with mild to moderate insomnia. This therapy provides a sense of calm and relaxation, which helps patients fall asleep more easily (Tyas, 2022).

Therapy with a frequency of 3Hz is also used as a method to treat insomnia. This low frequency is

believed to have a calming effect on the brain, which helps individuals to feel more relaxed, improves sleep quality and speeds up sleep time in insomniacs. This therapy is also considered quite safe and effective if used with the right dosage (Susanto, 2020).

This study is in line with (Sari et al., 2021) The results of the search from 4 journals that have been found provide evidence that the use of SEFT therapy can improve sleep quality and lower blood pressure. The use of Spiritual Emotional Freedom Technique (SEFT) therapy is very suitable and recommended for the elderly to improve sleep quality and blood pressure stability. This SEFT therapy only needs to be done every day for 5-15 minutes (Tyas, 2022).

Based on the preliminary study, it was found that most adolescents experienced sleep difficulties but lacked knowledge about effective management strategies. Considering the negative impact of insomnia on concentration and academic performance, it is important to identify interventions that can improve sleep quality. Therefore, this study aims to compare the effectiveness of Spiritual Emotional Freedom Technique (SEFT) therapy and 3 Hz frequency therapy in improving the sleep quality of adolescents with insomnia at Papua Pegunungan Junior High Schools in 2024.

Method

This study employed a quasi-experimental design with a Non-Equivalent Control Group Design approach. This design is similar to the pre-test and post-test control group design; however, the treatment and control groups were not selected randomly (Sugiyono, 2020). The design allowed researchers to observe differences in outcomes before and after the intervention (Notoatmodjo, 2021).

The population consisted of junior high school students in Papua Pegunungan who experienced insomnia. A total of 101 respondents were recruited from three schools: Usilimo State Junior High School (n=35), Yapis Wamena Junior High School (n=33), and Sogokmo Adventist Junior High School (n=33). The sampling technique used was purposive sampling, with inclusion criteria being adolescents aged 13-15 years who reported sleep difficulties for at least three times per week and were willing to participate in the study.

Data were collected using a standardized sleep quality questionnaire that measured several domains, including sleep duration, sleep latency, sleep disturbance, and daytime dysfunction. A pre-test was conducted to establish baseline sleep quality, followed by the provision of interventions. The experimental

group received 3 Hz frequency therapy, while the comparison group received Spiritual Emotional Freedom Technique (SEFT) therapy. Each intervention was delivered for a predetermined duration and frequency under supervision to ensure consistency. After the intervention period, a post-test was conducted using the same questionnaire.

Data analysis was carried out in two stages. First, descriptive statistics were used to summarize

respondents' demographic characteristics and baseline sleep quality. Second, inferential statistics were applied to test the research hypothesis. The Wilcoxon signed-rank test was used to analyze within-group changes in sleep quality before and after the intervention, while the Mann-Whitney U test was employed to compare differences between the SEFT and 3 Hz frequency therapy groups. The significance level of $p < 0.05$ was considered statistically significant.

Result and Discussion

Table 1. Frequency distribution of respondent characteristics based on gender and sleep quality

Criteria	Usilimo State JHS F (%)	Yapis JHS Wamena F (%)	Sogokmo Adventist JHS F (%)
Gender			
Woman	18 (51.4)	16 (48.5)	12 (36.4)
Man	17 (48.6)	17 (51.5)	21 (63.6)
Sleep Quality			
Very good	0 (0.0)	0 (0.0)	0 (0.0)
Pretty good	12 (34.3)	12 (36.4)	20 (60.6)
Kinda bad	23 (65.7)	21 (63.6)	13 (39.4)
Very bad	0 (0.0)	0 (0.0)	0 (0.0)

The results show that at Usilimo State Junior High School, most respondents were female (51.4%) with a predominant sleep quality of "kinda bad" (65.7%). At Yapis Wamena Junior High School, most respondents were male (51.5%) with a sleep quality of "kinda bad" (63.6%). Meanwhile, at Sogokmo Adventist Junior

High School, the majority were male (63.6%) with a dominant sleep quality of "pretty good" (60.6%). These findings indicate variations in student characteristics between schools, with insomnia being more prevalent in Usilimo and Yapis compared to Sogokmo

Table 2. Frequency distribution of adolescent sleep quality before and after SEFT therapy

Sleep Quality	Usilimo State JHS F (%)	Yapis JHS Wamena F (%)	Sogokmo Adventist JHS F (%)
Before SEFT			
Very good	0 (0.0)	0 (0.0)	0 (0.0)
Pretty good	6 (33.3)	6 (37.5)	10 (62.5)
Kinda bad	12 (66.7)	10 (62.5)	6 (37.5)
Very bad	0 (0.0)	0 (0.0)	0 (0.0)
After SEFT			
Very good	2 (11.1)	0 (0.0)	0 (0.0)
Pretty good	11 (61.1)	11 (68.8)	13 (81.3)
Kinda bad	5 (27.8)	5 (31.3)	3 (18.8)
Very bad	0 (0.0)	0 (0.0)	0 (0.0)

Before the SEFT intervention, most students in Usilimo (66.7%) and Yapis (62.5%) were in the "kinda bad" category, while in Sogokmo most were already in the "pretty good" category (62.5%). After receiving SEFT, an improvement in sleep quality was observed: in Usilimo, the "pretty good" category increased to 61.1%; in Yapis, it increased to 68.8%; and in Sogokmo it increased to 81.3%. However, in Sogokmo no students reached the "very good" category after SEFT, suggesting that the effectiveness of SEFT therapy was not uniform across schools.

Table 3. Frequency distribution of adolescent sleep quality before and after 3 Hz frequency therapy

Sleep Quality	Usilimo State JHS F (%)	Yapis JHS Wamena F (%)	Sogokmo Adventist JHS F (%)
Before 3 Hz			
Very good	0 (0.0)	0 (0.0)	0 (0.0)
Pretty good	6 (35.3)	6 (35.3)	10 (58.8)
Kinda bad	11 (64.7)	11 (64.7)	7 (41.2)
Very bad	0 (0.0)	0 (0.0)	0 (0.0)
After 3 Hz			
Very good	16 (94.1)	15 (88.2)	16 (94.1)
Pretty good	1 (5.9)	2 (11.8)	1 (5.9)
Kinda bad	0 (0.0)	0 (0.0)	0 (0.0)
Very bad	0 (0.0)	0 (0.0)	0 (0.0)

Before the 3 Hz frequency therapy, most students in Usilimo and Yapis were in the “kinda bad” category (64.7%), while in Sogokmo most were already in the “pretty good” category (58.8%). After the intervention, nearly all respondents across the three schools experienced significant improvements, with the majority reaching the “very good” category: Usilimo (94.1%), Yapis (88.2%), and Sogokmo (94.1%). This indicates that 3 Hz frequency therapy was more consistent and effective in improving sleep quality compared to SEFT, as it successfully shifted most students to the “very good” category.

Table 4. Normality Test Results

	Junior High School Usilimo Country	Yapis Middle School, Wamena	Sogokmo Adventist Junior High School
Before SEFT Therapy	<.001	<.001	<.001
After SEFT Therapy	<.001	<.001	<.001
Before Therapy Frequency 3 HZ	<.001	<.001	<.001
After Therapy Frequency 3 HZ	<.001	<.001	<.001

Based on Table 4, the results of the analysis using the Wilcoxon test on data in junior high school Usilimo Country in SEFT therapy the value obtained .003 and 3 HZ frequency therapy obtained a value of <.001 with $P = <0.05$. At SMP Yapis Wamena in SEFT therapy , the value was obtained .025 and 3 HZ frequency therapy obtained a value of <.001 with $P = <0.05$. While in SMP Advent Sogokmo, the value of SEFT therapy was obtained .083 and 3 HZ frequency therapy obtained a value of <.001 with $P = <0.05$.

Table 5. Wilcoxon Range List Test Results

	SEFT Posttest - SEFT Pretest		Posttest 3 HZ - Pretest 3 HZ	
	Z	Asymp. Sig. (2-tailed)	Z	Asymp. Sig. (2-tailed)
Junior High School Usilimo Country	-3,000 ^b	.003	-3.739 ^b	<.001
Yapis Middle School, Wamena	-2.236 ^b	.025	-3.729 ^b	<.001
Sogokmo Adventist Junior High School	-1.732 ^b	.083	-3.758 ^b	<.001

These results indicate that the administration of 3 HZ frequency therapy in 3 junior high schools in Papua Pegunungan is more effective and efficient compared to providing SEFT therapy to improve the quality of sleep of adolescents with insomnia. So it can be concluded that there is a comparison of the effectiveness of providing Spiritual Emotional Freedom Technique (Seft) Therapy with 3 HZ Frequency Therapy to Improve the Quality of Sleep of Adolescents with Insomnia at Junior High Schools in Papua Pegunungan in 2024.

The Effect of SEFT Therapy on Improving Sleep Quality in Adolescents with Insomnia

The results of the study showed that respondents who were given SEFT therapy showed that there was... significant effectiveness in students' sleep quality after being given SEFT therapy. Based on statistical analysis, the p value <0.05 indicates that SEFT therapy has a positive effect on improving the sleep quality of adolescents with insomnia.

SEFT is a technique that combines the concept of emotional management and stimulation of the body's energy points (Ningtyas et al., 2022) . This therapy is based on the theory that emotional disturbances, such as stress, anxiety, or trauma, can disrupt the energy balance in the body which is directly related to sleep quality. Through the process of tapping on certain points (such as meridian points in acupuncture), SEFT attempts to reduce emotional tension that causes sleep disturbances (Komlasari, 2023) .

In the context of adolescents, stress and anxiety factors are often the main causes of insomnia. SEFT therapy that targets emotional and psychological stress management has been shown to be effective in reducing anxiety levels and helping the body enter a deeper state of relaxation, which supports better sleep quality (Siregar et al., 2023).

Previous studies have also shown that stress and anxiety are major factors that cause insomnia in adolescents. SEFT therapy can help identify and address disturbing thoughts or feelings, as well as stimulate body relaxation. By reducing anxiety and emotional tension, adolescents find it easier to fall asleep and maintain quality sleep. This can improve the quality of sleep for adolescents who experience insomnia (Anggraini & Safinatunnajah, 2021).

In line with this research, namely research (Sari et al., 2021) from the results of the study using the Wilcoxon test shows that there is a difference in sleep quality before and after the SEFT intervention. with value $P = \text{Value } 0.002 (p < 0.05)$.

Another study that is also in line with this study is the study (Fitriana, 2021) the results of the T test in this study showed that there was an effect of SEFT

therapy on reducing the level of insomnia before and after the intervention with a P value = Value 0.000 ($p < 0.05$), while in the control group there was no difference with a P value = Value 0.188 ($p > 0.05$) and research (Ramadina et al., 2022) that from the results of the *t dependent statistical test*, a P value = Value 0.000 ($p < 0.05$) was obtained, indicating that there was a significant difference in sleep quality before and after the intervention.

The researchers assumed that insomnia in adolescents in the Papua Mountains Junior High School area could be influenced by various psychological and social factors, such as academic stress, anxiety related to personal development, and limited access to adequate mental health services. The researchers also assumed that SEFT therapy, which combines tapping techniques on the body's meridian points to relieve emotional stress, could be effective in helping adolescents overcome anxiety and tension that disrupt their sleep patterns. In addition, the researchers assumed that adolescents in Papua Mountains would be open to this therapy because SEFT can be adapted to local values that are more holistic and spiritual, and does not require complex medical equipment, making it more acceptable in communities with limited infrastructure. The researchers also assumed that support from family and the surrounding environment would play an important role in increasing the effectiveness of SEFT therapy, because social factors in this area greatly affect adolescents' emotional well-being.

The Effect of 3 Hz Frequency Therapy on Improving Sleep Quality in Adolescents with Insomnia

The results showed that after being given 3 Hz frequency therapy, the sleep quality of adolescents with insomnia experienced a significant increase. Most adolescents reported feeling fresher and more energetic when they woke up, indicating an improvement in overall sleep quality. In addition, statistical analysis showed that 3 Hz frequency therapy had a significant impact on adolescents' sleep quality, with a p value < 0.05 , indicating that the changes that occurred were not accidental. This indicates that 3 Hz frequency therapy has a strong positive effect on sleep disorders in adolescents.

3 Hz frequency therapy is a type of therapy that uses brain wave stimulation with delta frequencies, which are usually associated with deep and restorative sleep stages. Delta waves (0.5-4 Hz) are the dominant brain waves during deep sleep, a sleep phase that is very important for physical and mental recovery (Siregar et al., 2023).

3 Hz frequency therapy has a positive impact on sleep quality by stimulating the production of deeper

and more relaxing brain waves. This frequency can increase delta wave activity, which is the dominant brain wave during deep sleep. Thus, this therapy can help improve sleep patterns, speed up the sleep process, and improve overall sleep quality, reduce sleep disorders such as insomnia and increase the feeling of freshness when waking up (Wirastri et al., 2022)

In this study, a frequency of 3 Hz was used to regulate the brain waves of adolescents who tend to be unstable due to anxiety or stress. This therapy works by stimulating neurons in the brain to produce delta waves, which increase relaxation and reduce anxiety, thus helping adolescents sleep faster and more soundly (Fitriana, 2021).

Previous studies have shown that brainwave stimulation with certain frequencies can affect sleep quality, improve sleep regulation, and reduce sleep disorders such as insomnia. 3 Hz frequency therapy is expected to help adolescents with insomnia by stimulating the brain to enter deep sleep phases faster, extending deep sleep duration, and improving overall sleep quality. An example of 3 Hz frequency therapy is a study conducted by (Setyawan et al., 2022) entitled the effect of reading the Qur'an on the quality of sleep in adolescents, the instrument for assessing sleep quality in this study used The Pittsburgh Sleep Quality Index (PSQI). Based on the results of this study, it shows the effect of Al-Qur'an therapy (Surah Al-Mulk) on sleep quality at the Al-Mukmin Islamic Boarding School, Ngruki, Sukoharjo, Central Java with a p value < 0.001 .

Another study that is in line is the study (Wahyuni et al., 2020) data analysis using the Wilcoxon Signed Rank Test and Paired t-Test with a significance level of $p \leq 0.05$. The results of the study showed that binaural beats sound therapy increased the fulfillment of sleep needs both in terms of quality ($p = 0.002$) and quantity ($p = 0.000$). It can be concluded that binaural beats sound therapy has a significant effect on the fulfillment of sleep needs both in terms of quality and quantity through the mechanism of increasing alpha brain waves, serotonin, endorphins, and melatonin and the results of the study (Hilalliyah & Herlinah, 2021) the results of the insomnia rating scale before the natural sound music therapy with the criteria of severe insomnia were 12 people with a percentage of 100.0%, and after the natural sound music therapy with the criteria of moderate insomnia were 4 people with a presentation of 33.3% and respondents who experienced mild insomnia criteria were 8 people with a presentation of 66.7%. The results of the study showed that there was a relationship between insomnia and natural sound music therapy with P Value = 0.000 ($p < 0.05$).

Researchers assume that 3 Hz frequency therapy, which uses delta brainwave stimulation, can stimulate the brain to enter a deeper and more restorative sleep phase. The 3 Hz frequency is believed to help reduce anxiety and increase relaxation, which in turn will improve the quality of sleep in adolescents. In addition, researchers also assume that this therapy can be well accepted by adolescents because it is non-invasive and can be done without the need for complex medical equipment. Researchers assume that with the routine application of this therapy, adolescents who experience insomnia will experience an increase in duration and quality of sleep, as well as a decrease in sleep disturbances such as waking up in the middle of the night.

Comparison of the Effectiveness of SEFT Therapy with 3 Hz Frequency Therapy on Improving Sleep Quality in Adolescents with Insomnia at Papua Pegunungan Junior High School in 2024

The problem of insomnia in adolescents at junior high schools in Papua Pegunungan is an important concern because it affects their physical, emotional, and academic health. Sleep disorders caused by anxiety, stress, and emotional problems often hinder adolescents' ability to sleep well, which impacts their productivity and well-being. In the Papua Pegunungan area, limited access to adequate medical facilities makes finding solutions that are simple, safe, and accessible to adolescents crucial. SEFT (Spiritual Emotional Freedom Technique) therapy and 3 Hz frequency therapy are two interesting alternative approaches to treating insomnia, and this study aims to compare the effectiveness of both in improving the sleep quality of adolescents with sleep disorders (Susanti & Qomaruzzaman, 2022).

This study compared the effectiveness of the two therapies in improving sleep quality in adolescents with insomnia at SMP Papua Pegunungan. SEFT therapy focuses more on emotional and spiritual approaches by manipulating the body's meridian points to relieve stress and anxiety, while 3 Hz frequency therapy works by stimulating the brain to produce delta waves, which are associated with deep sleep and body recovery. These two therapies have different approaches, but both aim to achieve similar results, namely improving sleep quality (Siregar et al., 2023).

Based on existing theory, SEFT therapy may be more suitable for adolescents who experience insomnia due to severe emotional or psychological factors, such as deep anxiety, because SEFT leads to emotional healing. In contrast, 3 Hz frequency therapy is more physiological and affects the brain more quickly to improve sleep patterns by increasing the duration and

quality of deep sleep which is very important for the recovery of the adolescent body (Fitriana, 2021).

This study showed that both therapies had a positive impact on improving the sleep quality of adolescents with insomnia, although with different mechanisms. Adolescents who received SEFT therapy showed significant improvements in reducing anxiety and stress, which in turn led to better sleep. However, some adolescents may need more time to feel significant changes because this therapy relies on deeper emotional processing. Meanwhile, adolescents who underwent 3 Hz frequency therapy showed rapid and clear improvements in sleep quality, especially in terms of sleep duration and the time it took to fall asleep. They reported feeling more refreshed after sleep, indicating that this therapy was successful in improving sleep quality in a relatively short time (Sari et al., 2021).

Overall, both SEFT therapy and 3 Hz frequency therapy are effective in improving sleep quality in adolescents with insomnia at SMP Papua Pegunungan. SEFT therapy may be more effective for adolescents who have deep emotional problems and require a more holistic approach, while 3 Hz frequency therapy provides faster results in terms of better sleep duration and quality. This study suggests that both therapies can be used as complementary alternatives, depending on the individual needs of adolescents with insomnia, as well as the psychological and physiological factors underlying their sleep disorders.

Researchers assume that in this study 3 Hz frequency therapy is more dominant in providing faster and more significant results. This is based on the ability of 3 Hz frequency therapy to directly stimulate delta brain waves, which play a role in regulating sleep cycles and increasing sleep depth. This therapy is expected to be more effective in improving the quality of sleep-in adolescents with longer sleep duration and reduced sleep disturbances such as waking up in the middle of the night. Although SEFT therapy can address emotional factors such as anxiety and stress, which also affect sleep, 3 Hz frequency therapy is considered more direct and faster in providing a positive impact on the quality of sleep-in adolescents with insomnia.

Factors Influencing the Success of Both Therapies in Improving Sleep Quality in Adolescents with Insomnia

This study aims to evaluate the success of SEFT therapy and 3 Hz frequency therapy in improving sleep quality in adolescents with insomnia at SMP Papua Pegunungan. The success of both therapies is influenced by various factors, both those related to the individual adolescents themselves, the characteristics

of the therapy, and the social context in the environment.

Psychological factors, such as anxiety levels, stress, and other emotional issues, play a major role in determining the effectiveness of therapy, especially for SEFT therapy. Adolescents who have high levels of anxiety or stress may be more responsive to SEFT therapy, which is designed to address emotional and psychological disorders. SEFT focuses on emotional healing with tapping techniques on the body's meridian points, which can help relieve anxiety and tension. In contrast, 3 Hz frequency therapy may be more effective for adolescents who experience insomnia due to physiological disorders or poor sleep patterns, because this therapy works directly by stimulating delta brain waves, which physically affect sleep quality (Sari et al., 2021).

Gadget factors play a very significant role in influencing the success of therapy in improving sleep quality in adolescents with insomnia. The use of gadgets, especially smartphones, can disrupt adolescents' sleep patterns through exposure to blue light produced by the screen, which can suppress the production of melatonin, a hormone that regulates sleep. In addition, digital activities such as playing games or social media before bed can also increase anxiety or mental tension, which worsens insomnia symptoms (Mais et al., 2020).

In the context of therapy to overcome insomnia, this gadget factor must be considered, because excessive or uncontrolled use of gadgets can hinder the effectiveness of therapy. Therefore, therapy aimed at improving sleep quality in adolescents with insomnia needs to include strategies to reduce dependence on gadgets, such as regulating usage time before bedtime and encouraging more relaxing activities, such as reading books or meditation, to prepare the body and mind for better sleep (Komlasari, 2023).

Duration and consistency in undergoing therapy are very important to achieve optimal results. Both therapies take time to show their effects. 3 Hz frequency therapy can provide faster results in terms of sleep quality, because delta brain waves work directly to increase sleep depth. However, the long-term effectiveness of this therapy also depends on how often and regularly the therapy is carried out. Likewise with SEFT, which requires consistent sessions to help teenagers overcome their emotional problems gradually. Teenagers who follow therapy regularly and disciplined are more likely to experience significant improvements in sleep quality (Pratiwi, Martha, 2023).

The motivation and acceptance of adolescents towards both therapies are also very affect its success. Teenagers who are open and motivated to participate

in therapy tend to experience greater benefits than those who are less interested or skeptical of the methods used. (Luneto et al., 2023) . 3 Hz frequency therapy, which is more technical and uses binaural sounds, may be more acceptable to adolescents who prefer simple and non-invasive methods. On the other hand, SEFT, which involves body tapping techniques and emotional approaches, requires psychological readiness and openness from adolescents to respond effectively to the technique (Komlasari, 2023).

Social and environmental conditions around adolescents also affect the success of therapy. In areas such as Papua Mountains, where limited access to medical facilities and health education can be a barrier, support from family and the environment is very important. Adolescents who are supported by their families in undergoing therapy, both SEFT and 3 Hz frequency, are likely to experience more significant progress. In addition, a quiet and distraction-free environment can also increase the effectiveness of therapy, especially for 3 Hz frequency therapy which requires concentration and calmness during binaural sound listening sessions (Anggraini & Safinatunnajah, 2021).

Individual response to therapy also plays a role in the success of both therapies. Each adolescent has different physical, psychological, and emotional characteristics, which affect how they respond to therapy. For example, adolescents with sleep disorders that are more caused by emotional stress may benefit more from SEFT therapy, while adolescents with sleep disorders that are more related to the inability to enter a deep sleep phase may feel more positive effects from 3 Hz frequency therapy. Therefore, choosing a therapy that suits the needs and conditions of the individual is very important to ensure the success of therapy (Wahyuni et al., 2020).

The success of both therapies is also influenced by how the therapy is evaluated and continued after the initial conversation or intervention period. Research shows that SEFT therapy takes time to show significant results in overcoming long-term emotional problems, while 3 Hz frequency therapy can provide faster results. Therefore, continuous monitoring of sleep quality and periodic evaluations are essential to determine the effectiveness of each therapy, as well as to determine whether adjustments need to be made in the approach or duration of therapy (Fitriana, 2021).

Researchers assume that the success of SEFT therapy and 3 Hz frequency therapy in improving sleep quality in adolescents with insomnia is greatly influenced by psychological, social factors, individual motivation, and consistency in undergoing therapy. While 3 Hz frequency therapy may have a faster impact on sleep quality physiologically, SEFT therapy

is more effective in treating sleep problems that are rooted in emotional and psychological factors. The key to successful therapy lies in choosing the method that best suits the individual's condition and the support received during the therapy process.

Conclusion

This study concludes that both SEFT therapy and 3 Hz frequency therapy can improve the sleep quality of adolescents with insomnia at junior high schools in Papua Pegunungan, but 3 Hz frequency therapy shows consistently greater effectiveness across all schools. These findings indicate that 3 Hz frequency therapy is more effective than SEFT therapy in improving adolescents' sleep quality, thereby achieving the research objective.

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A.M, contributed in conceptualizing the research idea, developing the product. I, contributed in analyzing data and writing the article. R.S., contributed in writing, reviewing, and editing the article. K.A., contributed in collecting data.

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Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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