Case Report: Visualization for treatment of insomnia, anxiety, and depression caused by PTSD [version 1; peer review: awaiting peer review]

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Abstract

Background: Depression and anxiety are disorders related to insomnia that generally affect quality of life, especially if they are related to traumatic events. One of the therapeutic methods that has shown effectiveness in treating depression, anxiety and insomnia associated with posttraumatic stress disorder (PTSD) is the visualization method, which is a cognitive behavioral method. The aim of this case study is to investigate the effectiveness of visualization in treating symptoms of depression, anxiety and insomnia associated with posttraumatic experiences. Methods: Sulaiman is a university student who suffered with his family a painful traffic accident, and he has become unable to sleep. This affected his general life, so he became anxious and depressed and had nightmares when sleeping, which lasted for more than a year. He was trained on visualization exercises, including laughter, music, directed visualization, receptive visualization, programmed visualization, and others, which lasted for 17 sessions.

Results: The results showed an average improvement of 77.8% for each of the symptoms of anxiety, depression, insomnia, and the number of minutes it takes to fall asleep. The results of the nonparametric test also showed that there were statistically significant differences in the ranks of measures, as it showed z-values for each of insomnia (z = -2.32, p=0.008), depression (z = -2.54, p=0.04), anxiety (z = -3.08, p=0.03), the time taken to enter sleep (z = -2.64, p=0.04), and the time spent asleep (z = -2.44, p=0.02).

Conclusions: Sulaiman reported that he became more effective and said that depression, rumination, symptoms of anxiety and stressful thoughts had been reduced to a minimum due to learning more positive alternatives and effective and healthy fantasies.

Keywords

visualization, PTSD, insomnia, anxiety, depression
Introduction

Insomnia is defined medically as sleep for less than four hours a day or the inability to fall asleep. There are three types of insomnia: acute insomnia, which is within a short period of time; chronic insomnia, which lasts for a few weeks; and insomnia due to the presence of chronic anxiety, a type of intermittent insomnia that comes from time to time (Aldahadha & Karaki, 2022; Hawkins & Polemikos, 2002). Most of the causes of insomnia are psychological and physical; the psychological causes include anxiety, stress, and depression, and insomnia may be due to responding to emotional shocks, similar to hysterical insomnia (Aldahadha, 2018; Lunde & Skjøtskift, 2015). Sometimes insomnia is due to the presence of a constant and compulsive idea in the sleeper’s visualization. This idea is that sleep is impossible, and insomnia is measured through self-reports of the duration of time taken to enter sleep, the actual duration of sleep, the depth of sleep, and periods of interruption during sleep (Albert & Boone, 1975; Beck-Little & Weinrich, 1998).

Visualization is effective in treating many psychological stressors related to physical diseases, including headaches, muscle spasms, and chronic pain (Bergman, 1989; Epstein, 1989). It can reduce symptoms of depression, anxiety, and insomnia by employing the skill of visualization, or practicing positive thinking in overcoming physical symptoms. If it is difficult to reach a state of muscle relaxation on your own, then you can imagine a state of muscle relaxation spreading to all parts of your body, and you can also see yourself in a safe and comfortable state (Buonanotte, 1984; Davis et al., 2008).

The aim of the current study is to prepare a report and an example of the visualization strategy as one of the methods of cognitive behavioral therapy, which is used to treat many psychological disorders, including insomnia, depression and anxiety, to achieve this goal. A case study was selected who suffers from posttraumatic stress disorder accompanied by symptoms of insomnia, depression and anxiety. He obtained a program based on methods and techniques of effective and directed visualization in all its forms and objectives. This research also aims to provide therapists and counselors with recommendations and benefits of using this method.

Case report

The Queen Rania Center

The Queen Rania Center is a scientific and service center at Mutah University. It was established in 2006 after the Jordanian Studies Center and the Center for Psychological Counseling and Community Service were merged into one center. The center’s vision is to provide service to university students and the local and regional community with services of distinguished quality in all fields, including counseling, psychological treatment, training, consultations, and studies to cover all issues of the local and Arab community. The center provides individual and group counseling and treatment services, outreach counseling, career counseling, development counseling, consultations, training, tests, research, training courses, and community service. The center provides free services to university students and the community and does not charge fees to treat patients, whether from inside or outside the university. It is worth mentioning that the center provides psychological services to the local community and receives several cases outside the university; it also provides a service for transferring severe cases to psychiatrists and o

Ethics and consent

Sulaiman (pseudonym) agreed to participate in order to overcome his problems and signed a written consent form for the publication of his data. This study was approved by the Scientific Research Committee at Mutah University on March 3, 2021, and was conducted in accordance with the instructions of the American Psychological Association and the Ethics of Scientific Research and the Helsinki declaration of Ethical Principles for Medical Research Involving Human Subjects.

Case description

Sulaiman suffers from an old psychological trauma. He is 20 years old and is of Jordanian ethnicity, specifically from Amman city, and he does not complain of physical diseases. He suffered from a traffic accident one year ago that affected his family, and his father suffered a broken spine and became disabled and can move only through a chair. Additionally, his two brothers were with him in the car, and they sustained severe injuries and fractures of the skull. This incident affected the family and had a great impact on them. After this incident, Sulaiman experienced severe insomnia, including nightmares during sleep, waking up early and difficulty falling asleep.

He had bad dreams, and he would wake up feeling stressed, with a high heartbeat, breathing rapidly, and sweating, and he did not leave the scene of the accident, whether during consciousness or dreams. Sulaiman had feelings of depression and general anxiety, as he neglected to take care of himself and became uninterested in himself, neglecting his university duties, missing lectures, and no longer participating in the extracurricular university activities that he was active in, the most important of which was football; he spent most of his time alone in his room. This accident happened one year ago, and Sulaiman is still suffering from the consequences of it. He developed an inability to sleep and feelings of insomnia, and he hates life and hates riding in cars. If he travels, he remains afraid and apprehensive, expecting that an accident will
happen at any moment. At the site where the accident happened, Sulaiman experiences feelings of confusion, crying, high heart rate, anger and shock at least half an hour before arriving at the place. Suleiman's friend advised him that he often must change the route to go to the target place to avoid passing the scene of the accident that injured his family.

At the beginning of Sulaiman’s psychotherapy, he was interviewed in the zero-intake interview session. In the first session, he completed the scale of insomnia, depression, and anxiety. To diagnose Sulaiman's case, it was ascertained that there were no medical problems that might be a cause of PTSD, and the signs, symptoms and events that caused him to have these symptoms were discussed. In a later step, the criteria in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR) were used. Diagnosing PTSD requires exposure to an event that involves an actual or potential threat of death, violence, or serious injury, experiencing the traumatic event directly, witnessing the traumatic event that happened to others, repeatedly being exposed to graphic details of the traumatic event, and finally having problems persisting after this exposure for more than month and causing major problems in your ability to work in social and work environments and negatively affect relationships. It has been confirmed that all of these symptoms are present in Sulaiman.

This treatment aimed to help Sulaiman to be more aware of himself, and to remember periods of deep sleep versus periods of insomnia and sleep interruption, so that repeated measurements can be taken. He was trained to remember the time taken to fall asleep every night, calculate the time spent sleeping, and put pen to paper to remember those numbers and to avoid forgetting them while filling out the scales at the beginning of each weekly counseling session. Sulaiman showed that his anxiety was parallel to the thoughts of his obsession with that painful incident that afflicted him and his family, that he fears that this incident will happen again, and that he cannot forget the painful mental images of the accident, including the blood that flowed from his family members, the efforts to rescue them, and how they suffered from physical pain, hospitalization, and surgeries before they got to what they are now. These are images that often cause him to hesitate and affect his thinking.

Sulaiman mentioned that he does not have the ability to control the imagining of these painful mental images, and he also avoids situations and conversations related to this topic. They lead to physical symptoms such as increased heart rate and breathing and very intense fear, and he loses self-control at times, forcing him to leave some meetings, lectures and public sessions with his friends and colleagues at the university. In addition, these events contributed significantly to an increase in the degree of anxiety and depression and an increase in the time spent falling asleep compared to a decrease in the time spent falling asleep. It was found that the degrees of insomnia, depression and anxiety were also high at the first measurement in the first session.

This incident affected Sulaiman’s public life, as he started smoking after the accident, and affected his academic achievements. His cumulative average decreased, and he suffered from a lack of stamina and very severe nervousness. Sulaiman said that his friends and colleagues at the university noticed these symptoms and that his behavior had changed; some of them tried to help him and sit with him, but the help was not professional, and he benefited only from simple and fleeting advice or failed reassurances.

Sulaiman completed the training sessions on active and directed visualization and found a decrease in the symptoms of insomnia, anxiety, and depression, as shown in Figures 1 and 2. On the other hand, the time taken to fall asleep decreased compared to the increase in the time spent sleeping. At the end of the sessions, Sulaiman stated that he had become more

![Figure 1. Repeated measures of insomnia, depression, and anxiety from the first session to the end.](image-url)
able to control himself and had become more optimistic, that he had reached the stage where he accepted the accident and started thinking positively, and that this incident had taught him lessons that would protect him in the future from falling into an obsession with accidents again. Sulaiman said that whenever he rode in transportation or buses from Amman to Karak, he was always watching the driver, warning him, asking him to slow down and drive calmly, and reminding him that accidents are man-made and that he should be careful when driving.

The positive results continued after the end of the sessions. Sulaiman said that he succeeded in employing the method of visualization in his studies and throughout his life. He imagines positive things, can remember different pages of the books he reads, and visualizes them in a more effective way. After increasing the ability to visualize and imagine, while his focus was on visual images, he is now more capable of activating olfactory, auditory, and even tactile images.

In a brief time, the program of treatment centered around visualization contributed significantly to reducing the symptoms of insomnia, depression and anxiety and reducing the time for entering sleep as well as an increase in the duration of sleep. This program also contributed to Sulaiman becoming more positive and interactive with others and participating in university and family social activities, as he can stop all forms of destructive mental ruminations that induce symptoms of anxiety, insomnia, and depression. Accordingly, Sulaiman remarkably eliminated these symptoms during the treatment process. The therapist followed Sulaiman for three months after the 17 original sessions, phoning him on many days to check on his condition, and he reported that his case was improving and that he had become more efficient, more powerful, and more in control. In fact, he said this incident had become a lesson from the past, and he learned to think in a more positive manner because of it.

History
Sulaiman said that he lived in a simple and easy house, but it was dominated by love and respect, and he was in a modest neighborhood and from a middle-income family. He played with his companions, and they stayed up at night and went to areas where there were dangers; that was at the age of 16 or 17, when they were in the early stages of adolescence. At some shops and supermarkets, they took whatever they wanted without paying, and these events still affect him and make him feel guilty; he said he wants God to forgive him and repent to him, and he hopes that he will be forgiven by all the people he harmed. Sulaiman recalled that he suffered many setbacks and losses in his life, which were represented by the loss of the closest person to him, his friend who played with him during childhood. This child fell into a water well, and they could not save him. This was a setback in his life, because this friend was close to him and he always played with him, and now Sulaiman played alone. On the other hand, Sulaiman said that one of the painful loss incidents he experienced was that he had a cat in his house, and one day Sulaiman hit this pet cat, which had lived with his family for more than ten years; unfortunately, it was a fatal blow, and the cat died at the hands of Sulaiman. He felt guilt, as the parents blamed him and reprimanded him and felt that he had committed a very big crime, because this cat was one of the family members, living, sleeping, eating, and playing with them. Then they lost her overnight, and he was the reason for her death. This was a major event for Sulaiman, and it continued to haunt him unfortunately for many years. He still remembers this story, and the family still reminds him of it, even though he did not intend to hit or kill her.

These are painful events that he went through, such as loss and guilt. He said, however, that he was able to challenge and overcome these events and life continued, but the real feelings of depression that Sulaiman felt were when his grandfather died. His grandfather was a soldier and a fighter who had participated in several wars and made a very big imprint on Sulaiman’s life. He participated in many Arab wars and was exposed to many dangers, and he was telling Sulaiman about
his biography and how he fought in the defense of Jordan. He was Sulaiman's idol, and it left a very big impression on Sulaiman when he lost him, because their house was a shelter and a warm place to go when he sat with his grandfather and grandmother, who passed away two years after his grandfather's death and was no less important to Sulaiman than his grandfather.

Sulaiman mentioned many distinguishing events in his life, some of which were happy and joyful, and some of which make him feel strong and happy. There are tragic events and feelings of joy and anxiety, but the worst event was that painful accident that afflicted his family, caused him feelings of depression, anxiety and insomnia, and greatly affected his achievement and social interaction, so he wants to get rid of such feelings as soon as possible. On the other hand, he is worried about the negative feelings and painful psychological symptoms being suffered by his father, who is now paralyzed and has become extremely nervous and needs care. His mother is the one who takes care of his father. Sulaiman said he also takes great care of his father and takes him to the bathroom, although he may not meet all his physical needs and feels distress and sadness and often notices him crying and sad while he sits alone, although he tries to hide his feelings. Sulaiman said this is what causes him very deep pain from the accident that his family and he went through, which caused difficulties affecting their lives. Sulaiman said they are suffering a great deal, “especially the disability that my father suffers from, may God bless him and grant him peace”.

Assessment
The study included five instruments: the self-report list, scales of insomnia, depression, and anxiety, and finally the training program in visualization.

Self-report list
This list was used to record the time taken to enter sleep and the time spent asleep. Medical standards were adopted to determine the problem of insomnia, and the number of hours of sleep was used to assess the degree of insomnia every morning.

The Pittsburgh Sleep Quality Index (PSQI) Arab Version
Suleiman et al. (2011) codified this scale on the Arab environment, which consists of 19 items to be filled out by the examinee himself, there are 5 items that the partner in bed answers, as these items are grouped into 7 components: sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disorders, medications used, and finally daytime dysfunction. These items are answered on a four-way Likert scale from 0-3, where the highest score indicates poor sleep. The overall score of the scale ranges from 0-21. The revised scoring method, recommended by Beck et al. (2004), was used to compute the component scores. Aldahadha (2021) also verified the validity and reliability of this instrument on the Jordanian environment.

Beck Depression Inventory Arab Version
This list is one of the well-known and successful scales for measuring depression, which was translated and codified into the Arabic version by Hamdi and his colleagues (2004). The list, in its original form, consists of (21) items. The statements of each item were arranged according to its symptom with varying degrees of intensity from (0-3), where zero represents the absence of the symptom while the degrees (1, 2, 3) represent increasing graduated levels of depression. Hamdi et al., (2004) investigated the validity of the translated version of Beck's list, where a sample of 56 male and female students at the University of Jordan were taken and divided into two groups: a depressive group and a non-depressive group based on the clinical interview. Its results are statistically significant at the level (α = 0.001) in terms of distinguishing between depressed and non-depressed people. As for the psychometric properties of the list in this study, the list was presented to 10 reviewers who hold a doctorate degree, and all of them recommended keeping the original Arabic list in its current form. The internal consistency was tested using Cronbach's alpha, on a sample of 60 males and 73 females students, and its value was 87 (Aldahadha, 2021).

Beck Anxiety Inventory Arab Version
The Beck Anxiety Inventory Arab Version (Al-Issa et al., 2000), was developed to assess symptoms of anxiety independently of symptoms of depression. This inventory consists of 21 items. Beck and Steer (1990) found that there are only two factors for this inventory: psychosomatic symptoms and emotional-cognitive symptoms. Finally, the items of the inventory were divided into four factors: neurophysiological, subjective, panic and autonomic symptoms. The results of the studies showed that the inventory has a high internal consistency and that the test-retest correlation is also high (r = 0.67). In any case, all studies around the world have shown the validity and reliability of this inventory for measuring anxiety symptoms. As a result of the inventory’s high psychometric properties, the inventory has been used in a wide range of studies, including the Arab world. For the purposes of this study, verification was carried out to confirm the stability and validity of the inventory by submitting it to ten reviewers who hold a doctorate degree to express their
opinion on the extent of its representation of the Jordanian society, everyone advised to keep the inventory unchanged. The psychometric properties of the Arab version have been confirmed in several previous Arab studies (Aldahadha & Karaki, 2022; Aldahadha, 2021; An-Nahar & Zubaidi, 2000; Al-Rumaih, 2001).

Course of treatment and progress
The idea of treatment came from the book that was translated by the therapist and the author of this research over a period of more than 15 years, which is the practical guide in counseling and psychotherapy to deal with stress, anxiety, and depression (Aldahadha, 2013). It is a guide and a practical book that includes practical exercises on a very large number of counseling and therapeutic skills. It deals with psychological stress, anxiety, and depression, and it includes but is not limited to muscle relaxation, hypnosis, meditation, visualization, disputing of irrational thoughts, stopping thoughts, dealing with anxiety, nutrition, exercise and other guiding and therapeutic methods.

The training program based on visualization, which includes training on receiving visualization, directed visualization, programmed visualization, searching for the inner guide, figurative fantasies, music, and laughter fantasies, has been prepared. The measurements related to the study tools were taken at the beginning of each session and until the end of the program, as the treatment lasted for 17 sessions, during which instructions were given to put a paper and pen next to the bed to record the data required of him after he performs self-training every morning. In a later step, he was provided with instructions that he must keep in his memory when he performs the skill of visualization to increase its effectiveness: Be clear, positive, and kind to yourself. Avoid negative words, such as ‘I won’t feel tired or stressed’. Instead, think of positive words, such as ‘I feel relaxed…I am relaxed and comfortable’. Talk to yourself that you will become calm and confident and repeat the word ‘I will sleep soon…I feel drowsy…Repeat it several times.”

The training program was prepared and presented to 10 reviewers specialized in the field of counseling and psychotherapy to verify the validity of its contents and its suitability to the problem for which it was prepared. The following are the contents of the program for visualization training (Aldahadha, 2013; Davis et al., 2008).

Exercises
Everyone has fantasies, daydreams, memories, and self-talk, and these are all types of visualization. You can consciously strengthen and employ these visualizations to improve your abilities and increase your level of satisfaction. Mental sensory impressions or fantasies that you consciously form can help your body relax and ignore stress, depression, anxiety, and insomnia. The following is the set of exercises that Sulaiman was trained on.

Session 1: Rules of effective visualization
The therapist asked Sulaiman to take off his tight clothes, lie down in a quiet place, and close his eyes quietly. Imagine three times a day. Imagining is easier in the morning and at night, especially when one is lying on the bed. After several practices, you will be able to imagine waiting at the doctor's office, service station, etc. Then, he was asked to carry out the following instructions and mental images:

Clear your body of tension, find the tense muscles, and relax those muscles as much as possible through mental sensory perceptions. Try to employ all your senses: sight, hearing, smell, touch, and taste. Imagine a green forest, trees, blue sky, white clouds, as well as an uncomfortable needle or nail in the foot. Then, add the sounds: the wind, the sound of trees, the murmuring of water, the chirping of birds, and more. Then, add to that how you feel when you are on the ground and how you feel under your feet. Then, smell the scent of pine, wood, grass, and the smell of water. Repeat a short, positive sentence that indicates that you can relax now. Use the present affirmative sentence and avoid negatives such as, ‘I am not nervous’, versus a positive image such as, ‘I will feel calm’.

Session 2: Programmed visualization
Create an imaginary picture, adding sound, light, taste, and smell to it. Imagine the goal you want to achieve or tackle. Or you want to reach the goal sooner. Example: Use programmed visualization when you are doing a jogging exercise. When you do your first jogging exercise, visualize that jog and this exercise in a programmed visualization situation. Imagine you’re running up a hill, feeling yourself inhale and exhale after several miles, to the finish point. When you have finished imagining the run, recount what happened to you in detail.

Session 3: Guided visualization
Once again, Sulaiman was instructed to carefully direct his visualization and sensations, but omit the elements that he feels are difficult to conjure up. The following is an example of guided visualization:

Imagine that you are visiting a special place where you always love to relax. Imagine your dad telling you to relax. And he sings to you, tells you some adorable sentences and says I love you. And sometimes he laughs with his endearing words.
He tells you that he needs to laugh and be happy. He also tells you that you are loved now and that he needs to search and prove that love.

**Sessions 4-5: Receptive visualization**

Sulaiman was trained in the following exercise and was asked to repeat it in action several times:

Relax now, clear your mind of thoughts, choose a vague, intangible stimulus, ask a series of questions, then wait for a response. Imagine yourself on the beach with the sun shining on your skin, you hear water and its smell. You may ask, why am I not relaxed; the answer may be superficial and only at the level of consciousness. Because you can't tell people no, or because you can't free yourself from the symptoms of depression you're experiencing.

**Sessions 6-7: Relaxing through the eye (palming)**

Put your palms on your eyes while they are closed, try to turn off all the lights, do not put too much pressure on your eyes. Try to see black, maybe you see other colors or other fantasies. But focus on black. Employ mental imagery to remember the color black, complete this method for 2-3 minutes. Think and focus on the color black. Slowly raise your hands and gradually open your eyes until you get used to the familiar light. Remember the relaxation sensation of the muscles that control the opening and closing of the eyes.

**Session 8: Metaphorical images**

Lie on the floor, close your eyes, relax, visualize the tension, and then replace the tension with muscle-relaxing visuals. The best visualizations are the ones that improve and strengthen your self-confidence. In order to do this, the following visualizations may be helpful for this purpose. Try to visualize the following things:

Red color, white dot of chalk on the blackboard, the tensile strength and stiffness of the metal rod, the magical annoying sound at night, ammonia smell, and dark tunnel.

Through this visualization, you can become less tense and feel relaxed. and that is through:

Red becomes blue, the white dots of chalk fade into scattered dust, the metal rod becomes softer and softer, to turn the charming annoying sound into a pleasant sound, to replace the smell of ammonia with the smell of lemon, and the dark tunnel becomes luminous.

The more you scan your body, the more you must supply your fantasies with the tense muscles and then allow them to develop the skill of relaxing visualization. For example: if your neck is tense, you might imagine a strong force on your neck. Then imagine that this compressive force began to relax increasingly, and the more you open your eyes, you say to yourself, I look more comfortable and relaxed, or I will relax well in a little while…

**Sessions 9-10: Create a special place for you**

You can retrain yourself to relax the muscles and orientate yourself by creating and finding your own special place. This exercise can be indoors or outdoors. To clarify this, try to record this hadith on an audio tape or have someone else hear it for you:

To go to your safe or comfortable place, lie down, be completely comfortable, close your eyes… Walk slowly to your favorite place in your mind… this place may be indoors or outdoors… It should be comfortable and pleasant… Imagine yourself without worry and without tension… Notice the sights and scenery from a distance… What do you smell?… What do you hear?… Notice that… You must reach the end of the place and feel it… How do you feel?… Smell it… hear it…look at a specific point…a very special point…find the way through this point…look up…what do you see?… What do you hear… and sniff?… Walk down to your safe, special, and favorite place. You have now reached the special place… which is under your feet now… How do you feel now?… Take several steps… What do you see above you?… What do you hear? Do you hear anything? You must reach it and touch it… What are its features? Are there pens, paper, paint, or is there sand to draw with and plaster to shape, these are your tools? Go to her. Handle it, smell it.

Sit or lie in a special place… Notice these smells, sounds and lights… This is where you are and nothing can hurt you… If something is dangerous, don't think about it. Spend three to five minutes understanding the degree of relaxation, security, and comfort you are in right now. Remember this place, its smell, its taste, its sound… You can come back and relax when you need to… You can leave in the same way and the same way you came… Notice the ground, touch things near you… Look at the end of the road and appreciate the value and beauty of the scenery… Keep this special place in your memory that you can go to anytime you want. Say some affirmations like ‘I can relax here’, or ‘this is my special place, I can come here any time I want’. Now open your eyes and spend some time enjoying relaxation.
Sessions 11-13: Finding the inner mentor

Your inner director is an imaginary person or animal that can tell you how to relax and explain the causes of stress. With practice, you can reach your inner director in your favorite place and when you want to. Perhaps you have an inner mentor, such as a parent or some other spiritual or religious figure; if you can find that person, just call them up to your place and ask them to help you with the muscle relaxation skill. Try the following exercise using the skill of voice recording or by reading the text in the voice of a friend.

Relax … Then go toward the road that leads you to the special place, and you are going. Invite the inner guide for you to your special place… Wait… Watch the path that this inner guide is going on, notice the signs and shapes on the way. Listen to the sound of his feet on the ground, if you do not feel safe and secure with this person, find another person with whom you feel comfortable and accepted, ask him some questions… Wait until he answers you, the answer may be funny, saying something, expressing a feeling, dreams… Ask him again how can I relax…? What is causing me stress? When your prompt answers you, you will undoubtedly be amazed at the simplicity and clarity of his answers. And before your guide leaves you, or through his presence, say the signs and indicators that indicate your ability to relax… say simple sentences indicating relaxation… I can relax in this place… I’m relaxing well …

Sessions 14-15: Listening to music

Listening to music is one of the most common forms of muscle relaxation, and everyone has a special meaning for music. It is important and interesting, when you choose music, that you will feel safe and secure, especially when you want to listen for relaxation. If possible, devote half an hour to uninterrupted relaxing music that you can hear every day or when you decide to relax by listening to music. Frequently hearing the same relaxing music in the past is linked to the potential for comfort if heard in the future. To achieve the goal of relaxing by listening to music, you should do the following:

Close your eyes, and visually scan the body to make sure there are no tensions, no contractions, or pains. Be aware of your mood while listening to the music. Remember that the goal of focusing on music is relaxation. Say some relaxing cues such as, ‘listening to music makes me feel relaxed’ … When you are done listening to music, try to re-scan the body to make sure the body is free of tension. Did you feel different before and after listening to the music? Is there any difference in your mood?

Sessions 16-17: Remember to laugh

Sulaiman has been trained to draw on the triggers of laughter. Laughter helps reduce feelings of stress by creating an internal message that I am comfortable and at ease. Laughter stimulates the work of many systems, such as the respiratory and nervous systems, as well as the circulatory system, which means a decrease in the level of pressure and muscle tension and a feeling of comfort and health. It is hard to be angry, anxious, or depressed when you laugh. Laughter rescues you and takes you out of the difficult situation you’re in. It also distracts you from stimuli that give rise to tension. It gives you the necessary distance to get your point of view and recall your experiences of the situation you are talking about. Laughter is an influential artistic and social skill. Give yourself opportunities to laugh as a break from life's stresses. Here are some laughter exercises (Klein, 1989).

Close your eyes… note that you have become more relaxed, that you have overcome the tension from your body… Imagine yourself using the skill of humor in difficult situations… Maybe your professor has told you that you have made a mistake… or have a presentation in front of others. Choose something funny that has happened in your life as an alternative and contrarian response to the stressful situation.

Visualization and guided imagery are two methods of activating the activity and function of the right brain using the power of visualization and muscle relaxation. The following is an exercise to train the activation of the functions of the right brain through drawing.

Sit in a quiet place where no one can interrupt you… Listen to music if you like it. Choose from what is available around you, a shape or picture that is fun for you and you can play it well. Turn the picture so that you do not see it, and then draw the picture by imaging, do not try to look at it until after you finish the whole drawing. Plan to finish drawing in one sitting … you may need a timer to help you set the time. Look at the figure for one minute. Learn about the shape, lines, shadows, etc. Where does the line start and where does it end and so on? When you start drawing, start at the top and move to the other sections as in the case of the jigsaw puzzles. Start drawing … then move from one line to another, take advantage of the time. Don't complicate and make the exercise too difficult… make the movement of your hands easy, flexible, and simple. After you finish drawing, notice your state of mind. Do you feel calm and relaxed? Have you overcome the meaning and concept of time? Have you changed your way of thinking? Where and how did you focus? Was the focus overall rather than the parts during the drawing process? Now that you’ve noticed how you can use the right
brain in the drawing, you can in turn go back to activate the functions of the left brain of the brain. At this time, the level of stress and psychological pressure has dropped to the lowest level.

**Special considerations**

If you have trouble getting positive impressions or fantasies through all your senses, work on your strongest sense first. Then, move to the rest of the senses. It is preferable to do this exercise at least three times a day and be patient until the full time has passed, and if you cannot record audio to hear it later, we may provide you with some tapes that help to achieve the goal.

**Assessment of progress**

The results of repeated measurements for the three dependent study variables were tracked based on the qualitative and quantitative information that the case acknowledged. Figures 1 and 2 represent the repeated measurements of the study variables, from the first session to the last session. The three measures of insomnia, depression and anxiety were collected, as shown in Figure 1, and the measurements of time taken to enter sleep and time taken to fall asleep are indicated in Figure 2. In view of Sulaiman’s need for care and attention, he accepted treatment to a high degree. He was cooperative and performed all duties, and it is worth mentioning that telephone communication with him was done 3 times every day during treatment, most notably morning and evening, which contributed to accelerating the treatment process.

The results of the repeated measurements showed a significant improvement from the beginning of the treatment compared to the last session, as the averages of insomnia, depression, anxiety, and the number of minutes it took to fall asleep, respectively, decreased from 19, 35, 39, and 221 to 6, 11, 12, and 30, with an improvement rate of 69%, 69%, 70% and 86%, respectively. The measurements taken to sleep increased from 123 to 432 minutes, with an improvement rate of 95%.

The results of the nonparametric Wilcoxon test for small samples in Table 1 showed that there were statistically significant differences in the ranks of the repeated measures, as it showed z-values for each of insomnia (z= -2.32, p=0.008), depression (z=-2.54, p=0.04), anxiety (z=-3.08, p=0.03), the time taken to enter sleep (z=-2.64, p=0.04), and the time spent asleep (z=-2.44, p=0.02). The results showed that there is a big effect size for all z values, as they came in the order, 2.24, 2.20, 2.45, 1.51, -5.71.

**Complicating factors**

At the time when Sulaiman was receiving treatment through active and directed visualization exercises, Jordan was suffering from a very large number of traffic accidents, and perhaps it was one of the countries suffering the most in this aspect, as Jordan loses hundreds of people every year due to traffic accidents, not to mention the material damage (Al-Rousan et al., 2021). No day passes when Sulaiman goes from Amman to Karak without witnessing at least one accident, and during the period in which the accident happened to Sulaiman, the Desert Road was under rehabilitation, and there were construction works, paving new roads, road closures and many detours, which causes a traffic crisis and poor driving conditions, which causes many accidents. These events and circumstances contributed to Sulaiman’s growing problem, and therefore he felt that he was more vulnerable than before. Nevertheless, he trained in some behavioral and going to the university, and he was entertaining himself with videos. He was sitting with one of his friends who was traveling with him to feel more reassured to solve this problem and deal with it while traveling. He saw another very painful accident, and this accident was during the treatment period, which negatively affected the treatment process and brought him back to painful and disturbing mental images. Sulaiman received harmful stimuli of this kind and mentioned these events to the

| Table 1. Means and SDs of time taken to enter sleep, time spent in sleep, PSQI, depression, and anxiety scores from pretest to posttest. |
|---------------------------------|----------|----------|-----|-----|-----|------|
| Variable                        | Pre-test | Post-test | z   | p   | r   | Cohen's d |
| PSQI                            | 18 (5.04)| 6 (6.26) | -2.32 | 0.008** | .51 | 2.24 |
| Depression                      | 35 (8.41)| 14 (8.91)| -2.54 | 0.04*  | .39 | 2.20 |
| Anxiety                         | 38 (9.22)| 12 (10.45)| -3.08 | 0.03*  | .42 | 2.45 |
| Time taken to enter sleep       | 221 (12.65)| 42 (11.76)| -2.64 | 0.04*  | .48 | 1.51 |
| Time spent asleep               | 133 (16.80)| 210 (14.09)| -2.44 | 0.02*  | .63 | -5.71 |

PSQI: Pittsburgh Sleep Quality Index.
*p<0.05.
**p<0.01.
therapist, and they were treated as natural events that may occur, but we must accept them and, in return, have the skills and training that qualifies us to mitigate their negative effects.

**Discussion and follow-up**

The follow-up started after the 17th session and lasted for three months, and Sulaiman mentioned that he benefited greatly; his symptoms of depression and anxiety decreased, and he slept completely at night without interruption. The results of the nonparametric Wilcoxon test for small samples Table 1 showed that there were statistically significant differences in the ranks of the repeated measures, as it showed z-values for each of insomnia, depression, anxiety, the time taken to enter sleep, and the time spent asleep.

Figures 1 and 2 show a remarkable improvement from the beginning of the treatment until the last treatment session. During the counseling process, the therapist emphasized that Sulaiman learned the techniques and skills he was trained on and they become part of his general lifestyle and to prevent relapse. As the home duties, Sulaiman was instructed were intensified to do daily and frequently, perhaps up to ten times a day.

The stages of the treatment process were reviewed with Sulaiman, who mentioned that he daily performs the homework, exercises, and the exercises he was trained in during psychotherapy sessions. Among the difficulties he faced during the follow-up stage was that he was exposed to some incidents and witnessed some accidents on the roads while coming from Amman to Karak to attend his lectures at the university, which brought up old memories. The importance of practicing home duties that he trained in previously was emphasized, and that he should invent fantasies like the ones he trained in previously, because those situations are not ideal, and there are very many fantasies that he can create that are compatible with his ideas, experiences, psychological state, and circumstances. For example, Sulaiman mentioned that he felt happiness and joy when he practiced the laughter exercise. He mentioned to me some of the situations that he imagines, including one of his friends who makes funny movements and expressions. This creates a very deep laughter, and thus the feelings of shock, insomnia and fatigue go away from him. Sulaiman also mentioned that the positive perceptions that he seemed to form about himself and his future also had a positive effect in overcoming the symptoms of anxiety and depression and making it easier to fall asleep. However, the psychological state he was suffering from, including his family members and the consequent problems, burdens and physical disabilities that have greatly affected the general atmosphere of the family and his mental health, caused him to relapse in some cases. Sulaiman was directed to play the role of a mentor and to transfer his treatment experiences to the rest of the family members and to maximize this improvement that he obtained so that other family members could benefit from it.

The results of this study agreed with most previous study results, and what explains these results is that visualization is directly related to sleep, although it is also used to overcome symptoms of depression and anxiety. It includes curbing negative thoughts and fantasies, controlling their nonappearance, and concentrating on positive thoughts and perceptions. On the other hand, Sulaiman reported a noticeable change that he began to feel after practicing the daily exercises. This change was represented by an increase in the number of hours of sleep and ease of sleep, which was positively reflected in reducing symptoms of depression and anxiety, so he became more engaged in his other life activities, including social events and football, without worrying.

This study is distinguished from previous studies, in that it is a qualitative and quantitative case report study that has been rarely conducted in the Arab world and is also characterized by a self-suggestive training program. The importance of this study came as an attempt to highlight the effectiveness of the visualization program in providing the trainee with the ability to facilitate the possibility of falling asleep and to increase the number of hours of sleep as well as overcoming depression, anxiety, and insomnia. This is according to the skills of individual therapy. This will provide many strategies and skills that can help the trainee facilitate the process of falling asleep, which will reflect positively on their quality of life. In this study, Sulaiman learned to employ visualization to attract more positive thoughts and fantasies that helped him relax and reduced his level of stress, and we can safely practice these exercises on our own, as most reports indicated that there are no negative side effects after practicing these exercises (Aldahadha, 2013).

**Recommendations to clinicians and students**

Difficulty sleeping is one of the most prevalent health problems among many groups, as insomnia has negative symptoms and multiple dimensions, including weakness in physical, psychological, cognitive, and social performance. Visualization is a nonmedical method for treating insomnia. This method includes training and educating patients on methods and steps of visualization to alleviate the accompanying symptoms. Visualization is seen as a change in mental activity that leads to more focus and attention on a particular topic in return for distracting attention from another topic. Its effectiveness has been indicated in many studies (Younus et al., 2003), and many studies have shown the effectiveness of visualization in dealing with sleep disorders. Insomnia is often treated through medications, which may be effective in the
short term but fail under certain circumstances. Especially if insomnia is linked to symptoms of depression and anxiety, there will be an increase in dependence on medications.

In sum, visualization is well known in counseling and has increasingly been used as an effective and powerful tool in helping people with various mental disorders and in acquiring life skills. Just as an actor knows when and how to time his expressions to make the best effect on viewers, a counselee who uses visualizations effectively must be aware of what they are doing. They apply their skills artistically in an elegant and exciting way in the psychotherapy process. Note that most of the guiding and therapeutic theories use the visualization technique. Visualization is a multifaceted art form, and other creative arts can incorporate visualizations and expressions into their content to make an effective impact on clients and help them solve their affairs and problems more quickly. Visualization is an art through which the therapist can help individuals understand emotional situations from childhood to old age (Aldahadha, 2013).

The use of cognitive and behavioral treatment methods is an example of the therapeutic methods employed to control the stimulus and discuss beliefs and ideas to alleviate symptoms of depression in children and adolescents who have been subjected to psychological trauma. There are those who believe in the importance of involving parents with children in obtaining positive outcomes from the treatment used with children, and this is what is included in the therapeutic method focused on psychological trauma. The effectiveness of the positive effects of cognitive–behavioral therapy may double if it is combined with other treatment methods, such as imaginative play therapy or dance or music.

Since visualization training is effective in overcoming the problem of insomnia and difficulty sleeping, and its results go beyond reducing symptoms of depression and anxiety, accordingly, the study recommends generalizing the practice of visualization exercises for cases such as Sulaiman’s. Since the results of this study are limited to the study sample, we recommend that more work be done to confirm the generalizability of the results. Finally, we would like to point out the importance of adopting and benefiting from these exercises.

Data availability
All data underlying the results are available as part of the article and no additional source data are required.

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References


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