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RESEARCH ARTICLE

EFFECTS OF EXERCISE ON MENTAL HEALTH AMONST ADULTS: A REVIEW OF LITERATURE

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Abstract

The main aim of this study is to see the effects of exercise on stress level and sleep pattern (ages 18 to 40 years), there are numerous researches done about the importance of exercise and how it helps in not just reducing stress level in individual or better sleep pattern, but also helps in releasing endorphins and serotonin that makes an individual feel happy. Researchers have found that individuals who exercise have better health, helps them focus on work and stay active and are happier. The research found that exercise really helped in relieving stress level to a certain level and also helped improved the sleep pattern. The research not only focuses on one kind of exercise but different kind of exercise and how it helps our mental health.

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Introduction:-

Mental health issue is a very common issue in current time, it can be caused due to many reasons like stress, depression, anxiety etc. It was not given much importance in the earlier days but now people have started paying more attention and giving importance to the mental health issues. One of the most common issue is stress, and disruption in sleep pattern.

Causes of stress and disruption in sleep pattern- Today lots of adult are stressed out with work, pressure from college, family issues, relationship issues etc., not only stress but also the lack of proper sleep pattern leads to both mental and physical health issues I.e., feeling fatigue, demotivated, not being able to focus, headaches, anxiety, loss/increase of appetite etc. Disruption in sleep pattern can happen due to change in the work/college timings, assignments, stress from personal relationships, poor diet and unhealthy lifestyle, depression, anxiety etc. The research study is to check the effect of exercise on stress level and sleep patten in adults (18 to 35 years).

There are many ways to relieve stress and also have a better sleep pattern, but one of the best and most effective method- is exercise, exercise is not just an activity but it is a therapy, e.g.: swimming is one exercise used as therapy for brain injured patients, motor disabilities etc. It is believed to be one of the most effective ways to not only keep stress away and have better sleep, but also keeps us fit and functioning. There are different kinds of exercise for different purposes, the most common ones can be yoga, meditation, cardio, swimming, walking, cycling, cross fit, weight lifting etc. Exercising at least 30 minutes a day is said to be enough and effective to boost your serotonin up. St. Thomas Aquinas quoted "but as you get into shape, you'll begin to tolerate exercise, then enjoy it, and finally

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depend on it. All men need leisure. Exercise is play and recreation, when your body is busy, your mind will be distracted from the worries of daily life and will be free to think creatively.”

Many research studies have been conducted on benefits of exercise for mental health by supporting that exercise is good in enhancing positive emotion like enthusiasm, pleasure, and decreasing anxiety, tension, tiredness and anger. People who engage in physical exercise are more likely to have fewer stress symptoms and healthier mental health than those who do not. Exercise has also been found to be associated with improved sleep quality. Most of the exercise are on walking, gym-based aerobic activity. Rapid eye movement (REM) is one example of no proper sleep, exercise is found to greatly correlate with decrease in REM.

I have also asked some few people that I know who does work out fulltime (fitness model, fitness freak, cross fit), to people who just started (3 to 4 months back), to people who are on and off with their workout routines, about their experience while working out, as to how much it has helped them mentally and if they could see any change in their sleep pattern. The majority of them said that they started the exercise or workout because they were insecure about their body, out of which very few worked out because they liked it and enjoyed it. The most common answer was that it really did help them relieve their stress and stay more focused and active and feel accomplished, it made them even more happy after working out. It also helped them sleep better at night, some of them had issues with their sleep pattern and exercise really helped them fall asleep on time and get better sleep quality.

Research questions

- 1) Benefits of exercise in both stress management and better sleep pattern.
- 2) Exercise keeps an individual accomplish with their certain goals.
- 3) How effective is exercise for stress management and better sleep pattern?
- 4) Importance of exercise in our daily life.

Inclusion And Exclusion Criteria

The papers selected for this review included the effects of exercise on stress levels and sleep pattern. The papers which had effects of exercise on other variables except the objectives of the study were excluded. This review paper includes papers from (2012 to 2020).

Significance if the study

The significance of the study is to understand the importance of exercise in our daily lives and its effects on our health and bodies. This review was conducted to have clarity of importance of exercise in our daily life, as many of us today is too busy, distracted and stuck with our laptops, computer and phones, trying to finish and complete the work, test, exams assignments etc. One needs to learn or practice to do at least one activity in a day everyday life.

Exercise is also now to be a good healing technique for many health issues and also mental health like brain injury, obesity, diabatic, high blood pressure, anxiety etc.

People should know the importance of exercise and not neglect it, a basic exercise like walking or meditating every day for 30 minutes is more than enough, one doesn't have to do extensive heavy exercise. This review tries to check the effects of exercise on the stress levels and sleep pattern of adults.

Literature reviews

Harvard medical school (July 07, 2020) conducted a research on how exercise help reduce stress level, the study talks about different kind of exercises, that can reduce stress level in an individual like (aerobic exercise and autoregulation exercise: breathing exercise, mental exercises and progressive muscular relaxation). This study was done on 18 and above age.

It was shown that regular aerobic exercise had remarkable changes to the body, it's unique capacity to exhilarate and relax, from stimulated to calm have helped to reduce the level of body stress hormone I.e., adrenaline and cortisol.

Autoregulation exercise has also showed great signs in reducing stress. Mental stress can show physical symptoms like: headache, neck pain, muscle tense, tight jaw pain, dry mouth, pale skin, cramps, diarrhea, heartburn, chest tightness, rapid breathing, repetitive coughing etc. Autoregulation exercise is an exercise where an individual uses the mind to relax the body, some approaches are

Breathing exercise (taking slow and deep breath, holding your breath for a brief time and exhaling it gently) repeat these 5 to 10 times, and practicing this 6 times in a day and every day helps with our breathing pattern when stressed and also helps calm the nerves.

Mental exercise also known as meditation is one of the most demanding and rewarding autoregulation exercise. Dr. Herbert Benson said that meditation must be done at a place where there is no distraction and is private and quiet, set a time, make sure that you are comfortable, one can do the meditation 2 hours after food and with clear bladder, close your eyes to make sure you have no visual distraction, relax your body, let your mind go blank, concentrate on your own mantra (it can be any word that you can repeat, you can chant it loud or silently). He said that once you master this technique it really helps our body to relax and calm down the stress in our body. As mental stress can make our blood pressure high, and weaken the heart, meditation is known to reduce the heart rate and balance the oxygen level in our body. Practicing meditation once or twice in a day is considered to be really helpful for reducing stress.

Progressive muscular relaxation has shown a good result in reducing stress. This technique is solely used to relax your muscles by tightening every muscle for some few seconds and releasing them like: closing your eyes tightly for a while n relaxing them, pushing your tongue tightly against the roof of the mouth and relaxing them, pull your toe up and releasing them etc.

It was concluded that exercise has shown great results in reducing stress.

Jong-Ho Kim, Larry A. McKenzie (November 2014) conducted research on the Impacts of Physical Exercise on Stress Coping and Well-Being in University Students in the Context of Leisure. The study was conducted on students from the age of 18 to 26, (3 juniors, 3 seniors, 2 master's and 1 doctoral student). All these students were actively engaged in one or the other exercise (aerobic exercises: jogging, walking treadmill, cycling, weightlifting and yoga), the research was to study the in-dept potential mechanism between physical exercise and wellbeing(leisure) and it was concluded that physical exercise contributes to problem- focused coping through positive emotions (coping with stress and developing healthy behavior).

Simone Wilson- Salandy, Mary A. Nies (November 12, 2012) Conducted research on the effect of physical activity on stress management, interpersonal relationships, and alcohol consumption of college freshmen. On their study in "physical activity on stress management" it was studied on 841 students from the age of 18-25 years, for a period of 3 to 6 months, they found that 232 college students plus 188 male and 193 female students who were actively engaged in physical exercise showed lower level of stress, and had better coping skills, they also showed to have better relationships with others and healthier lifestyle.

Feifei Wang and Szilvia Boros (2019) conducted a research study on the effect of physical activity on sleep quality, they reviewed researches based on PA on sleep from 2010 to 2018, where they concluded that instead of heavy exercise, moderate exercise shows better results in sleep quality. They said that if an individual does moderate exercise everyday than it helps them get better sleep and improve the sleep quality. This research was done on the age group of 18 to 25 years, but also said that this moderate exercise benefits the older age group too.

Eric V. Neufeld, David M. Boland, Jennifer L. Martin, Christopher B. Cooper (2017) conducted a research study on interrelationship between sleep and exercise, this study was done on different ages group and were divided into different categories like: the first group was on athletes (younger and older), the second group was on people with health issues like diabetes, hypertension, sleep apnea, women in postpartum period, insomnia, obesity. They concluded that exercise like aerobic exercise help improve sleep pattern in all the categories. In athletes exercise with proper diet helped them sleep better and longer, in the second group sleep apnea, insomnia, and women in postpartum period were able to get better sleep because of the quality of exercise. Even in obesity they concluded that with exercise and loss of abdominal fats they had better sleep quality. All these came to a conclusion that exercise played a significant role in better sleep quality and sleep pattern.

Katrine Loppenthin, Bente Appel Esbensen, Poul Jennum, Mikkel Ostergaard, Jesper Frank Christensen, Tanja Thomsen, Julie Schjerbech Bech & Julie Midtgaard (2014) conducted a research study on effects of intermittent aerobic exercise on sleep quality in patients with rheumatoid arthritis on an age group of 18 and above, 444 participants were randomly placed for aerobic exercise on bicycle ergometer, and also used PSG measurement.

They concluded that aerobic exercise helped the patients have better sleep quality and improve in their sleep pattern, which was also concluded by the patients sleep diary written by themselves.

Result:-

According to the reviewed paper there are two types of exercise that are aerobic and auto regulation which helps in relaxing the mind and in turn reducing the stress level. Aerobic exercise tends to yield the best results when it comes to regulating the stress level and overall body functioning as well as maintaining healthy sleep patterns.

Conclusion:-

Stress can be caused by different reasons and come in different shape and forms, from the above researches we can see that every individual has stress whether you are perfectly fit or has health issues, student etc. There are many ways to relieve stress level and one of the most effective is exercise, whether aerobic or autoregulation exercise, it has shown great results in relieving stress and not just stress but has also shown great results in improving sleep quality and sleep pattern in individuals.

Sleep pattern or sleep quality, many people have issue or problem when it comes to sleep. Disruption in sleep can also be caused due to many factors in Lives, and one of the effective methods to deal with it is “exercise”, with all the researches done it has shown that quality exercise every day for at least 30 minutes helped improved sleep quality and sleep pattern.

Exercise has proved to be a significant way, method or technique to relieve stress and improve sleep pattern in an individual.

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