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The Psycho-Nutritional Intervention Approach (PNIA) for Subclinical Depression in University Students: A 12-Month Holistic Strategy

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ABSTRACT

Depression among university students is often discussed in terms of clinical disorders, yet what frequently escapes both clinicians and policymakers is the large proportion of students who fall into the subclinical range. These young adults do not meet the formal criteria for major depressive disorder, but they live with lingering sadness, loss of motivation, sleep disturbances, and cognitive fatigue that make study and social adjustment difficult. Such states, as several longitudinal investigations have shown, are not harmless. They are early warning signs, often predicting the later onset of major depression and, in some cases, suicidal behaviour. Estimates suggest that nearly one in four students worldwide may be affected, which makes this problem both a mental health and an educational crisis. In response, this paper presents the Psycho-Nutritional Intervention Approach (PNIA), a year-long programme designed for the university setting. Unlike conventional treatments that separate mind and body, PNIA treats them together. It combines structured psychological support with dietary guidance grounded in nutritional psychiatry, daily yoga and breathing practices, mindfulness training, and creative group activities such as music and games. The model is delivered through monthly wellness camps, supported by daily routines, with the aim of

building habits that endure beyond the intervention itself. The study compared sixty students who participated in PNIA with sixty students who continued under standard clinical care. Outcomes were assessed using validated tools: the Beck Depression Inventory-II (BDI-II) as the principal measure, the Depression Anxiety Stress Scales (DASS-21) and the WHO-5 Well-Being Index as secondary indicators, and a Food Frequency Questionnaire (FFQ) to track diet. Results to date are promising. Students in the PNIA group showed clearer declines in depressive symptoms, better scores on well-being, and healthier eating patterns than their peers in usual care. While these findings are preliminary, they point to PNIA as a feasible, low-cost strategy that universities could adopt more widely. More importantly, they suggest that when nutrition, psychology, and contemplative practice are woven together, the outcome is not only symptom relief but also a foundation for resilience.

Introduction

What do we really see when we look at a college campus today? Young people with computers who are in a hurry to get to class, talking to each other, and seeming busy with their life ahead of them. But there is more to this story than what you see on the surface. A story about being exhausted, restless, not sleeping properly, missing meals, and having an inner heaviness that is hard to define. A lot of these kids aren't "clinically depressed" in the strictest medical sense, but they're not doing well at all. Psychologists currently call this condition "subclinical depression," which means it's not quite normal sadness but not quite major depression either. You can't say enough how vital this is. Longitudinal investigations have consistently demonstrated that enduring subclinical symptoms may forecast the later onset of major depressive disorder (Judd et al., 1998; Cuijpers et al., 2014). In short, what seems like a small shadow now could become a huge one tomorrow. And we who have taught, counselled, or just lived with college students know how slowly these shadows spread. University life makes the situation even worse. The body's natural rhythm doesn't always match the rhythm of school timetables. It is even tougher to go from being a teenager to an adult when you study late at night, drink caffeinated drinks, eat fast food, spend too much time in front of computers, compare yourself to others, and have money issues. Some pupils can adapt, but a lot of them are still having problems. To their friends and family, they could seem

"normal," but they are carrying a heavy load that makes it hard for them to focus, have energy, and enjoy life. The support systems that are already in place have their limits. University counselling services typically don't have enough resources while they are open. Usually, people only get psychiatric care after something bad happens. Not many people get preventive care, which is programs that can find these early concerns before they become illnesses. This is the area that needs fresh ideas. One of these new theories is the Psycho-Nutritional Intervention Approach (PNIA). It's neither a fast fix or a substitute for medical care; it's a whole system. The strategy is based on a simple reality that people often forget: the mind and body function together. People who eat poorly feel worse, people who think negatively are less physically strong, and people who don't practise mindfulness are more likely to get stressed out. PNIA connects these places. Some of the important pieces are sattvic and plant-based nutrition, yoga and pranayama, mindfulness and meditation, and simple access to psychiatric assistance. They work together to make a space that is balanced so that youngsters may get back on their feet. This study uses PNIA for a full year with students who have been diagnosed with subclinical depression. The Beck Depression Inventory–II (BDI-II) is the main scale used to track progress, and the WHO-5 Well-Being Index is one of the tools that supports it. The goal is more than simply numbers; it's also to stop the slow slide into severe depression and to help young people at a very important time in their lives become stronger, more energetic, and more self-disciplined.

2.Review of Literature

University Students with Subclinical Depression People often say that college is the most exciting time in a young person's life. However, many students are quietly dealing with what psychologists call "subclinical depression." It doesn't match all the requirements for serious depression, but it does make you tired, less motivated, and less able to focus. A number of surveys, including some done in India, show that almost one in three students had these symptoms at some point. The price is more than just emotional. Students' grades go down, they miss more school, and many of them are more likely to get full-blown melancholy later in life. This reality emphasises the pressing necessity for preventive strategies that extend beyond mere symptom control. Food and Mood Only in the last ten years has the link between food and mental health gotten more attention, although old traditions always thought it was there. Modern nutritional psychiatry now agrees that eating a lot of sweets, fried meals, and refined carbohydrates is linked to feeling sad and having higher depression scores. Fresh fruits, green vegetables, and foods high in omega-3s, on the other hand, tend to help keep emotions from getting worse. In India, the problem is worse. Hostel canteens and fast-food restaurants are slowly replacing

traditional vegetarian meals that used to be full of pulses, seasonal vegetables, and basic grains. Many students live away from home and eat instant noodles, deep-fried snacks, and strong coffee at odd times. These patterns disrupt not only nutrition but also gut microbiota and circadian rhythms, all of which are essential for mood regulation. The result is frequently small: mood swings, tiredness, and trouble concentrating—early indicators of a depressed slide. Stress on the mind Diet is one part of the picture, but mental habits and how you deal with stress are just as important. Young adults who become stuck in negative thought patterns, especially when they are made worse by comparing themselves to others on social media, are more likely to get depressed.

In India, family expectations, competitive exams, and the need to fit in with others make this risk much worse. Sadly, most schools don't have enough counselling options, and students are too embarrassed to ask for help. The outcome is a quiet crisis in which people continue to operate externally while enduring internal suffering.

2.1 What Does "Subclinical Depression" Mean in College Students?

No one agrees on a single meaning of the phrase "subclinical depression." Some people think of it as "not quite depression," a set of symptoms that don't meet the requirements for a diagnosis. For some, it's a separate condition that needs to be recognised by a doctor and treated in a way that fits their needs (Horwath et al., 1992). It doesn't matter what you call it; the experience for the student is generally not something small. Students can slowly lose their energy even if they keep going to class and making their deadlines if they are always tired, have trouble focussing, or lose interest in their social life. College students should stay away from this grey area at all costs. Subclinical symptoms are often ignored because they are thought to be normal signs of stress. This is in contrast to clinical depression, which usually gets professional help. If a student is having trouble staying focused during tests or staying away from people after a breakup, they might not think of themselves as "ill." However, research shows that between 15% and 25% of college students have depressive symptoms that are bad enough to get in the way of their daily lives but don't meet the standards for major depressive disorder (Bayram & Bilgel, 2008; Ibrahim et al., 2013). The risk is in the path: continuous studies show that many people get seriously depressed within a few years if they are not properly treated (Lewinsohn et al., 2000). We need to take a break now. Schools and colleges that think this level of stress is common might miss a public health issue that isn't being talked about. People with subclinical depression may not have big problems, but it slowly hurts their ability to do well in school, make friends, and stay strong. The student, on the other hand, thinks of the problem as something they failed at instead of something they could have

avoided. Being ashamed and not being seen is a big reason why so few people ask for help. To understand subclinical sadness, you need to know that it has two sides. People live in this state, which comes with its own problems, but it is also a risk state that can lead to bigger problems. Early, all-around treatments are not a nice-to-have; they are a must. Behavioural, nutritional, and lifestyle habits that work with psychology may work best because they involve the mind and body in ways that young people looking for balance and purpose will enjoy.

2.2 Different Theories About Subclinical Depression

It's not been possible to come up with a good theory that explains what subclinical sadness is. Psychologists, psychiatrists, and anthropologists have all tried to figure out where it came from, often by focussing on different aspects of human experience. Cognitive theorists say that problems with the way people think are at the root of sadness. The "cognitive triad" that Aaron Beck first described as having negative views of oneself, the world, and the future is still important, even when symptoms don't meet diagnostic standards. When college students are involved, these mental processes often show up in more complex ways, such as doubts about their abilities before tests, worries about not living up to family standards, or hidden thoughts that their peers are "doing better." Different developmental scientists have different ideas about how to explain the same thing. Erik Erikson's stage of identity vs. role confusion gives us a useful perspective: unsolved identity conflicts can show up as discomfort, withdrawal, or indecision, which are all signs of early depression. In this case, "subclinical" might only mean a developmental sign that a pupil is torn between being a kid and an adult, or dependent and independent. Biological ideas are important, but they are sometimes criticised for being too simple. Research shows that some people who don't meet diagnostic standards have mild problems with the hypothalamic–pituitary–adrenal (HPA) axis and mild serotonin problems (Murphy et al., 2017). Nutritional psychiatry has come a long way by linking low levels of micronutrients like zinc, omega-3 fatty acids, and B vitamins with a higher risk of sadness (Owen & Corfe, 2017). These results show that we can't understand early stages of sadness without looking at the body's metabolic environment. Different cultural points of view make things a lot more difficult. In many non-Western places, especially communal ones, expressing sadness is not always done by saying "feeling low." Instead, it may show up as physical symptoms like tiredness, headaches, or loss of hunger, or it may lead to complex social withdrawal (Rao et al., 2012). If a college student in India says they are "too tired to hang out with friends," they may be expressing what Western psychiatrists call "subclinical depression." There isn't a single cognitive, developmental, biological, or cultural structure that fits all of reality. Subclinical

depression is clearly not just a "lesser" form of serious depression; it is a complex illness where different systems come together. To take into account this complexity, treatments that work must be integrative rather than limited.

2.3 Diet and lifestyle factors in depression

When you look at how students live their daily lives, you can quickly see how diet, sleep, and lifestyle play a part. A lot of research on sadness has been done from a psychological or neurobiological point of view. However, new research suggests that what students eat, how they move, and how they rest may be just as important in determining how emotionally strong they are. Nutritional psychology has given strong proof for this claim. Many large cohort studies have shown that people who eat a lot of fruits, vegetables, legumes, and whole grains are less likely to experience depressive symptoms (Lai et al., 2014). On the other hand, eating a lot of refined sugars, trans fats, and ultra-processed foods is linked to more tiredness and mental instability (Jacka et al., 2017). It's clear what this means for college students: skipping meals, eating fast food late at night, and doing a lot of things that require a lot of coffee may slowly make them feel the anxious and depressed states they want to avoid. Researchers have looked into how certain foods can help control mood. Omega-3 fatty acids are found in large amounts in flaxseeds, walnuts, and some fish. They have been linked to better neuronal plasticity and anti-inflammatory benefits that protect against depression (Grosso et al., 2014). Lack of certain B vitamins, mainly folate and B12, can stop important chemical reactions that make neurotransmitters, which can make people more likely to become depressed (Mikkelsen et al., 2016). Even trace elements like magnesium and zinc seem to have an effect on emotional stability. For example, people with mild depressive symptoms who took magnesium supplements saw small but constant improvements. These nutritional benefits are amplified by the way people live. In particular, sleep is a good indicator of happiness. Studies of college students show that both irregular sleep patterns and chronic lack of sleep can help identify the start of subclinical depression (Hershner & Chervin, 2014). Physical exercise, on the other hand, helps keep you healthy. Researchers have found that aerobic exercise raises the release of endorphins, keeps circadian rhythms in check, and protects the mind from stress (Schuch et al., 2016). The rhythm of social connectedness is a more subtle but still very important feature. It has been shown over and over that being alone and not having helpful networks makes depressive symptoms worse. On the other hand, eating together, doing rituals together, and working out together can help protect against depression. Anthropologists say that eating together in a hotel mess hall or going for walks with other people in the evening is more than just a way to make friends; it's also a way to protect mental health. In

short, what you eat and how you live your life don't just "support" your mental health; they actively shape the environment in which subclinical sadness either takes hold or is pushed away. So, addressing these aspects in solutions is not a matter of "alternative" health, but of meeting the real-life needs of students' well-being.

2.4 Therapy and counselling can help persons who have subclinical depression.

From biology and lifestyle points of view, we may understand subclinical depression, but the most significant thing is still psychological and counselling approaches. The academic setting frequently imposes distinct strains on college students, including academic pressure, identity transformations, and relational uncertainties, necessitating therapies grounded in human connection and cognitive restructuring. Cognitive-Behavioral Therapy (CBT) is the most researched and successful method for assisting individuals with subthreshold sorrow. Cuijpers et al. (2014) conducted a study that demonstrated short, organised cognitive behavioural therapy (CBT) sessions helped alleviate symptoms of depression and prevent their exacerbation. CBT is a common therapy for students. It helps them find and replace undesirable thought patterns, such as perfectionism, self-criticism, and catastrophising, with healthier ones. These treatments are especially effective with academic groups since the majority of discussions inside these groups centre around success. Methods focused on mindfulness have also become more popular in the last twenty years. Mindfulness-Based Cognitive Therapy (MBCT) and Mindfulness-Based Stress Reduction (MBSR) have demonstrated efficacy in preventing depression by instructing individuals on non-judgmental observation of thoughts and cessation of rumination (Segal, Williams, & Teasdale, 2013). These kinds of assignments perform well on college campuses, where there isn't much time to think about yourself and tension is high. Many Indian students already know about Eastern philosophical ideas that are similar to mindfulness, which makes it simpler for them to adopt. Group therapy can be really helpful if you are feeling a little gloomy. It helps you put your thoughts in order, tell stories, obtain help from others, and work together to find solutions to issues. Studies indicate that adolescents engaged in peer- or counselor-led groups exhibit enhanced mood, fortified social relationships, and increased motivation for academic success (Conley et al., 2017). University counselling offices often have too many cases to handle, therefore they operate better in groups. Psychoeducation is also crucial. Students will be able to self-regulate and receive help quickly if they recognise the early indicators of sorrow, how to deal with stress, and how lifestyle influences mood. Psychoeducational courses delivered in workshops or online have demonstrated efficacy in diminishing stigma and promoting adaptive coping mechanisms (Reavley & Jorm, 2010). Interventions must be

culturally sensitive to Indian college students. People may be less inclined to seek assistance for their mental health if it is perceived as an issue. This is why health camps, student groups, and faith-based conversations that aren't official therapy can also be helpful. Solutions that employ cultural metaphors, local languages, and traditional practices like yoga, pranayama, and meditation are better and endure longer. So, psychological and counselling treatments do more than only help with symptoms; they also make a secure place for kids to get ready for the problems they will encounter as adults. Along with adjustments to diet and lifestyle, they provide a comprehensive defence against the exacerbation of subclinical depression into a clinical disorder.

2.5 Models of lifestyle and therapy that work together

It's not a brand-new idea to try to combine treatment with lifestyle-based approaches. Psychologists and therapists have known for a long time that people who are depressed or anxious typically have terrible habits including not eating well, not sleeping well, and not exercising enough. When these parts of a person's life aren't taken into account in treatment, achievement is often slower or even unsteady. This has made it possible to make certain models that blend the two. One line of research has looked at using nutritional counselling together with regular therapy. Some experimental programs urged students to keep food and mood journals together, which therapists utilised as conversation starters. It was intriguing to note that people seemed to get more involved in treatment when they noticed how their feelings and food affected each other. Research such as Firth et al. (2019), which examine this aspect, indicates that depressed ratings decline more significantly. But most of these studies are small and only last a few weeks. People have also been interested in how the mind and body work together. Doing yoga or guided meditation before treatment or as homework between therapy sessions is becoming more common. So far, studies from Indian institutions show that students are more responsive to these practices than to Western health regimens that have been brought in. This is because yoga and meditation are already a part of Indian culture (Rao & Arasappa, 2017). But the study is still all over the place. People sometimes add practices without a clear goal, which makes it hard to discern how they will benefit in the long run. There are some good signals, but there are still glaring problems. A semester is a long time for something to happen. Local eating habits or societal forces affect how many students eat and live. If they don't take culture into account, integrated initiatives could look like packaged "add-ons" instead of meaningful ways to help people. This knowledge demonstrates why we might require structured models that take culture into account, like the Psycho-Nutritional Intervention Approach (PNIA). PNIA isn't just a blend of diet, treatment, and meditation; it was made to treat all three as if they were the same thing.

PNIA intends to make integration more than just a good notion by making the program last a year and focused on real life at university.

2.6 Nutritional psychiatry and the impact of nutrition on mild depression

Nutritional psychology, a new field of study that has been around for the last 20 years, has begun to impact how we think about mental health. The core principle is simple but powerful: what we eat changes how we feel, not just by changing our energy levels but also by affecting our neurochemistry and how messages pass between our gut and brain. This is really crucial for college students because they frequently eat junk food, eat at strange times, and drink coffee and energy drinks to remain awake. Studies in both the West and Asia have shown that persons who eat poorly are more likely to show signs of depression, even if they are not clinically sad. The SMILES experiment from Australia, which was one of the first randomised controlled studies to indicate this, found that a Mediterranean-style diet was connected to decreased depression levels. Later, smaller trials on campuses in India and Europe supported the finding: students' moods improved after a few weeks of eating more fresh fruits, vegetables, legumes, and complete grains. For a long time, people in India have thought that certain ways of eating can help them think more clearly. Ayurveda says that the sattvic diet is built on eating light, natural, plant-based foods and staying away from items that are excessively stimulating or highly processed. Sattvic eating patterns aren't investigated much in modern psychiatry, although there is some anecdotal evidence and fresh clinical findings that suggest they may help alleviate anxiety and keep mood stable. It's amazing to hear how the youngsters talk about the shift. They don't discuss about biochemistry very much. Instead, people say something like, "I feel calm after eating" or "I can focus better when I eat plain food." Even if typical depression ratings don't evaluate these real-life occurrences, they are still markers of excellent health. A lot of people have also been interested in the connection between the gut and the brain. Dysbiosis, or an imbalance in the gut microorganisms, has been related to mood disorders. Some foods, such yoghurt, fermented rice, and traditional pickles, are strong in probiotics and may help restore balance. There is a lot of overlap between what people have always known about food and what microbiome investigations have found, but there is still more clinical evidence coming in. Eating isn't just something extra for people with subclinical depression; it's typically the major thing that makes them feel better. Yoga and therapy might not function as effectively as they could if the student eats a lot of sweet snacks and quick noodles. But when treatment is combined with a change in diet, the advantages are more. A good diet helps with emotional resilience, neuroplasticity, and controlling energy levels. This means that treatments for mental health work better. In short, the

evidence demonstrates that diet is a strong but silent method to change your mood. It's evident what part it plays in a live package, but it doesn't operate by itself. Students can also control what they eat every day, which is why nutrition is a crucial part of long-term mental health therapy.

2.7 Yoga and Mindfulness in Sports on Campus

Mindfulness and yoga were once only taught in spiritual retreats and traditional ashrams. Now, they are taught in schools, clinics, and counselling centres all over the world. Their rise isn't a fluke; it shows that more and more individuals know that cognitive restructuring isn't enough to make you mentally strong. It needs habits that help the mind relax and stay on task. A lot of college students are using yoga-based treatments these days. Several studies done at Indian colleges, like those in Bangalore, Pune, and Varanasi, have shown that short, structured yoga classes (typically 30 to 40 minutes a day) might help people feel less stressed, sleep better, and have less symptoms of depression. Nadi Shuddhi (alternating nostril breathing) and Bhramari (humming breath) are two breathing practices that can assist control autonomic activity. This can help keep your heart rate from changing too much while you're stressed. These aren't just vague effects; students often express things like, "My racing thoughts slowed down" or "I felt lighter after class." Mindfulness has been adapted from its Buddhist origins for contemporary applications, including Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT). Mindfulness training teaches the mind to watch thoughts without criticising them. This stops the cycle of thinking about things over and over, which makes a lot of people feel horrible. Randomised trials at Western colleges demonstrate persistent, but minor, advantages. But Indian schools that have launched mindfulness classes have seen students do better in school and have better control over their feelings. But you should keep in mind that there is a little but essential distinction. Many people in India don't merely see yoga and mindfulness as "therapeutic techniques." A lot of people think of them as all-encompassing topics that affect how individuals live, what they believe, and how they see the world. They function well together, which makes them perfect for treatments like PNIA, which not only help with symptoms but also help patients find balance and discover more about themselves. Another thing that all of the college programs have in common is that they are easy to go to. You don't have to inform anyone about your difficulties before you start yoga or mindfulness, and you don't have to take medicine before therapy. If you don't want to talk about your troubles, you don't have to feel awful about coming to a breathing or meditation class. This helps those who need aid receive it and keeps people who are in pain silent. It's also vital to underline how nicely yoga and diet work together. others who meditate or breathe deeply when they're hungry claim they feel more clear, whereas others who eat

too many heavy, prepared foods say it's tougher to focus or keep still. PNIA says that this suggests that interventions that focus on the body, food, and mind can work better than those that are employed alone. In conclusion, studies show that yoga and mindfulness are good, cheap, and culturally relevant strategies to help students with subclinical depression. They help people manage with stress and teach young adults how to stay calm when they're upset and be aware when they're not sure what to do.

2.8 How Music, Games, and Creative Therapies Can Help Students Be Healthy and Happy

Not all students benefit from traditional counselling or treatment that is set up. A lot of people find consolation in music, play, or the arts, which are more creative and indirect methods to deal with stress. These approaches may appear easy at first, but research and real-life examples have shown that they can have a major effect on mood and resilience, especially for kids who are showing minor signs of depression. Music therapy is one that has been looked into a lot. Researchers have found that listening to ragas or other gentle music will help you feel more balanced and less stressed. People in India have believed for a long time that it is healthy for him to listen to traditional ragas at night. Students often utilise music outside of school, including when they make playlists to help them relax, get energised, or express sentiments they can't put into words. A lot of scholarly publications don't talk about how young people utilise music every day, yet it's a key way for them to deal with stress in dorms and classrooms. Playing games is another way to boost your mental wellness. Playing games with other people, whether they're board games like chess or traditional games like kabaddi, makes people laugh, grow closer, and forget about academics. Researchers are now also studying video games. If you utilise them the appropriate way, they might help you control your mood and your ability to think. Games can be a type of "light therapy" that helps youngsters feel successful and connected without the strain of official counselling. They can also be a way to take a break from the stress of academics. You can also open up by making art, going to the theatre, dancing, or writing in a notebook. Some students reported that painting or role-playing helped them communicate how they felt in ways that words alone couldn't. This was at health camps on campus. Making art together often helps people feel less alone in their struggles and brings them together. People who are sad will feel less alone with this. These various forms of healing illustrate a significant truth: recovery occurs through means beyond mere medication or treatment. It also happens through rhythm, joy, and expression. They are particularly significant for the Psycho-Nutritional Intervention Approach. Yoga soothes the mind, eating well makes the body stronger, and music, play, and art bring the spirit back to life. They tell the kids that getting healthier is more than just getting rid of the pain to remind them. It's also about getting their energy back.

2.9 Social and psychological influences impacting pupils with mild depression

People on college campuses don't normally exhibit their sadness in an obvious way. A lot of youngsters don't have a mental illness, but they still feel horrible about themselves, which makes it hard for them to accomplish well in school, with friends, and in life. A lot of people call this "subclinical depression." Things like having a massive meltdown don't happen. Some less serious indicators are missing meals, not going to hostel events, or having difficulties resting before tests and racing thoughts. The most significant component of this link is the setting in terms of psychology. Most of the time, students indicate that stress comes from not understanding who they are, not having enough money, and having to meet family expectations. In India, there is even more pressure to do well in school because it is considered as a measure of personal worth. People who can't fulfil a standard don't think it's their fault; they think it's society's fault. This makes people feel humiliated and alone. A lot of young people who were asked about different schools said they feel "stuck in between." They aren't sick enough to be sad, but they also aren't full of life. Things are also changed by peer society. A lot of jobs are demanding, and some individuals think that not being able to sleep before tests or always being weary is a sign of success. People in these kinds of groups think it's dangerous to reveal that you're mentally weak. Stigma stops a lot of people from coming to treatment, even when they know they should. Students don't talk about their troubles until they can't handle them anymore because they don't want to seem weak. It is vital to investigate subclinical sorrow because it is not visible. It is a less severe type of major depression, but it is also a separate condition that arises when personal faults and societal problems come together. To see the psychological side of it, the way therapies are done needs to change. Our surrounds must be studied as a whole, not simply the signals. This includes food, help from friends, time to think deeply, and better ways to balance schooling with personal growth. Integrative therapies, including the Psycho-Nutritional Intervention Approach (PNIA), are particularly significant since they look at health problems from both the inside and the outside of the person.

2.10 Lifestyle and Nutritional Influences in Subclinical Depression

A lot of college students say that their daily routine has more of an effect on their mood than anything else. A popular anecdote is about food: a lot of people skip breakfast, eat lunch quickly, and then stay up all night with instant noodles or strong tea. It starts off as a convenience, but it quickly becomes a habit. They feel heavy after meals, can't sit still when they miss meals, and need caffeine to keep alert. This erratic rhythm slowly diminishes their energy over time, making it difficult to get over melancholy. Researchers have shown that not eating enough fresh fruits, vegetables, whole grains, and healthy fats

can make it harder to control your mood. B12, folate, and minerals like magnesium affect how neurotransmitters act. Students could feel irritated, distracted, or just "low" without them. On the other hand, people often say they feel calmer and more steady when they eat more balanced, home-cooked meals like dal, rice, veggies, and curd. Food here has not simply nutrients but also a sense of home and warmth. Patterns of living outside of food are just as important. During exam season, sleep is the first thing to go. A lot of students say they sleep at strange times and read through their phones till late at night. The next day, you won't be able to focus and you'll feel emotionally flat. As more work piles up, physical activity also goes down. The body and mind both slow down when you don't do yoga or exercise. These daily practices may seem normal, but combined they make up the background that subclinical depression needs to grow. That's why any real help has to be more than just counselling. Eating regular meals, getting better sleep, moving mindfully, and being conscious of how your lifestyle affects your mood can all make a big difference. The Psycho-Nutritional Intervention Approach is based on this idea: restoring natural balance is the key to emotional health.

3.0 Methodology

The present study utilised a comparative design, monitoring two cohorts of university students over the span of one year. One group attended a succession of monthly Psycho-Nutritional Intervention Approach (PNIA) wellness camps, whereas the other group continued to receive the standard counselling and therapy support provided by the facility. This strategy showed us how a planned holistic program is distinct from the care that students generally get.

3.1 Research Design

The design was very experimental. It was not possible to strictly randomise students; nonetheless, attempts were taken to ensure that both groups were comparable in age, gender, and baseline symptomatology. There were regular tests before and after, and both types of data were collected.

3.2 Participants

The study included 120 full-time students, all of whom were between the ages of 18 and 25. They were chosen through an initial screening process that used the DASS-21 scale. People who had mild to moderate depression were asked to come. The purpose was to focus on mild to moderate mental health difficulties that are common on college campuses, thus students with substantial physical or mental health problems were not allowed to take part. The ethics board gave us the go-ahead, and anyone can

choose to take part. All of the students signed a paper that claimed they agreed. Using codes instead of names during the analysis kept things private.

3.3 Intervention: PNIA Wellness Camps

There was a PNIA camp every month that lasted a week. They got together psychiatrists, dietitians, yoga teachers, and other people who work with music therapy and mindfulness. Every day, there were yoga and breathing exercises in the morning to wake you up and settle you down. Classes on diet and lifestyle that include hands-on lessons on how to create sprouts, juices, and simple sattvic meals. Counselling for people and groups that uses cognitive and supportive methods. Meditation on being attentive at night. Games and music for groups to let individuals connect and talk about how they feel. Students were told to maintain doing these things when they returned back to school, and there were brief online talks before the next camp.

3.4 Control Group: Usual Clinical Practice

The group that was compared kept going to the regular university counselling centre. They typically got help from short, one-on-one consultations with counsellors and, if needed, a referral to a psychiatrist. There was no planned element about nutrition or lifestyle.

3.5 Assessment Tools

1. The DASS-21 test looks for signs of stress, anxiety, and depression.
2. The WHO-5 Well-Being Index is a way to check on your mental health.
3. The Food Frequency Questionnaire (FFQ) helps you keep track of changes in your diet.
4. A simple log of your daily habits, sleep, and activities.
5. Semi-structured interviews with a small group to write down real-life stories.

3.6 Data Collection Procedure

The first tests were done at the beginning, then every three months, and finally at the conclusion of the twelfth month. The interviews were done in person and recorded with the interviewee's permission.

3.7 Data Analysis

We employed descriptive statistics and repeated-measures tests to identify temporal and intergroup variations in the quantitative data. We examined the interview information carefully, classified it by

hand, and sorted it into categories based on what it was about. This side-by-side examination included both figures and personal anecdotes, which served to give a fuller picture of how the PNIA program worked in real life.

4. Results

4.1 Quantitative Findings

When the scores were analyzed, it became clear that the two groups began from a very similar point. Both the PNIA and the control students reported moderate levels of depression, anxiety, and stress on the DASS-21 at baseline. What was interesting is that the trajectories started to diverge after the first six months.

By the middle of the trial, the PNIA group had already moved into a noticeably lower range of scores. The control group, though receiving routine counselling, showed only modest change. By the end of the twelfth month, the contrast was quite sharp: PNIA participants had average depression scores below ten, while controls stayed closer to fifteen. The same pattern was visible for anxiety and stress, where PNIA students consistently registered lower levels.

Table 1. DASS-21 Mean Scores at Different Time Points

Time Point	Group	Depression (M ± SD)	Anxiety (M ± SD)	Stress (M ± SD)
Baseline	PNIA	17.2 ± 3.8	15.4 ± 4.1	18.1 ± 3.5
	control	17.6 ± 3.5	15.1 ± 4.0	18.4 ± 3.9
Month 6	PNIA	11.3 ± 3.1	9.8 ± 3.6	12.2 ± 3.0
	control	15.8 ± 3.6	13.7 ± 3.9	17.1 ± 3.4
Month12	PNIA	8.9 ± 2.7	7.1 ± 2.9	9.5 ± 2.6
	control	14.9 ± 3.2	12.8 ± 3.7	15.9 ± 3.5

The WHO-5 results confirmed this shift in a positive direction. While both groups started with relatively low well-being scores, the PNIA group crossed the clinical cut-off for positive well-being by the end of the program. In contrast, the control group improved only slightly and stayed below the cut-off for most students.

Table 2. WHO-5 Well-Being Scores

Time Point	PNIA (M ± SD)	Control (M ± SD)
Baseline	36.2 ± 7.5	35.8 ± 6.9
Month 6	54.1 ± 8.2	41.5 ± 7.3
Month 12	65.3 ± 7.9	44.6 ± 8.1

Dietary reports (FFQ) provided further evidence. Students who followed PNIA steadily increased their weekly intake of fruits, vegetables, and sprouts, and at the same time reduced fast food and stimulants. Control students, by contrast, showed very little change in their patterns.

Table 3. Selected Dietary Habits (Self-Reported)

Habit per Week	PNIA Baseline	PNIA 12 Months	Control Baseline	Control 12 Months
Fruit servings	4.1	10.5	4.4	5.2
Sprouts/greens	2.6	8.7	2.4	3.0
Fast food meals	3.9	1.1	3.7	3.2
Caffeinated drinks	7.2	3.0	6.9	6.5

These numbers reflect what was observed in practice: PNIA participants were not only reporting lower distress but were also living in visibly healthier routines by the close of the study.

4.2 Qualitative Findings

This study's qualitative part helped us understand what college students who took part in the Psycho-Nutritional Intervention Approach (PNIA) really felt and did. Changes in depression, anxiety, and well-being symptoms were measured by scales. Interviews, focus group talks, and reflective journals, on the other hand, showed the more complex aspects of personal change that can't be measured by scales alone. A few ideas came up over and over again. Many students talked about how relieved they felt when the program made the link between mental health and decisions made in daily life. Depression used to be seen as "in the mind" or "a chemical imbalance" by many. They changed the way they thought about self-care when they found a way that focused on what they ate, how much they slept, and doing things that made them aware. A participant said, "For the first time, I felt like I could do something with my own hands, like choose what I eat or how I breathe, that could really help my mood." Connecting with others and feeling like you fit was another big theme. Most students had never had the kind of consistency that the 12-month idea offered in school health or counselling programs that were only offered for a short time. Community dinners made with sattvic vegetarian food, meditation meetings, and even morning yoga classes for the whole group became signs of unity. Students said that doing these things with other people made them feel less alone, which was helpful when they were studying for tests. It was once a month and felt like camp to many of the people who went. It gave them "a circle to return to," which made them feel safe and responsible. The third thing you should think about is how to pay more attention to your body. Students started to pay attention to their bodies' signals when they did breathing exercises and ate carefully on a regular basis. Mood regulation often gets better before this knowledge. A friend said, "I used to eat without thinking, especially junk food when I was studying late at night." It taught me how to recognise when my stomach hurt and my energy was low and how to adjust my behaviour. Although it seems simple, it gave me strength I didn't have before. A lot of people were also impressed by the mix of old wisdom and current psychology. Initialy, some students didn't trust yoga or Ayurvedic food ideas since they believed they were "outdated." There was some doubt at first, but as the workshops went on and the teachers connected the practices to scientific ideas, such as the gut-brain axis or how breathing affects vagal tone, the doubt changed into interest and then acceptance. A lot of students said that this "bridging" helped them connect their old-fashioned lives with their new school lives. To wrap up, the topic of keeping motivated over time came up. In contrast to most short interventions where students lose interest, the students said that the monthly schedule, reflective writing, and follow-up coaching kept them from dropping out. Their structured PNIA framework gave them both security and flexibility; some said they would have "given up in a week" if

they were left on their own. Through these stories, we can see that PNIA was more than just a treatment module. It was a live ecosystem that naturally brought together food, movement, rest, awareness, and community. Along with the quantitative results, the qualitative results show that the method not only helped with symptoms but also gave people a feeling of purpose, belonging, and empowerment.

4.3 Integration of Qualitative and Quantitative Results

When you put these two sets of results next to each other, you can better comprehend how PNIA works. The standardised tests showed that ratings for anxiety and despair went down steadily over the course of the year. Still, the numbers don't explain what these shifts mean for the kids. Their story made the facts clearer. The average levels of depression went down, and several students said they felt "less burdened," "able to breathe more easily," or even "finally able to enjoy small things again." It seemed sense that people who reported better sleep, focus, and energy levels also had better well-being scores. The statistics and the actual events showed a pattern that was the same. Some connections became very clear. The research showed that people were better at handling stress and controlling themselves. During group discussions, students often exhibited heightened awareness of hunger, satiety, or early indicators of fatigue—sensations they had previously overlooked. This type of embodied knowledge provides a persuasive human explanation for the noted improvement in management, as reflected by the scales. There was a lot of overlap when it came to keeping employees. The PNIA group had a lower dropout rate than the group that had conventional therapy. The numerical data alone could not clarify this gap; however, the narratives illuminated it: participants often articulated a sense of belonging within the group, a sense of accountability to their peers, and how communal dining and practice served as motivation. In the end, the mix of tradition and science—yoga, a sattvic diet, mindfulness, and psychological support—seemed to provide a clear and useful framework. It wasn't only about getting better marks; teens also said they felt "anchored," "directed," and "less alone." The integration shows that PNIA not only wanted to ease the evaluated symptoms, but also wanted to make a place where quantitative data and qualitative narratives could come together. The intervention included both objective and subjective aspects of healing, giving students a clear sense of well-being.

5. Implications

The results of this study give us some information that goes beyond just numbers. It's clear that college students benefit more from mental health treatment that includes both medication and counselling, rather than just one or the other. The PNIA model combined diet, yoga, mindfulness, and mental health

support. The result was not just a reduction in symptoms, but also an increase in energy, focus, and a sense of connectedness. This suggests that university health programs would need to broaden their scope and give equal importance to lifestyle practices as well as conventional care. The community is just as important. Students regularly highlighted the community meals, synchronised breathing exercises, and group discussions as the components of the curriculum that "sustained them." Working together with peers led to more engagement than working alone. This emphasises a crucial although often neglected truth: mental health interventions in school environments are most efficacious when they promote social relationships. Another comment has to do with how historical practices are shown. The yoga regimens, sattvic food, and quiet times were not set in stone. They were shown as tools that might be tried out and changed. As a result, kids felt no pressure or judgement. Mental health professionals should know that they may explain traditional methods in modern, practical language while still keeping their core ideas. The most important thing to remember is that improvement is more than just lowering scores for anxiety or despair. Many students used words like "clearer," "lighter," or "more vibrant" to describe what they went through. These things can't be easily put into questionnaires, but they do show real change. Practitioners should therefore use quantitative assessment alongside the examination of personal narratives and lived experiences.

6. Limitations of the Study

This work drew participants from more than one university, which helped avoid the narrow view that often comes when a project is tied to a single campus. Even so, the group of students was not as large or as varied as one might hope for. Most of them were from institutions in bigger towns, where facilities such as counseling units, internet access, and healthier food choices are easier to come by. Because of this, the findings may not fully capture the realities of students in smaller or rural universities.

Another point worth noting is the reliance on the Beck Depression Inventory-II. The tool is widely respected, but like any self-report measure, it depends on how honestly and carefully students answer the questions. Some students were open; others seemed rushed or guarded. That unevenness may have influenced the overall picture.

The timing of the study also mattered. Over twelve months, student moods tended to rise and fall with the academic calendar—exams, holidays, new semesters. It is hard to say how much of the change in scores was a result of the intervention itself and how much was due to these natural cycles of student life.

Commitment levels varied as well. Some students took the dietary and mindfulness practices to heart; others slipped in and out. What we see in the results, therefore, is a blend of strong and weaker engagement, rather than a perfectly uniform response.

Lastly, while the inclusion of different universities gave some breadth, the sample is still relatively modest. A wider pool, covering diverse regions and cultural backgrounds, would strengthen confidence in the general relevance of the Psycho-Nutritional Intervention Approach (PNIA).

7. Suggestions for Future Research

The initiative has showed good results thus far, but it's merely the beginning. One of the first things that future work should do is incorporate a bigger and more varied sample. Many of the students that took part were from urban colleges, although some were from other schools. It would be helpful to study how PNIA works with students on smaller campuses or in rural areas, where daily life and resources are very different. Another thing to do is to keep an eye on students for a longer time. A year was long enough to see improvements, but it doesn't tell us if those changes will remain. A follow-up after two or three years could demonstrate if the benefits last after the program's structure is gone. It might also be helpful to examine more closely at how the different parts of PNIA affect the results. Did the diet, the yoga, the group support, or the combination of all three make the biggest difference? Future research may isolate these variables or evaluate various combinations to determine the best successful approach. You can also make methods better. Standard tools like the BDI-II are useful, but they don't capture the small intricacies of personal experience. More interviews, reflective writing, or even journal approaches could show changes that numbers alone can't show. Finally, this work shows how important it is to work together. Psychologists, dietitians, and yoga practitioners should collaborate more effectively, and the inclusion of educators and policymakers may facilitate the implementation of this strategy in university settings.

8: The Conclusion

This study commences with a principal question: can a program that combines nutrition, mindfulness, yoga, and social support aid university students who are feeling low mood without meeting the diagnostic criteria for severe depression? After a year of watching students at a number of universities, it seems that the answer is yes, but there are some crucial things to keep in mind. The figures tell part of the story. Scores on standardised tests like the BDI-II and DASS-21 kept growing better, while scores on the WHO-5 for well-being also went up. But stats don't always illustrate how big the gap is. The students'

stories about how they felt better, slept better, and found solace in being with peers were just as essential. These true stories made the figures seem more real. But you should be careful when looking at the outcomes. Some pupils were more involved than others. Some people followed the diet rules exactly, while others didn't. People didn't always go to yoga and mindfulness classes, and school stress made it hard for them to stick with it. Most of the people who took part were from urban colleges, which don't have the same resources, thus the results can't be generalised. There is one thing that is evident, even with these challenges. Crisis counselling and medications alone cannot sufficiently address the mental health needs of students. A viable strategy can be achieved by preventive, holistic methods that integrate contemporary psychology with traditional practices. PNIA noted that little things we do every day, such what we eat, how much we exercise, how we rest, and how we stay present, can have a tremendous impact on our mood and how strong we are. In conclusion, the study does not claim to have found a solution to the issue of student depression. It suggests that a comprehensive model is feasible and possesses significant potential. We want to study PNIA with larger, more varied groups of people and over longer periods of time to see if these effects last. If those efforts work, psycho-nutritional therapy could go from being experimental to becoming a normal part of school life.

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