

Mindful Walking and Personality Traits among University Students

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ABSTRACT

There have been reports of declining mental well-being of university students due to academic stress, peer pressure and career anxiety. With the sample size of 124 male and female university students this study aims at understanding how mindful walking and personality traits are influencing the mental well-being of university students, and gender differences. WEMWBS scale was used for assessing mental well-being and BFI-10 inventory for assessing personality traits. A positive correlation between mindful walking and mental well-being was found and extraversion, agreeableness and conscientiousness had a positive correlation with mental well-being, whereas neuroticism had a negative correlation and there was no correlation between openness and mental well-being. A significant gender difference existed in mindful walking whereas there was no gender difference in mental well-being of university students. In the world of busy time schedules this study provides the way of engaging in a time efficient physical activity i.e., mindful walking and adhere to its benefits on mental well-being.

Keywords: *Mindful Walking, Personality Traits, Mental Well-Being, Gender, University Students*

In the era of busy schedules where everyone is struggling with time management, complaining of not having enough time no body thinks of physical activity and its benefits. Even when each one of us is well versed in the importance and benefits of physical activity people keep lacking in this area. There are several factors affecting the physical activity of a student: environmental factors, urban areas, laziness, time management, and peers. World Health Organization reports 'Regular physical activity is proven to help prevent and manage non-communicable diseases (NCDs) such as heart disease, stroke, diabetes, and several cancers it prevents hypertension, helps us in maintaining healthy body weight, quality of life, and mental and physical well-being. Many studies online talk about the benefits and importance of physical activity over mental well-being. Smith and Merwin did a review study to understand the relationship between exercise and mental health disorders they found many evidences that talked about physical activity as a therapeutic intervention to mentally disturbed patients like exercise improves depression symptoms. An article by mayo clinic also talks about the benefits of regular exercise, this article has a separate portion in the blog that states the benefit of exercise in depression

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anxiety. Through this, we can understand the importance of exercise and its many beneficial effects on human body and mind. The aim of this research is to highlight that one type of exercise that consumes less time and provides beneficial result. Since not many of us have sufficient amount of time due to hectic life schedule and that one activity can be mindful walking.

Mindful Walking

Walking is an activity that we do every day, we walk here and there all the time be it going to grocery store, market, talking a stroll all these are considered walking but not mindful walking. Mindful walking previously known as “forest bathing” and was used widely in Japan to treat stress among workers. Forest bathing has an environmental requirement but mindful walking can be done anywhere It has no such requirements physically but the important aspect of mindful walking is where are you mentally.

How to walk mindfully

There are some things to keep in mind while engaging in mindful walking, first and foremost thing being comfort unless and until one is not comfortable one cannot achieve any targeted goals. Another main aspect of mindful walking is to be in the present, there’s no time limit, no destination but what matters is how aware are we of our surroundings not physically but mentally.

- **Open up your senses:** as we walk we should focus on all of our senses, what we see, what we smell, the sounds, and most importantly how our body feels like the feet touching the ground, the body movements, the hair flowing, eyes blinking.
- **Awareness:** it is most important to be aware of your environment, if you are walking in the park notice the kids playing, birds chirping, old uncles walking and if you are on the streets notice the cars, the crowds, the busy life, the shop vendors. It doesn't matter where we are but we should be aware of where we are.
- **Notice your feelings:** noticing environment is one thing but at the same time we should also be aware of our own feelings and emotions. If your mind wanders to negative thought or the past remind yourself to be in the present and start noticing your surroundings.

Walking brings many health benefits it lowers the risk of heart disease, high blood pressure, diabetes and increases the chances of healthy body weight, fitness and metabolism. Whereas mindfulness brings making psychological benefits it uplifts mood, reduces stress, reduces anxiety and also lowers the risk of psychological disorders, combining both walking and mindfulness brings enormous physical and psychological well-being.

Mental well-being

The term mental well-being and subjective well-being are used interchangeably, a person is mentally well when they are at the optimal level of their functioning.

Subjective well-being comprises of 2 components: hedonia and eudaimonia Hedonia: refers to being happy and excited. This includes any activities that brings pleasure to an individual for example, some feel happy while reading book quietly and some when dancing with the crowd.

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Eudaimonia: states being happy is not enough, but doing something worthwhile like contributing to the society, completing one's goal, being challenged overall having a sense of purpose and attaining to it can bring optimal level of well-being.

Attaining both these concepts together contributes to the understanding of mental well-being. Mental well-being refers to the well-being of our psychological, emotional and social health. A person who is clinically ill (diabetes) can have high level of mental well-being and a person who has no illness can have low level of mental well-being.

There are three components that define mental well-being

1. Cognitive and social well-being: the ability to plan, make decisions, organize, solve problems and remember, and social skills refer to the ability to communicate properly in the society.
2. Emotional well-being: refers to the ability to cope up with life challenge, it includes happiness, pleasure, hope, faith etc
3. Psychological well-being: refers to positive mental state. It includes positive feels towards oneself, achieving goals, able to cope with life stressors in a adequate manner.

Personality

Personality in simple language means individual differences, all human beings have different unique personalities and that is what makes them an individual. Personality according to psychologist refers to "psychological qualities that contribute to an individual's enduring and distinctive patterns of feeling, thinking and behaving" we can identify personality through analysing personality traits, traits refers to consistent pattern of behaviour and emotion that an individual displays over time.

Psychologists have tried to define personality and have come up with different theories till date. The first theory of personality came into being during the middle ages, in ancient Greece Hippocrates came up with the theory of four humors to understand the mental illness, their theory was the imbalances of bodily fluids namely black bile, yellow bile, phlegm and blood that affected one's health and personality.

1. The humor yellow bile was associated with choleric temperament
2. The humor black bile from kidney was associated with melancholic temperament
3. The humor phlegm was associated with phlegmatic temperament
4. The humor blood from heart was associated with sanguine temperament

These four types of temperaments/ personality traits were given by a Greek physician, surgeon and philosopher Galen, his 4 personality traits are

1. Sanguine: optimistic, enthusiastic and social
2. Choleric: short tempered, ambitious and aggressive
3. Melancholic: quiet, sad and lazy
4. Phlegmatic: relaxed, forgetful and peaceful

Gordon Allport, psychologist 20th century who tried to bring light into the approach of individual differences and today he is remembered for his trait theories of personality. Allport developed his theory of personality by going through dictionary and noting every word that describes a personality he made a list of 4507 different traits of personality and later categorized them into 3 types cardinal traits, secondary traits and secondary traits. Raymond Cattell (1957), well known psychologist who worked with different other

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colleagues and identified 16 different personality characteristics, eventually he also developed a 16pf questionnaire to assess personality traits which is still very widely used today. according to Cattell all individual possess these traits to certain degrees. Hans and Sybil Eysenck were another personality theorist they focused on temperaments, the inborn characteristics of an individual to define personality. They believed our personality traits are influenced by our genes. Their theory previously consisted of 2 dimensions, later one they added one more.

There are many theories that discuss personality traits, one significant model that I will be using in this research to understand the relationship between individual differences and mindful walking and individual difference and mental well-being is The Big Five Factor Model given by D. W. Fiske (1949).

Physical Activity\Mindful Walking and Well-being

When we talk about physical activity people automatically think of working, running, or hitting the gym, a heavily loaded workout but even minimal exercise like walking, stretching dancing just body movements has proven to be beneficial for mental well-being. According to the article by the mental health foundation on physical activity and mental well-being “a short burst of 10 minutes of brisk walking can increase our mental alertness energy and positive mood” this statement supports the first half of my study “walking and mental health” my study aims at university students who at this era struggles with time management, students are always engaged with assignments, work and relationships that makes it difficult for them to spend enormous amount of time in physical activity, a time efficient workout for such situations can be a 10 minutes of mindful walking around the area, another important factor that makes a student physically inactive is gadgets. Let’s think of the time when there were no mobile phones what do you think are source of entertainment? Walking, talking a stroll in the park, communicating, dancing and running. Students engage hours and hours in their mobile phones but fail to understand the importance of 10 minutes in their overall mental being. An important factor that makes a student physically inactive is gadgets. Students today are so very much engrossed in social media, browsing and relationships it has become impossible for them to even think of doing regular exercise, this is where 10 minutes of brisk walking comes into play.

This article has separated physical activity into 4 categories:

- Daily physical activity: Everyday things such as walking to the bus stop, carrying bags, or climbing stairs all count into daily physical activity
- Exercise: refers to an activity done in order to improve health it is also done for fitness, such as jogging or cycling, or lifting weights to increase strength.
- Play: Activity that is done for fun or enjoyment that is not planned or prepared for
- Sport: form of physical activity that include anything from football or squash to cricket. Sports can be played in a group and even alone sports is a great way of getting our stress out externally, for people who hates exercising this could be a good substitute.

Mental well-being and its importance

It is very evident and proven that physical activity could bring optimal well-being. What do we understand by this term well-being and how is it different from mental health well-being? According to the better health channel’s article Well-being doesn’t just mean absence of disease or illness. It’s actually a combination of a person's physical, mental, emotional,

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and social health factors. Well-being is strongly linked to happiness and life satisfaction, if an individual is mentally and physically well she could have a very positive approach towards her life. Another important topic that I will be discussing in this research is mental health. The term refers “to the emotional, psychological, and social well-being of an individual” which also sums up to be the optimal well-being of an individual. The term well-being and mental health has the same meaning ultimately. But the confusion here is poor mental health is seen as same as mental disorder the difference people need to understand is individual with poor mental health may or may not be diagnosed with a mental disorder. Mental health is important at every stage of our life, poor mental health can affect how we think and feel it can make us function poorly in our life. A study found that more than 50% of the 500 students who participated in it, were experiencing symptoms of common mental disorders like stress, anxiety, depression, and somatoform disorders was reported by the Times of India 30th April 20. US teens are on the verge of crisis reports BBC new due to deteriorating mental health. Every other day there are articles and news about deteriorating mental health in youngsters, I won't say a mere walk can fix mental issues but it can prevent and reduce the risk of mental disorders. According to the study by American Psychological Association on “Nurtured by Nature” spending time in nature can improve cognitive functions, reduces stress, emotional benefits: subjective well-being, positive mood, happiness. They also reported that not just green space but blue space also has equal well-being benefits.

Since there are so many researches and articles talking about poor mental well-being among different sectors but since my research focuses on mental well-being of university students and ways to improve it. Some of the basic factors that triggers mental health crisis among university student are,

- Financial dependency: students strive for financial independence during this time, the pressure to ask money from parents makes them feel very uneasy. This leads to over thinking followed by career anxiety.
- Academic pressure: the guilt of studying with parents money makes them want to succeed academically, the pressure to do well, achieve good marks makes them avoid their physical and mental well-being, they overwork and take a lot of stress.
- Poor time management: students these days struggle a lot with poor time management because they procrastinate and spend ample of their time browsing through social media.
- Social media platforms: the use of social media has increased at such a level, one of the leading cause of poor mental health among general population is unnecessary comparisons, unable to distinguish real life from social media life.
- Career pressure: the pressure to succeed in life is another factor building stress among students.

These factors are some of the basic causes that I have noticed among Indian students, may or may not be applicable everywhere. These factors can cause mental health challenges like

1. Depression
2. Anxiety
3. Eating disorders
4. Addiction
5. Self-harm

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There are several coping strategies that can help students build resilience towards stressful situation, they can learn techniques to regulate their emotions in positive way, prevention techniques like healthy food habits, exercise, supportive social environment and walking in nature could lower the risk of mental health issues.

Personality traits/mental well-being

Personality has been studied from a very long time now and yet there's not one strong theory that defines one's personality, human beings are all very unique and different from one another, we possess different qualities, we have different thinking pattern and we behave accordingly in our society this uniqueness that we possess is referred to as personality. The one question that lingers here is not all people have a healthy mental well-being and individual differences is one factor that affects one's mental well-being. Many such studies have been conducted that supports the findings of relationship between mental well-being and personality be it positive or negative.

Some personality traits have positive relationship with mental well-being whereas some have negative relationship and some show no relationship. In this studies the personality trait assessment is done with the help of The Big Factor Model theory and it comprises of 5 traits, there are studies that shows negative relationship between neuroticism trait individual and mental well-being, which means individual high on this traits are more prone towards common mental health disorders. People high on openness trait might have a positive but weak correlation with well-being whereas individual high on extraversion trait might have positive correlation with mental well- being. In such way, mental well-being can be influenced by personality traits of an individual.

The big five factor model

Catell's theory was criticized to be too lengthy and Eysenk's to be too narrow, then came another most prominent theory called Five Factor Model. It is known to be the most effective and accurate theory it is referred by psychologist till date, due to its five factors it is now known as the Big Five Personality traits which were first coined by D. W. Fiske (1949)

The big five personality traits are:

1. Openness: This trait describes how open someone is to a variety of experiences. People who are high in this trait tend to be more open to new experiences. People low in this trait are have a rigid mindset, they do not like to try new things.
2. Conscientiousness: This personality trait describes how self-disciplined, organized and goal-oriented a person is. Highly conscientiousness people tend to be organized, they plan ahead, think about how their behaviour affects others, and are mindful of deadlines. Low on this trait tend to procrastinate, does not like planning, make messes and does not finish task on time.
3. Extraversion: personality trait characterized by how sociable, energetic and warm a person is people who are high in extraversion are outgoing and gain energy in social situations. Being around other people makes them feel energized and excited. People who are low in extraversion have introvert personality, the like to stay aloof, their energy gets drained when exposed to social situations.
4. Agreeableness: personality trait describes kindness and sympathy behaviors of an individual. People who are high in agreeableness are more cooperative and those low in this trait are more competitive and even manipulative.
5. Neuroticism: This personality trait describes how emotionally unstable, nervous, distressful and fearful a person Individuals high in this trait have high chance of

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experiencing mood swings, anxiety, irritability, and sadness. Those low in this trait can be more stable and emotionally resilient.

Chapter summary

Mental well-being is not given as much importance as it should, this could be due to the unawareness and the stigma it follows. Unawareness has become one of the major cause of declining mental health in our country. Indian education system is already so cramped up, students are too much burdened with loads of unnecessary information and on top of that assignment and workloads sadly students and parents do not think this as an issue hence it lowers the mental well-being of students, being sad is called depression here and being anxious is called anger issues. This study aims at understanding the student's mental well-being and ways to help them achieve higher sense of mental well-being.

LITERATURE REVIEW

Literature evidence (Ruegsegger & Booth, 2017) exist that talks about how exercise can delay the onset of lifelong diseases and promote a long healthy lifestyle, physical activity such as running also has proven to have an impact in the mental well-being (Int. J. Environ. Res. Public Health 2020). When talking about physical activity it is not necessary for an individual to do a heavy loaded workouts like gym, cardio, zumba but even small activity like walking can have a positive effect towards mental health. The Atlantic reported currently of United States experiencing a major mental health crisis, they found out 44% of high school students in American complained of having a persistent low mood and this rise in percentage was during pandemic. Mental health crisis has become one of the most important issues currently all across the world. (Derek Thompson) so what can be the effective means to battle through acute and chronic depression?

Physical activity and mental health

Dinas et al., 2011 talks about the beneficial effect of exercise on depression which worked better than antidepressant. Physical inactivity is associated with the development of psychological disorder and the use of exercise has worked as a treatment for depression says Carek et al., 2011. Physical activity also improves the quality of life of patients with non-psychiatric diseases such as peripheral arterial occlusive disease and fibromyalgia and helps in the relief of such diverse conditions as nicotine abstinence and menopause (Aurelio, Peluso and Andrade (2005). However physical activity does not mean heavy workout, walking out in the sun also has equal benefits when it comes to sound mental health says Kelly et al.,(2018). Walking out also has been considered a form of psychotherapy that mainly helps an individual with emotional struggles Martin Mau et al.,(2021). Regular physical activity helps to improve physical and mental functions as well as reverse some effects of chronic disease to keep older people mobile and independent says McPhee et al.,(2016) study. A study done by Cunningham et al.,(2020) highlights that older adults who are physically active age more healthily however older adults are not engaging themselves in maintaining physical activity to attain these health benefits. (Ruegsegger & Booth, 2017) Many studies support physical activity as a non-invasive therapy for mental health improvements Despite the well-known benefits of exercise, most adults and many children engage in sedentary lifestyles as if they are not motivated enough to achieve the health benefits of exercise.

Walking and mental well-being

Examining all these researches it is understood that physical activity has proven to be most efficient for population that are struggling with mental health issues. However, this research

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also tries to look into the effect of one particular, easy and time sensitive activity i.e. walking and its effect in mental health. According to a Better Health Channel article, walking is a great way to improve and maintain our overall health. It increases power and endurance. Additionally, walking can lower your risk of contracting illnesses like heart disease, type 2 diabetes, osteoporosis, and some types of cancer. Another article on WebMD by Dan Brennan, MD on October 25, 2021 states walking not just offers the physical benefits of exercise but also boosts our emotional well-being, who would not want an emotionally healthy lifestyle? This article also highlights the benefit of walking regularly on chronic mental health conditions like anxiety and depression. Other several studies support the notion of walking and mental health. Edwards and Loprinzi conducted a study on young adults to examine their mood states and walking result showed that 10 minutes of brisk walking improved their mood states. Likewise another study by Edwards, Rhodes, Paul and Loprinzi on 63 young adults concerning impact of acute exercise and meditation on emotional regulation. They found out contrasted to an active stretching control group, it was discovered that a 10-min period of brisk walking and meditation before being exposed to a negative emotion signal had no discernible influence on the ability to regulate melancholy, anger, or anxiety. Neumann 2015 shows walking also have helped people battling depression, 200 minutes of walking every week regulated their social emotional well-being, and they were not as resistant and unwell as patient battling through depression generally projects.

Gender study and mental well-being

When it comes to depression the study done by National Institute of Mental Health says Women are 70% more likely to be depressed at some point in their lives than men. That does not mean men are not vulnerable but the reason could be in our society men are more nature based and women are more occupied indoors. A study by Khalili, Shirinkam, Ghadimi and Karim on the effect of group walking program on social physique anxiety and the risk of eating disorders in aged women showed that group walking could be used as a treatment for these two disorders. Among not only aged women but also gender differences in terms of mental well-being is seen in adolescents. In a study done by Droogenbroeck and colleagues among adolescents and young adults, psychological distress, anxiety and depression were much higher in girls than boys. Girls with poor social support reported more lower mental well-being. Young adult boys aged between 20 to 25 showed more psychological distress, anxiety and depression than late adolescent boys aged 15 to 19. overall girls were more likely to have poor mental well-being than the boys. Gender differences exist not only in terms of mental well-being but in terms of onset of illness, social adjustment and severe mental disorders. A study by Malhotra and Shah found that women dominates when it comes to common mental disorders like depression, anxiety and somatic complaints in India. Studies show that women are 2 to 3 times more at risk of common mental disorders than men. This may be due to the gender disadvantages of women in our society, an abusive partner, sexual abuse by partner, being widowed or separated, women go through many such issues silently due to lack of education which is followed by dependency on partner.

Gender difference and physical activity

There are not much studies focusing solely on gender difference and mindful walking but on physical activity in general. A study done by Pongras et al., on gender difference in physical activity among the university students in Visegrad countries assessed the difference between physical activity and health status among university and school students. Study was done on 2237 students and the result showed significant difference in terms of physical activity, lower rate of physical activity among female students than in male students. Similar study

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was conducted among Chinese university students by Jiang et al. They looked at gender difference in terms of physical activity and happiness among 1512 students, 1108 males and 404 females, they found no gender difference in physical activity or walking behavior, but females were engaged more in sedentary behavior than men. BMC Public Health published a paper on 2017 by Tessa M. Pollard et al. to assess if gender differences existed in walking behavior. The study concluded that there was no consistent gender difference found on walking behavior because this behavior varied with age.

Personality traits and physical activity

Another important aspect this study taps is personality traits and its effect on walking and mental well-being to understand the reason behind negligence toward physical activity in today's population. Several researches are done that shows when it comes to physical activity individual differences exists. There was a review study done to understand the association between physical activity and personality traits by Rhodes and Smith 2016, extraversion ($r = 0.23$), neuroticism ($r = -0.11$) and conscientiousness ($r = 0.20$) showed a significant correlation with physical activity whereas openness to experience and agreeableness were not associated. This individual difference exists not just with general population but also in the field of sports, as studied by a sport psychologist Weinberg and Gould, revealed that there was a positive relationship of extraversion and conscientiousness towards physical activities whereas neuroticism was negatively correlated. Another study by Magdalena I. Tolea and colleagues also added to the notion, neuroticism was negatively correlated with physical activity and strength whereas extraversion was positively correlated with strength and activity.

Personality traits and mental well-being

Mental well-being refers to a state of optimal functioning both physiologically and psychologically. We have already discussed above the significance of physical activity toward mental well-being, we came across different studies that highlights the correlation between dancing and happiness, walking and mental well-being, walking and depression, physical activity benefits toward population struggling with depression and anxiety. Hence physical activity not only helps people struggling with mental illness but also lowers the risk of it.

Mental ill-being refers to wide range of mental health issues that affect our thinking, emotions and overall well-being. There are many factors that contribute when an individual struggles with mental health condition it can be due to genetic factors, environmental factors, trauma, head injury or substance abuse. One such factor that is not talked of as commonly as it should when it comes to mental ill being is personality traits. Individual ranking high in neuroticism are more prone to developing mental health conditions like anxiety and depression than those who ranked high on extraversion says C Jarrett in her study Personality and mental health on June 2017. Students mental well-being is becoming a talk nowadays these individual differences exists but are not so much talked about. Lewis and M. Cardwell did a study on this area to check the personality traits and its influence on mental well-being of 1744 students using WEMWBS scale the result was, the students who showed high in neuroticism has low level of WEMWBS indicating poorer levels of well-being whereas students showing high level of conscientiousness showed positive mental well-being, high level of conscientiousness and extraversion showed lower level of depression comparatively. Subjective well-being refers to an individual's overall satisfaction from their life. In a study done by Abdullah and colleagues on personality traits and subjective well-being the SWB was assessed via domains of happiness, satisfaction with

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life, social psychological and emotional well-being the results were extraversion, agreeableness, openness, and conscientiousness showed a positive relationship whereas neuroticism showed a negative relationship in all domains. Personality traits like openness has positive but weak correlation with psychological well-being, conscientiousness has weak positive correlation with emotional well-being and agreeableness has weak positive correlation with social well-being.

Chapter summary

This part of the study takes on the account of many such studies that support my assumption of this study, this chapter contains of variables used in this study and studies related to these variables mindful walking and mental well-being, personality traits and mental well-being and gender differences.

METHODOLOGY

This chapter talks about the significance of the stated problem, the types of problems this study is trying to tackle and the assumptions of the study. It also explores the population studied, the amount of samples used and the ethical considerations kept in mind while collecting the data, the type of design used for the analysis of the collected samples, the tools used while assessing the data from the population.

Rationale

The question this study aims to answer is the difference that even a minimal activity like mindful walking brings about in an individual's mental state. While there are many studies focusing on the relationship between physical activity and mental health, none has focused solely on one particular exercise and its impact on mental health. This study focuses on only one time of physical activity, which is time efficient since time is the most essential factor in today's era. Walking can make our mood better and the euphoric feeling we get after any physical activity is the cause of chemical reactions that releases in the brain during exercise called neurotransmitters but the question arises whether walking can cause same amount of impact in university students. Since students already fall under lot of pressure due to exams, assignments if it really is possible that a mere physical activity like walking can improve their mental well-being and can lower stress. Study shows anxiety appears to be high in college students worldwide and strategies are needed to promote awareness of resources and encourage access but since in India mental health is not discussed openly students choose to stay put regarding mental ill-being which affects them severely for the long run. What can be done is to educate and normalize mental health issue since this takes time for the time being we can help students opt for other means that has been proven to lower academic stress level and anxiety.

This study also tries to understand the relationship between personality traits and mental well-being, since humans are unique and can possess different personality traits, individual trait must can be one such factor which makes a student disregard mindful walking hence the reducing mental well-being, if we examine individual traits of students, we could use suitable measures accordingly to maintain a higher level of mental well-being.

Objectives

- To assess the relationship between mindful walking and mental well-being
- To assess the relationship between personality traits and mental well-being
- To assess the relationship between gender and mental well-being

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- To assess the relationship between gender and mindful walking

Hypotheses

- H1 There would be a positive relationship between mindful walking and mental well-being
- H2 There would be a positive relationship between extraversion, agreeableness conscientiousness, openness and mental well-being
- H3 Male students would score higher in terms of mental well-being than female students
- H4 Men tend to engage in mindful walking more than women among university students

Operational definition

- **Mindful walking:** Mindful walking in my research refers to engaging in walking activities aimed at walking, going to college, getting to grocery stores, or wandering around the market.
- **Mental well-being:** In this study mental well-being refers to being mentally healthy, less stress level, subjective happiness, sense of satisfaction with life. It refers to deduction of common mental disorders like anxiety, depression and insomnia
- **Personality traits:** In order to assess the influence of individual differences toward mindful walking and mental well-being this study uses the Big Five Factor Model, it has 5 dimensions
 1. Extraversion
 2. Agreeableness
 3. Conscientiousness
 4. Neuroticism
 5. openness

Sampling

This study used a non-probability sampling method for the selection of population for data collection. The study aims at understanding the benefits of mindful walking on mental well-being of university students, the relationship between personality traits and mental well-being and gender study. The targeted population for the study was university students' hence non-probability sampling method was used. Data was collected distributing surveys online, using social media platforms, the consent of the participants were kept in mind while collecting the data.

The study collected data from 124 university students, out of which 122 responses were recorded 91 (74.6%) of them reported that they engage in mindful walking and 31 (25.4%) of them do not engage in mindful walking, 69 (55.6%) of the sample were females and 55 (44.4%) of them were males.

Research design

This study used a correlational design for data analysis

Tools

This study followed a quantitative approach for data collection it used a non- probability sampling method to collect the data. Data collection is done distributing surveys online among university students. Social media platforms were used for distribution of surveys.

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Survey contained of socio-demographic details of students, a note to make the concept of mindful walking clear and two scales A. To assess the mental well-being of university students B. To assess the personality traits of students and its influence on mental well-being. Survey A consists of 14 mental well-being questionnaires and survey B consists of 10 personality trait questions.

This study used a straightforward question to understand if a student engages in mindful walking.

The WEMWBS scale is used to evaluate mental well-being. The WEMWBS- Edinburgh Mental Well-Being Scale measures mental well-being and focuses only on the positive aspects of mental health. This is verified using a sample of students and a representative population. It consists of 14 items that are only related to positive mental health characteristics. According to a WEMWBS study, it is a valid and reliable scale, and the results show that this scale has a high validity and reliability of Cronbach's α (0.89) content, a reliability of 0.83, and other mental health measures. And show a high and low correlation with happiness. Equipped with a scale to measure general health. The social desirability bias was below other comparable measures.

For assessment of personality traits of students The Big Five Personality Inventory-10 is used, It is a short version of the big five inventory it consists of only 10 items it is a self-report scale that is designed to measure the five personality traits: extraversion, agreeableness, neuroticism, conscientiousness and openness.

Ethical consideration

Criteria such as A. must be within the age group of 18 to 27 B. must be a university student, were adhered to before collecting samples from participants. Participants had to be college students. The first page of the survey contained a consent form, with consent from all participants, and participants were assured that their responses would only be used for this survey. Since the survey was conducted during the pandemic period, it was not possible to obtain ethical clearance.

Variables

Dependent variable

Mental well-being as a dependent variable was measured using Warwick-Edinburgh Mental Well-Being Scale.

Independent variables

Mindful walking and its effect on mindful well-being, it was measured using straightforward question “do you engage in mindful walking” “how often do you engage in mindful walking”

Personality traits and its influence on mental well-being, assessed using the Big Five Factor Scale Gender influence on mental well-being.

Data analysis

The data collected is analyzed using the statistical package of social science software version 23. SPSS was used to evaluate relationships between variables using Pearson's correlation and to examine gender differences between variables using an independent t-sample test.

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Chapter summary

The method used to collect the data was an online survey method, data was collected from 124 college students and all participants gave informed consent prior to participation. The outbreak of a pandemic has led to online data collection and research to improve the mental health of college students and to understand their personality traits and their impact on the mental health of students. Tools used for data collection were WEMWBS for assessing mental well-being and BFI-10 for personality traits.

RESULT

In this section the study reports the results acquired using SPSS version 23, the results are displayed in the form of tables, table 1 and 2 shows the correlational results obtained and table 3 shows the gender differences that exist within the variables studied.

Table 1 Means, standard deviation and correlation between mental well-being and mindful

Variable	M	SD	1	2
1. Mindful walking		2.97	0.869	
2. Mental well-being	46.25	9.07	0.149*	

* $p < 0.05$

Table 1 indicates the positive relationship between mental well-being and walking, it means the more a student walks more the chances of that student to be mentally sound, less stressed and a clearer mind.

Table 2 Means, standard deviation and correlation of big five personality trait and mental well-being

Big Five Personality	M	SD	Mental well-being
1.Extraversion	5.8	1.6	0.161*
2.Agreeableness	7.16	1.52	0.294**
3.Conscientiousness	6.01	1.55	0.177*
4.Neuroticism	6.38	1.961	-0.469**
5.Openness	7.00	1.420	0.014

* $p < 0.05$, ** $p < 0.01$

Table 2 indicates the relationship between mental well-being and 5 personality traits, the result here shows personality traits is a factor that determines the mental well-being of university students. Mental well-being shows a positive correlation with extraversion, agreeableness and conscientiousness on the other hand it shows a strong negative correlation with neuroticism and no correlation with openness.

Table 3 Gender difference in mindful walking and mental well-being of university students

Variables	male		female		t	Sig
	M	SD	M	SD		
Mindful walking	3.14	0.903	2.87	0.828	1.966	0.05*
Mental well-being	47.50	8.649	45.25	9.415	1.367	0.174

* $p < 0.05$

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Table 3 shows if there's any significant gender difference in mindful walking and mental well-being of students, the result here shows when it comes to mindful walking there is a significant gender difference, male students tend to engage more in mindful walking than female students. On the other hand, mental well-being has no significant gender difference in university students.

Chapter summary

The results indicate a positive relationship between mindful walking and mental well-being among university students. A positive relationship between extraversion, agreeableness, conscientiousness, and mental well-being, a negative relationship between neuroticism and mental well-being, no correlation between openness and mental well-being. Gender difference in mental well-being and mindful walking of students were also assessed, the result showed male students engages more in mindful walking than female students, there was no gender difference in mental well-being of university students.

DISCUSSION

This chapter consists of findings of the study in an elaborate way along with the studies that supports my findings.

Relationship between mental well-being and mindful walking

This section of the study presents the result of relationship between mindful walking and mental well-being in university students, the result show that there is a significant positive relationship between mindful walking and mental well-being of university students, which means if a student engages in mindful walking they tend to have healthier mental well-being. A research article by Hadulla R.M and colleagues assessing the reduction of mental well-being of students due to COVID pandemic found out that three of four students were unwell battling through severe depression. The importance of mindful walking could fit right here. Student's degrading mental well-being has become a serious issue, all articles and news online report about these issues frequently. BBC reports that out of 7200 students, half of them have a mental health issues. This study aims to tackle these issues through physical activity. Physical activity has proven to be very effective in improving mental well-being of an individual but the limitation here is not all students want to work out or run or hit the gym for that matter. World has become way too comfortable and students demand such comfort while physical activity as well. One most effective yet a very comfortable form of physical activity is mindful walking, a brisk walk of 10 minutes has also been proven to give mental benefits says Dan Brennan in the article published by WEBMD.

The finding of this study shows that there is a positive correlation between mindful walking and mental well-being is further supported by a pilot study done by Lu Shi et al., on participants that were physically inactive, intervention group was informed to walk one hour per week and control group was asked to increase their physical activity, result was that the intervention group showed a significant reduction of their stress level than the control group. Another factor that leads to mental ill-being of university students was their low self-esteem in terms of their body image, a study by Shweta Goswami and colleagues found that there is much dissatisfaction of body image among young women students this issue could also be tackled through mindful walking, as walking has benefits of weight loss.

Relationship between mental well-being and personality traits

This section shows the relationship between personality traits and mental well-being. Here the study assesses if personality trait of students influences the mental well-being of university students.

Extraversion:

It is a personality trait characterized by the tendency to be sociable, outgoing and tend to gain energy through social situation. The findings show extraversion has a positive correlation with mental well-being of university students ($p < 0.05$) which means students with this personality type tend to be mentally healthy. Extraversion is a broad personality type and they have the tendency to experience positive emotions, they are lively and active, since they engage more in social situations and talk about their feelings, they may have a healthier mental well-being.

A study by Khalek further supports the findings of this study, this study aimed to examine the trait extraversion and its association with mental health and a significant positive relationship between extraversion and mental health with the correlation of 0.589 ($p < 0.01$) was found.

Agreeableness:

It is a personality trait characterized by the tendency to be more kind, sympathetic and cooperative. The findings show agreeableness is positively correlated with mental well-being of university students, students who put others need before theirs, who finds joy in helping others and is more empathetic has an adequate sense of mental well-being have a higher mental well-being. Agreeableness is a core component of prosocial behavior, Charlotte and Berge did a qualitative study where they studied the relationship between prosocial behavior and mental health, prosocial categories like helping, doing chores, volunteering, giving are positively correlated with mental well-being hence an individual who scores high on agreeableness can have a higher sense of mental well-being.

To further support the findings, referring to Aisha Muhammad Abhdullahi study on personality trait and subjective well-being, she found that agreeableness is positively correlated with social well-being, emotional well-being happiness, satisfaction with life and happiness.

Conscientiousness:

The personality trait is characterized by the tendency to be goal oriented, organized and properly planned. The finding show conscientiousness is positively correlated with mental well-being. This is expected, students who are goal oriented and organized tend to have a direction of their life, they feel the sense of satisfaction on a daily basis, which then makes them less anxious about their career and academics hence better mental health.

To further support my findings, I referred to Katja Kokko et al., study on personality trait and psychological well-being where they assessed psychological well-being using Carol Ryff's 6 dimensions of mental well-being (self-acceptance, positive relationships with others, environmental mastery, autonomy, purpose in life, and personal growth) They found conscientiousness is significantly correlated with psychological and emotional well-being.

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Neuroticism:

It is a personality trait that has the tendency to experience negative emotions like anger, anxiety, irritability and depression. The findings of this study is that neuroticism has a negative correlation with mental well-being of students, which is logical and understandable since neuroticism is linked with such negative feelings a student who is highly neurotic will not be able to perform well academically, interpersonal relationship, career wise hence a negative relationship with mental well- being. According to Costa and McCrae study neuroticism is more strongly correlated with negative affect scale than with positive affect scale and balanced affect scale, an individual who scores high on neuroticism can also be temporarily depressed reports their study.

To further support these findings, Eliseo Chico study was referred to, study was done on Personality dimension and Subjective well-being on 368 participants. Neuroticism was significantly negatively associated with all dimensions of subjective well-being with -.43 on subjective well-being, -.32 on positive affect, -.66 on subjective well- being, -.70 on balance affect and positive relationship of .67 on negative affect.

Openness:

It is a trait that has the characteristics of being creative, intelligent and knowledgeable, has interest in new things and adventurous. The findings of my study is that the personality trait of openness has no relationship with mental well-being.

Which means a student who's creative and intelligent cannot mean that he/she will surely have a positive mental well-being. Interestingly these findings contradict with findings of Dr. Kananifar who found out the relationship between openness and mental health shows weak negative among international students and domestic students. Which could be because of the cultural differences Kananifar study was conducted in Malaysia whereas the participants to my study was from India and Nepal.

To further support these findings Abhdullahi study was referred to where findings show no relationship between openness and life satisfaction, which means a person open to experience and intelligent cannot always be satisfied with life. Openness trait deals with matters that does not add on to the components of mental well-being, being intelligent and creative cannot make one mentally healthy, hence my result shows no relationship

Table 3 shows, if there is gender differences in mental well-being and walking of the students.

Gender differences and mental well-being

Mental well-being refers to the state of psychological, social and emotional well- being. The findings of this study were that there is no specific genders difference in terms of mental well-being of university students. Interestingly this finding contradict all other findings done on gender differences and mental well-being of students. Miss Akhter has done a study in psychological well-being of students and gender difference. She did this study on 100 participants of 10th standard students where she found out there is significant difference in the psychological well-being among male and female students. The difference between my study and this once is that Akhter study was done on 10th standards students and my study on university students so this could be the reason for no significant difference for my study. Another study was done by Jeannie Perez on 588 college and university students that aimed to determine the gender differences of psychological well-being on Filipino students. She

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found a significant gender difference where female showed higher scores than men in psychological well-being.

A possible explanation of why the findings of this study is contradicting other findings could be that these findings were of those times when universities were open and mode of classes were offline. There would be the risk of abuse and violence from the environment for women that reduces their psychological well-being, but the current scenario is different and less stressful for students, the online mode of classes have made everything possible and relaxing which could be the reason why there is no gender difference in mental well-being of university students.

Mindful walking and gender differences

Among university student, the findings of this study say there is a significant gender difference in mindful walking among university students. Male students score higher than female students that shows male students tend to engage in mindful walking activity more than female students the possible explanation for such a difference could be the gender-based violence in public faced by women, like Eve teasing, harassment and bullying. Further, women students have been found to engage more into sedentary behavior than male students in a research study conducted by Wenning Jiang and colleagues.

To further support this findings the study by Ozdol et al., was referred to they did a study on the physical activity levels of university students on accordance to gender on 450 participants. They found male students walked more and had higher score on physical activity than female students.

Chapter summary

The discussion part of the study contains the elaborated discussion about the findings of the study, findings were that students who walk daily can have a healthy mental well-being, since mental health has become a major issue today, one-time effective way of managing it is mindful walking. Time effective because students have a busy schedule. Another factor that influences mental well-being of students that the findings talk about is personality traits, different personality traits have different take on mental well-being, a student who scores high on extraversion, conscientiousness and agreeableness has a sound mental well-being whereas student who scores high on neuroticism and openness will have to put in extra effort to be mentally healthy. The findings also show male students engaged more in walking than female, no gender difference was found for mental well-being among students.

CONCLUSION

The aim of this research was to understand the relationship between mindful walking, personality traits and mental well-being, and the gender differences in mental well-being and mindful walking among university students. Based on the results obtained from this study it can be concluded that mindful walking can affect the mental well-being of university students, students who engage in regular mindful walking tend to have a better well-being. This study also shows a significant correlation between mental well-being and personality traits of students, conscientiousness, extraversion and agreeableness show a perfect positive correlation, neuroticism show a negative correlation however openness shows no correlation. This study also obtains a specific gender difference in mindful walking, male student showed higher interest in engaging in mindful walking than female students but shows no significant gender difference in mental well-being of the university students.

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Optimal mental well-being has great benefits for students, they can focus on their academics well, they can concentrate on the present and not worry about the future, they will have a clearer perspective of their life hence lesser anxiety, improvement in everyday mood, strong interpersonal, social relationship, and increased self-esteem all this could be attained through a simple mindful walking daily.

As with personality traits, individual higher on neuroticism could focus more on physical activity altogether, they need to engage more into mindful walking which will help them attain greater mental well-being. Since there was no significant gender difference found in the mental well-being of university students, we can say both gender should equally engage in mindful walking at least once a day since there are no negative effects of mindful walking.

Limitations of the study

There are some limitations to this study that could be assessed with future research, firstly this study was conducted during pandemic, and the students were not attending physical classes but online classes. Secondly, although a validated scale was used for assessing personality trait it was a brief version of personality inventory, the longer version of this scale could be used for more results that are valid. Third, although the findings were as expected, one could use more domains for assessing mindful walking for example steps per day, how many times a day and since how long.

Implications of the study

The findings of this study could be used to tackle one of the significant issue in today's world, this study talks about mental well-being of students and there is always some news concerning mental health, In India 8.2% of students commit suicide this is due to the lack of proper measures taken by the student, students are too much pressured with works they fail to take care of their mental and physical health, hence this study tried to find a short way of increasing mental well-being of students which is via mindful walking. A mere walk of 10 minutes could bring many health benefits mentally and physically. Another important thing this study finds out that can be beneficial to the society is individual differences and its influence on mental well-being, education system could take different measures for different personality traits and help them increase their mental well-being that would overall benefit the future generation of our country. Hence the findings of this study could help students attain higher level of mental well-being which therefore also decreases the risk of other chronic mental and physical issues.

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Conflict of Interest

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