



HORIZON

VOLUME 1, ISSUE 10, OCTOBER 2023

the
LIFESTYLE, PRODUCTIVITY, CULTURE & SO MUCH MORE.....

- Mental health is a universal human right
- Everything old is new again; from the cave to the clinic
- Cultivating self esteem and self confidence: a worthy head start
- PCOS and PCOD

DEAN'S DESK



Dear students, we at Grodno State Medical University strive to provide students with top-quality education, but that's not it. GRSMU is also a hub for Scientific, Cultural, and Sports related activities. We wholeheartedly acknowledge that International students are an integral part of our university, and we take immense pride in that. Grodno State Medical University is glad to work with students from different countries and provide them with a stage to represent their nation and culture.



**DEAN OF FACULTY OF INTERNATIONAL STUDENTS
DR. ALEKSANDER ALEKSANDEROVICH STENKO**

GRSMU celebrates its uniqueness in diversity, for in its true essence our university is a junction where students from various backgrounds and cultures come together as one big family. GRSMU has always encouraged students to explore further and beyond in every field they try their hands at. I hope that you like the novel concept of 'The Horizon' - a magazine that serves as a platform for the students to voice their opinions, share their takes and present their points of view.

'**The Horizon**' is a medium of extended communication where we can learn a lot from one another. I highly appreciate this initiative and personally support it. I look forward to reading the interesting blogs written by you.

WELCOME TO THE HORIZON



“We all have fascinating stories to share!” For the longest time, I have had this idea of starting a magazine. But not just any conventional magazine, one that shall serve as a platform for the students and alumni of International faculty at Grodno State Medical University to share their stories. A platform that enables students to share their takes on various curricular and extracurricular aspects of medicine. Thus, the idea of **‘The Horizon’**, came to life.



**DR. MEHUL H. SADADIWALA, FOUNDER,
CLASS OF 2023**

‘The Horizon’ will be a creative intersection where students can freely give commentaries about Lifestyle, Culture, Productivity tips, and more. Throughout the years, many individuals at GrSMU have inculcated valuable skills and gained experience with a fair share of success in various disciplines. Maybe you run a successful YouTube channel or an educational website, or maybe you are a successful student-researcher or an educator, and so much more. 'The Horizon' enables students to share their personal experiences. The insights that you share will encourage other students to take further strides and explore future possibilities.

‘The Horizon’ is supported directly by the Dean of the International Faculty, and it will operate under the supervision of the International Students' Scientific Committee. Students from 1st to 6th year, and even graduates, can submit their blogs to this magazine. The articles should directly or indirectly revolve around student life to share knowledge and the collective growth of students.

For inquiries and submissions.

📷 - grsmu_science

✉ - grsmuscience4life@gmail.com, socialmedia3490051@gmail.com

EDITOR'S DESK



“ Reading scientific articles is an integral part of the scientific process, contributing to the advancement of knowledge, informed decision-making, and the development of critical thinking skills. It is a fundamental practice for researchers, educators, medical students and anyone interested in the progress of science and technology.



DR. FATHIMATH NAUFA
EDITOR-IN-CHIEF (OCT-DEC, 2023)

I deeply value the contributions of our journal's authors and readers, and I am eager to facilitate the dissemination of the work to a wider audience. Your expertise and dedication are at the heart of our journal's success, and I am eager to support and promote your work. I am committed to fostering an inclusive environment where all articles, regardless of background, have the opportunity to be contributed and be heard.

”



CHAMATHI DE SILVA,
EDITOR-IN-CHIEF (OCT-DEC, 2023)

“

Reading lets us embark on journeys we can never reach in real life. It allows us to gain knowledge of incalculable value. Knowledge is the ultimate wealth which allows you to reach indestructible heights. Learning new things everyday will allow us to shape our life as we see is best.

I am honoured to introduce myself as the Editor-in-Chief of Horizon for Oct-Dec 2023. It is a great privilege to read all the blogs that will be published in Horizon and is a great pleasure to see the works of the fellow students and graduates.

I would like to invite all to read the blogs of your colleagues and share your own to help enrich the knowledge of each other.

”

And a message to our dearest readers, we would like to invite you all, students and alumni, to share with us the blogs that directly or indirectly revolve around student life, to share knowledge and experiences that has had an impact on your growth within and outside the bounds of our university.

Concluding, let us alter the limitations of our individual efforts and collectively explore limitless Horizons.

Cover Credits

Aminath Izuvath Ismail

For enquiries and submissions.

📧 - grsmu_science

✉ - grsmuscience4life@gmail.com, socialmedia3490051@gmail.com

MENTAL HEALTH IS A UNIVERSAL HUMAN RIGHT

Commemorating the day of mental health day on October 10th , this blog tells us why mental health is important and some common signs that someone might be struggling and how they can obtain help.

WRITTEN BY
YASHMITHA UTHYASHANKAR
CLASS OF 2025

Human rights are rights we have simply because we exist as human beings. It's a necessity for survival, happiness, health and to be a contributing part of society. To obtain this along with many other things we also need a mind free of any sort of emotional or psychological problems. A mind that allows you to make healthy choices, to be social and to think and to act and to feel human. We need mental health.

Today, the severity of mental disorders and the need for mental health is still not considered important to many people. Even when it is fatal, it doesn't lead to change, it leads to conspiracy, crude remarks and disrespect. Those who struggle may struggle for months, even years, but the effect of its consequences on society is short lived. This ignorance only helps with raising the statistics of those affected and the inevitable fatalities if help is not provided.

There's a plethora of mental disorders and the mental disorders we talk about everyday such as anxiety, depression, OCD and so on. These are more complex that we describe it to be. "To be depressed is to be sad", "I get scared during my exams I think I have anxiety", "I'm a very clean person, I like everything a certain way, I think I have OCD " .

These are phrases we've either told or heard someone say. While it may seem harmless, to those affected it trivializes their disease, they assume that what they go through will never be understood and it prevents them from seeking help. Sadness, anger, nervousness, these are normal human emotions, but to feel such a way every single day, with an unapparent reason, in an abnormal and uncontrollable manner is a sign of poor mental health.

The present generation's idea of mental health comes from the media's portrayal of it. The overly dramatized version that is shown for viewership purposes just adds on to the stereotypes.

We've all heard the phrase, "get help?" but what is help? When you realize that something may be wrong, talk to someone, be it your friend or your family. There will always be someone to provide a helping hand. Struggling alone and not knowing what to do is scary on its own, but bottling it all up, is worse.

If you feel like you cannot talk to someone you know, talk to a professional, a therapist assures confidentiality and you can always choose a therapist to fit your liking.

Asking for help is normal, we cannot do everything alone, it is in our nature as humans to work together. Judgement will always be present but that shouldn't stop us from getting the aid we deserve.

Self-care is something everyone should know about. A healthy mind is as important as a healthy body. Self-care is an individualized concept; it is unique to each person. It is something that brings you happiness, makes you relaxed and feel better about yourself. It can range from hobbies such as cooking, reading, painting to exercise, walking and etc. Practicing self-care teaches you to give importance to yourself and to find things that you're good at and it helps you to love yourself.

How can you help others? Always look out for your friends and family. If they seem like they're struggling or if you notice any change in them, check on them. Something as small as this goes a long way.

Listen to them, sometimes we just need a person to vent to, to make us feel like we are being heard. Support them and help them get the help they need. Learn more about different mental disorders, how you can identify them and how you can help. The only way you can truly help someone is if you understand them.

Be empathetic, realize that what they're going through is something so much more and help them get the help they deserve. Remember, it takes a lot of courage to open up.

As medical students and future doctors, we need to know the importance of mental health, how we can provide help, how we can destigmatize it and how we can raise more awareness on the topic.

As people, we should know that mental health is a universal human right.

To learn more about mental health and mental disorders, or to know about how you can obtain help, check our Instagram page mind over matter.

References:

1. <https://www.samhsa.gov/mental-health>
2. <https://www.circlehealthgroup.co.uk/health-matters/health-and-wellbeing/what-is-self-care-and-why-is-it-important>

“EVERYTHING OLD IS NEW AGAIN” FROM THE CAVE TO THE CLINIC

Halotherapy -An Ancient Natural Ally in the Management of Asthma. Halotherapy proved its benefits in asthma diagnosis, treatment, and prevention and may represent a reliable therapeutic addition to the allopathic treatment, due to its ecological and environment-friendly nature, in order to prevent or prolong the time to exacerbations in patients with asthma .

WRITTEN BY
LALWANI URVISHA
CLASS OF 2027



Modern medicine's growing production is now recognized as a new cause of environmental contamination.

The scientific community is interested in creating alternative, environmentally friendly treatments for chronic respiratory diseases like asthma.

An Old-Fashioned Natural aid in the Treatment of Asthma is Halotherapy. Halotherapy has demonstrated its benefits in the diagnosis, treatment, and prevention of asthma and may be a trustworthy therapeutic supplement to allopathic medicine.

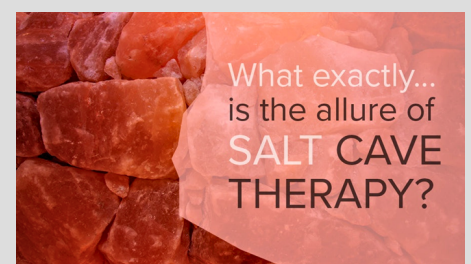
People look for such alternatives because of:

- (1) Being unhappy with conventional treatment in some way,
- (2) they believe alternative treatments give them personal autonomy and control over their health care, and
- (3) these alternatives are thought to be more in line with the patient's values, worldview, or beliefs about the nature and significance of health and illness.

HALOTHERAPY: WHAT IS IT?

The therapeutic environment of halotherapy, which is an alternative medical technique that involves breathing within a cave and is sometimes referred to as speleotherapy when carried out in caves, is comparable to that of a naturally occurring salt cave.

To improve the respiratory health-related quality of life, naturally crystallized salt is inhaled through aerosols or directly from the environment.



Halotherapy may provide benefits beyond the placebo effect for persons with obstructive lung illnesses, according to the American Lung Association. He hypothesizes that salt vapor inhaled by patients would thin down mucus, assisting them in exhaling sputum. Thus, it can be applied to the treatment of respiratory conditions as cough, bronchitis, and asthma

HISTORY OF HALOTHERAPY

Halotherapy has been practiced for ages in a variety of forms. In salt rooms resembling spas, halotherapy is frequently practiced

The first recorded reference of spa resorts is from Poland in the 12th century, where people were advised to take mineral baths. Halotherapy's modern history begins in 1843, when a Polish doctor by the name of Feliks Boczkowski popularized the concept after seeing that salt mine employees, in contrast to that of other miners, did not experience respiratory or lung issues.

Since the 1950s, asthma treatment facilities have been built in areas with natural karst caves, salt tunnels and mines, most notably in Slovakia, Romania, Ukraine, and Poland.

FORMS OF HALOTHERAPY

It includes:

- Saline solution inhalations
- Dry salt aerosol inhalations
- Irrigation and lavage
- Saline and brine baths
- Crenotherapy.

TYPES OF HALOTHERAPY

Most salt therapy is performed in salt chambers, which can be active, passive, dry, or moist /wet

• An Active salt chamber:- In this space a device called a halogenerator is placed, to which salt is added. The machinery disintegrates the salt into minute particles that are circulated throughout the space.

• A passive salt chamber:- Several kinds of salts, including Himalayan salt, are present throughout the space. With controlled humidity and temperature, it resembles a salt cave.

• Salt therapy with dry air:-This form is referred to as halotherapy. With the aid of a halogenerator, it is carried out in salt rooms. This enables the tiny, dry salt granules to disperse in the air and then it enters in lungs and skin.

• Moist salt treatment:- This entails drinking salty water, gargling with it, or inhaling salty water through nose. It also requires a steam bath in salty water rich with minerals.



HEALTH BENEFITS OF HALOTHERAPY

Halotherapy has been shown in studies to help with allergies, skin issues, and respiratory ailments.

It also acts as:

- Mucoactive
- Antibacterial
- Anti-inflammatory
- Immunity-boosting
- Anti-allergic

Additionally, COVID-19-related breathing issues can be treated with halotherapy, which will help you breathe better and get more oxygen into your blood.

Halotherapy can be utilized to cure a variety of conditions, according to research, because of its beneficial features:

- Lung infection
- Inflammation of throat
- Chronic obstructive pulmonary disease
- Smoking-related breathing problems
- Respiratory allergies
- Asthma
- Bronchitis
- Cold or cough
- Pneumonia
- Sinusitis
- Rhinitis
- Tonsillitis
- Cystic fibrosis

The minuscule salt flakes used in procedure can also aid in skin cell renewal and shield it from aging and infection. This therapy is effective in treating:

- Acne and rosacea
- Skin allergies
- Rash
- Eczema
- Psoriasis.

- Dermatitis.
- Fungal infections.

RISKS OF HALOTHERAPY

As nasal passages are clearing out, which could cause coughing and increased mucus production. There can be some adverse effects of halotherapy. You may sporadically get pink eye, conjunctivitis, or skin allergies.

Halotherapy must be avoided if following conditions are present:

- Hyperthyroidism
- Hypertension
- Tuberculosis
- Heart problems
- Respiratory failure
- Blood disorders
- Infectious diseases
- Fever
- Open wounds
- Malignant tumors
- Claustrophobia

CONCLUSION

Since halotherapy has demonstrated good efficacy and safety, it is desirable to combine it with commonly established treatment protocols in clinical settings to lower the drug burden, including the requirement for decongestants. Halotherapy also aids in the early restoration of the nasal cavity's functional status.



References:

1. <https://pubmed.ncbi.nlm.nih.gov/34828649/>
2. <https://www.webmd.com/balance/what-is-halotherapy>
3. <https://www.medicalnewstoday.com/articles/halotherapy>

CULTIVATING SELF-ESTEEM AND SELF-CONFIDENCE: A WORTH HEAD START

Building a good self-esteem and self-confidence are important to live a good life.



WRITTEN BY
KHUSHALI HARKHANI
CLASS OF 2024

What is the Meaning of Self-Esteem and Self Confidence and how do these qualities influence each other?

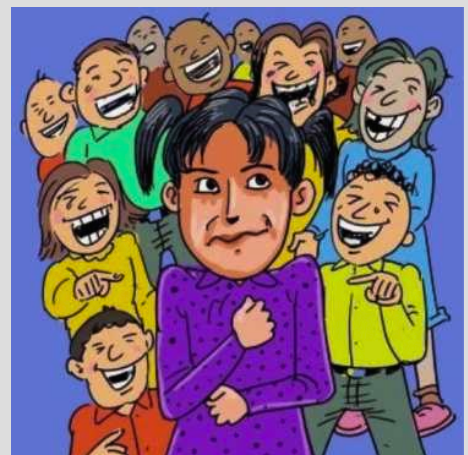
Self-esteem is generally a person's overall sense of how worthy he counts himself to be. We can consider it as a measure of how much a person likes himself or how a person perceives himself.

Whereas Self-confidence is believing in yourself and trusting yourself that you can get through any situation that comes towards you and it can change according to outer environmental experiences

Building a good self-esteem is necessary to have the self-confidence that helps you with life's challenges so that you participate in things you find enjoyable and rewarding with a better approach.

How does having low self-esteem and low self-confidence affect you in daily life?

When you have low self-esteem or low self-confidence, you feel that when you come across one negative or disappointing experience, it can start making you think you're worthless or you're good for nothing which makes you more scared for trying again as you don't believe in your abilities of overcoming it and start a self-perpetuating cycle of negative pep talks stating how one of a kind loser you are thus leading to disappointing outcomes.



For example you're learning a new subject, if you're lacking self-esteem and while giving a test you receive low marks you may start thinking, "I'm stupid and I can't get anything right" making you want to stop learning already.

Now if you have healthy self-esteem and receive a low mark, you may think, "Hmmm, I should've studied better and should learn from my mistakes to do better next time."

Thus you will be affected by the result but you'll take it in a positive way and won't start hating yourself for it.

Having low self confidence results in

- Shyness
- Communication difficulties about how one feels
- Social anxiety
- Being submissive to others
- Feeling inferior
- Not able to take a stand for oneself

Low self-esteem causes you to develop a strong internal critic that expresses itself loudly when you're feeling anxious, overwhelmed or judged by others causing you to:

- Have negative self talks
- Ignore your strengths and abilities
- Not accepting your mistakes as a lesson
- Being hard on yourself
- Expect that only failures will occur
- Avoiding challenges with the fear of being judged
- Think that you're undeserving of love and fun in your life

This can affect your life and your overall performance in university also it can meddle in your relationships and make it difficult to rely on people or yourself.

So cultivating self esteem and self confidence is needed to overcome the negative thoughts and negative pep talks you give yourself and this is how you must try to build them:

PRACTICING SELF-ACCEPTANCE

Becoming more accepting of yourself helps you to feel confident in your own skin in any situation.

Everyone tends to make mistakes it's inevitable. Thus, by practising self-acceptance you can:

- Make mistakes and not criticize yourself instead learn from it
- Identify ways on how you can solve the issues differently
- Be critical of your behaviour and try to change it without being critical of yourself
- You can let people appreciate you genuinely and believe the compliments for real
- You start loving yourself and seeing you for who you really are behind the criticism
- You enjoy life more have more fun and start feeling worthy.

KNOW YOUR TRIGGERS

Start journaling of experiences or thoughts that affect on your self-confidence or self-esteem. Identify your strengths, abilities and accomplishments. Be honest about what makes you a better person and what qualities you should improve .

Do an introspection of what behaviour you're sensitive to and what is the cause of it and how you'll overcome it.

LEARN TO BE MORE POSITIVE

Direct your thoughts in a positive direction and not take the negative self talks and excessive criticism into account.

Instead build strong belief in your morals and yourself.

BE MORE AWARE OF YOUR OWN NEEDS

Don't feel bad about putting your needs before others. Practice saying "no" when you're not comfortable doing the told work.

Make room for guilt free actions and allowing yourself to ask for what you actually need.

SURROUND YOURSELF WITH GOOD COMPANY

Spend time with people who see you as you are and accept you just the way you are. And instead of feeling inferior to them be inspired by them or ask for help. Communicate freely about how you feel and how they make you feel.

Don't be surrounded by those who criticize you all the time .

CELEBRATE YOURSELF

Do self care. Be more kind towards yourself. Be proud of your accomplishments. Start by seeing good in you. Write down the good qualities you have and read it everyday.

More importantly fill your cup with love, light and peace.

Thus cultivating these qualities and values may help you get a good head start in any field you approach making your life easy by helping you with your mental and social wellbeing and leading a peaceful life.

References:

1. my.uq.edu.au (the University of Queensland)
2. psychologytoday.com
3. positivepsychology.com

PCOS AND PCOD

This blog addresses about the main differences between pcod and pcos , the reason for its increase in 20th century and daily life routine to prevent pcos .

WRITTEN BY
PALLAVI VIVEKANAND KOLHAR
CLASS OF 2025

What is PCOS ?

Polycystic ovary syndrome (PCOS) is a hormonal condition which basically affects about 1 in 10 women. It is associated with elevated levels of two hormones in the body – insulin and androgens – which cause symptoms such as oligomenorrhea, hirsutism, acne, and weight gain.

For a diagnosis of PCOS, two of the following criteria must be met: irregular ovulation, which is usually indicated by lack of a cycle, irregular menstrual cycle . signs of elevated androgen levels or a CBC confirming having increased level and having multiple small cysts on the ovaries.

What are polycystic ovaries?

Polycystic ovaries have several features which include many growth-arrested follicles, thickened ovarian capsule (tunica albuginea) and an more amount of ovarian cortex with increase collagen content, having a more fibrous composition.



THE DIFFERENCE BETWEEN PCOD AND PCOS

In PCOD - The ovaries start releasing immature eggs that lead to hormonal disturbances and swollen ovaries

In PCOS - Ovaries produce more androgens which makes eggs become cysts and these won't be released like PCOD but they build in ovaries.

CAUSES OF PCOS

Early studies of PCOS found familial linkage and subsequent twin studies identified a sizeable genetic component to the heritability of PCOS. GWAS and microsatellite linkage studies have identified a number of loci associated with PCOS. The genes closest to loci identified as predisposing to PCOS include FBN3 . Genetic cause of PCOS has triggered into discussion about how genes lead to reduced fertility .



FIRST CASE OF PCOS

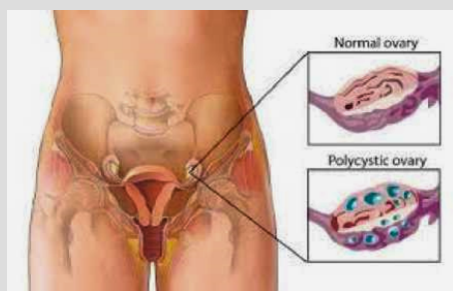
Stein and Leventhal were the first investigators of PCOS, Italian scientists who mentioned about a married, infertile woman with lustrous ovaries with creamy white surface, and with the size of pigeon eggs, which is now accepted that it was multifactorial, genetic disease; Insulin resistance has been noted often among women with PCOS, especially in those with hyperandrogenism.

Now there is major evidence that cardiovascular disease risk factors and issues within carbohydrate metabolism are all elevated in patients with PCOS compared with the healthy population.

The majority of women with PCOS have increased androgen levels due to the increased number of antral follicles containing thecal cells that secrete more androgens. Therefore shows symptoms of excess androgen :-

Acne, hirsutism, central adiposity, menstrual irregularity, anovulatory infertility, miscarriage but also have increased risk of being obese, insulin resistance and of type 2 diabetes, non-alcoholic fatty liver disease, dyslipidaemia and depression.

Women with PCOS have at least a four-fold increased risk of type 2 diabetes, even without taking into account of their additional predisposition risk factor to becoming obese .



What causes a lean woman to develop PCOS?

- Abnormal fat and muscle ratio (even if they are lean they have less muscle but more fat in body)
- Increase central or visceral fat (even with normal /low BMI)
- Excess fat on lower abdominal region and hips are predisposing risk factors for PCOS .

Family History

Females whose sister or mother has PCOS, or type 2 diabetes are more likely to develop PCOS..

Insulin Resistance

A major part of the problem is insulin resistance which is the hallmark condition of the modern age, affecting 1 in 4 adults.

Insulin resistance is the result of too much sugar in our diet, as well as smoking, obesity, trans fat, stress, and environmental toxins.

Insulin resistance is estimated to affect between 50-70% of PCOS women and is generally cleared to be a major contributing cause of the condition. Excess insulin causes multiple cystic ovaries because this impairs ovulation and causing the ovaries to make more testosterone instead of estrogen



Lifestyle can have a major impact on insulin resistance, especially if a woman is obese because of an unhealthy diet and lack of exercise.

Losing weight will mostly help improve symptoms regardless of the cause of insulin resistance.

PCOS CAUSE OVERWEIGHT OR BEING OBESE CAUSE PCOS?

It is complicated, and is not well understood. Although being obese is associated with PCOS, women of normal weight could have PCOS, and some overweight women don't.

These measures can reduce the impact of PCOS on our health and lifestyle.

- If a women is overweight, losing the extra fat will help improve the lipid profile and blood sugar control and this may even restore normal menstrual cycles and normal fertility.
- If a women has diabetes or pre diabetic , the healthcare provider must prescribe a medication such as metformin to improve the insulin sensitivity resistance.
- have conversations with the healthcare provider about you taking birth control pills to balance hormones and regulate normal menstrual cycle. Oral contraceptives can help slow excess hirsutism, improve acne, and decrease major cancer risk.
- If a women is having trouble in conceiving, visit a fertility specialist. You may get benefit from procedures to induce ovulation and help you get conceive.

References:

1. <https://doi.org/10.1016/j.mehy.2019.01.019>
2. [10.1089/obe.2007.0019](https://doi.org/10.1089/obe.2007.0019)
3. <https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/genetics>

Our Editors

- 1 Mehul Hitesh Sadadiwala (Jan-Mar, 2023)
- 2 Anjelo Leard (Apr-Jun, 2023)
- 2 Krisha K. Gandhi (Apr-Jun, 2023)
- 3 Zaakiya Ganem Zamzam (Jul-Sep, 2023)
- 3 Hardik Bakulkumar Mevawala (Jul-Sep, 2023)
- 4 J.N.A Chamathi Dewanga De Silva (Oct-Dec, 2023)
- 4 Fathimath Naufa (Oct-Dec, 2023)

Cover Credits

Aminath Izuvath Ismail

Photo credits