

REVERBERATION

OCTOBER-DECEMBER 2024

WHERE NURSING MEETS PROGRESS





FROM PRINCIPAL'S DESK

Dear Readers,

It is my profound privilege to share this message for our newsletter, which serves as a platform to celebrate the achievements, aspirations, and innovations of Chitkara University College of Nursing, Chitkara University, Himachal Pradesh. Nursing is far more than a profession- it is a noble calling that seamlessly integrates science and compassion to enhance human health and wellbeing.

At our institution, we are dedicated to cultivating proficient professionals who will drive progress in healthcare, research, and community service. Through comprehensive academic programs, practical training, and an unwavering commitment to excellence, we strive to equip our students to navigate the ever-evolving challenges of the health care setting with confidence and expertise.

This newsletter encapsulates our journey-showcasing the relentless efforts of our students, faculty, and staff. Whether it is through groundbreaking research, impactful community outreach initiatives, academic achievements, or extracurricular successes, every milestone reflects our commitment to fostering innovation, collaboration, and holistic development.

As we look to the future, let us remain focused on pursuing excellence, embracing new opportunities, and staying true to our mission of making significant contributions to the field of nursing. I encourage everyone to actively participate in the dynamic life of our college and take pride in being part of a community that values learning, growth, and service to society.



ROLE PLAY

10-10-2024

WORLD MENTAL HEALTH DAY

In celebration of World Mental Health Day, fifth semester B.Sc. Nursing students, collaborating with Dr. Y.S. Parmar Govt. Medical College and Hospital, Nahan, organised a role-play with the subject 2024: "It is Time to Prioritise Mental Health in the Workplace." The event's main topics were psychological counselling, stress management techniques, and stress evaluation. Some important lessons learnt were:

- ☆ Avoid multitasking
- ☆ Spend quality time with family
- ☆ Get restful sleep
- ☆ Practice pranayama, yoga, and exercise
- ☆ Separate professional and personal life
- **☆** Practice mindfulness
- ☆ Keep tasks short and clear
- ☆ Be polite, honest, and empathic

The role-play activity promoted SDG 3, SDG 4, and NEP's multidisciplinary education, enhancing skills, social skills, and problem-solving abilities. The event raised awareness about mental health and workplace stress reduction strategies, benefiting medical professionals, patients, and caregivers.

Some Glimpses of role play







WORKSHOP

24-10-2024

"ECO EMPOWERMENT: REDUCING PLASTIC IMPACT THROUGH SUSTAINABLE INNOVATIONS"

Chitkara University College of Nursing hosted a one-day International Workshop titled " Eco Empowerment: Reducing Plastic Impact through Sustainable Innovations," promoting SDGs 3, 4 & 12.

Professor Neil Angelo S. Abreo from Mapua Malayan Colleges, Philippines, discussed the environmental and health risks of microplastics, explaining how they accumulate in the body and threaten public health and biodiversity. He also highlighted the use of underwater drones with AI technology to detect plastic pollution, stressing the need for global research and collaborative action.

Further, participants discussed reduction strategies and emphasized sustainable living and waste management.

The workshop concluded with a call to reduce plastic usage at all levels from individuals to global communities & underscored that a multidisciplinary approach involving education, policy, innovation, and community action is essential to combat the plastic pollution crisis.







EXPERT SESSION

23rd-24th October 2024

"Breaking the Chain: Innovative Strategies for Infection Control and Safety in Hospitals"

Chitkara University College of Nursing, Himachal Pradesh in collaboration with IIC and Centre of excellence for sustainability organized an expert session entitled "Breaking the Chain: Innovative Strategies for Infection Control and Safety in Hospitals" at Paras Hospitals, Panchkula.

Ms. Kamal, Infection Control Nurse at Paras Hospital, led a session on innovative infection control strategies in hospitals. The objective was to educate students on effective infection control measures and innovative tactics to reduce infection risks. Ms. Kamal addressed the rising challenges in healthcare environments and the importance of effective infection control measures. She highlighted innovative approaches, including infection surveillance technologies with AI-powered analytics, Internet of Things (IoT) technology for environmental monitoring, and sensors with real-time feedback for staff hand hygiene compliance. The Ecolab hand hygiene compliance monitoring system was featured as a tool for accurate tracking and accountability

Group picture of the event





ROLE PLAY 28-10-2024

Healthy Bones Healthy Life: Navigating Osteoporosis Prevention

Keeping the idea "Osteoporosis doesn't have to be a silent disease, with awareness, prevention and care one can strengthen the bones" in mind, Chitkara University College of Nursing organized a mass communication on Healthy Bones Healthy Life: Navigating Osteoporosis Prevention at Paras Hospital Panchkula. The main aim of this event is to educate individuals about osteoporosis, its risk factors, promote early detection and treatment and encourage community engagement in activities that support bone health. This session would help to achieve SDG-3 (Good Health and well-being), SDG-4 (Quality Education), SDG-9 (Industry, Innovation, and Infrastructure) and NEP-1 (Multidisciplinary and Holistic Education).

Students of B.Sc. Nursing 3rd semester performed a mass communication at Paras Hospital, Panchkula on osteoporosis to aware the public. They presented a role play at OPD area for patients and their attendants showing some myths and realities regarding bone health and some signs of osteoporosis. At the end of the play students educated the public regarding osteoporosis, factors that are responsible for causing osteoporosis. Students further explained the signs and symptoms of osteoporosis that can help the public to identify the condition and approach the hospital setting for evaluations.







DONATION

26-10-2024

Donation of Neonatalie newborn simulator to Dr. Y.S. Parmar Government Medical College and Hospital, Nahan

Chitkara University, Himachal Pradesh, generously bestowed a Neonatalie newborn simulator to Dr. Y.S. Parmar Government Medical College and Hospital, Nahan, as part of its commitment to corporate social responsibility (CSR). This advanced simulator aims to enhance the quality of medical education, improve the practical skills of healthcare professionals in neonatal care, and reduce potential errors.

Dr. Amitabh Jain, Medical Superintendent of YSPMCH, along with Dr. Surjeet, HOD of the Pediatrics Department, and Ms. Asha, Nursing Superintendent, expressed deep appreciation for this contribution and acknowledged the university's dedication to fostering educational excellence in healthcare.







EDUCATIONAL VISIT

13-11-2024

GAINING INSIGHTS

Chitkara University College of Nursing, Himachal Pradesh, organized an educational visit titled Gaining Insights: Educational Visit to an NGO Supporting Mothers and Children, for B.Sc. Nursing 7th semester students. The visit aimed to provide in-depth knowledge about the operations, fundraising efforts, and challenges faced by NGOs, particularly in achieving SDG-4. The students visited the Institute for Research & Growth (IRG) in Baddi, Himachal Pradesh.

Mr. Baljinder Singh, the Program Officer, explained the NGO's operations, including door-to-door services (since 2012) for antenatal, lactating mothers, children, and the elderly; mobile health clinics (since 2017) serving remote areas such as Baddi, Nalagarh, and Barotiwala; and a Reproductive and Child Health (RCH) center (established in 2020) providing maternal and child healthcare, including immunization and Anganwadi assessments for children under six (started in 2024).

The NGO is funded by the Glenmark Foundation, which provides Rs. 40 lakhs annually. Challenges discussed included religious resistance to immunization, vaccine shortages, weather conditions, and technical issues. The visit successfully met its educational objectives, and as a follow-up, Chitkara University College of Nursing, in collaboration with the Red Ribbon Club, plans to organize a rally and Nukkad Natak on World

NGO VISIT



AIDS Day in partnership with NGO IRG and the Glenmark Foundation.





ANGANWADI HEALTH CAMP

14-11-2024

"EMPOWERING CHILD HEALTH"

Chitkara University College of Nursing, HP organized an Anganwadi health camp entitled Empowering Child Health: Growth monitoring for Children under six at Baddi, HP by B.Sc. Nursing 7th semester students. In a groundbreaking initiative, a public health camp was organized to immerse students in real-world experiences, monitoring child growth and development under National programs RBSK & ICDS, aligning with SDG-3. Through hands-on training, students assessed the growth of under-six children, identified malnourished children, and educated Anganwadi workers on crucial health indicators. Moreover, interactive sessions with children focused on essential hygiene practices and play therapy, fostering cognitive, social, and motor skill development. By bridging the gap between theory and practice, this camp empowered nursing students to become compassionate, skilled, and community-driven healthcare leaders.







AWARENESS PINNING CAMPAIGN

30-11-2024

HIV/AIDS AWARENESS PINNING CAMPAIGN

An HIV/AIDS Awareness Pinning Campaign was initiated by Chitkara University College of Nursing and Red Ribbon Club at Barotiwala rural community, HP with the Theme "Take the Right Path." The primary aim is to engage communities and individuals in the fight against HIV/AIDS there by promoting a collective response to the epidemic.

The Community members available at CHC, Senior Secondary School, Anganwadi, Panchayat Ghar, Shops, Houses, bystanders, and Pedestrians were encouraged to wear HIV/AIDS awareness pins, which were prepared and distributed by B.Sc. Nursing VII Semester students that served as both a powerful visual symbol and a practical tool to initiate conversations and dispel myths surrounding the disease. Along with the pins, posters, and slogans with clear and concise information about HIV transmission routes, preventive measures, the importance of regular testing, safe sexual practices, stigma reduction and measures to reduce discrimination associated with the disease were shared.

This Campaign was aligned with SDG-3 and has proven to be a valuable and impactful initiative by engaging directly with community members and raising awareness, promoting health, and empowering individuals to take charge of their well-being, ultimately contributing to better health outcomes and a more inclusive society.







EVENT

30-11-2024

"AURA: AWAKENING UNIQUE RADIANT ABILITIES -INNOVATIVE MIND CARE"

Chitkara university college of nursing, Himachal Pradesh organized an event titled "aura: awakening unique radiant abilities - innovative mind care" in collaboration with the center of excellence for sustainability and Prabh Aasra, Kharar. The event aimed to promote inclusion, raise awareness about mental health and wellness, and provide tools and resources to support the well-being of individuals with mental disabilities. Aligned with the un's sustainable development goals (SDGS) 3, 4, and 10, the event also focused on creating a community that prioritizes mental health.

A key highlight of the event was the active participation of patients in yoga, physical exercises, and brainstorming activities, all designed to foster holistic awareness of the importance of maintaining physical and mental health. The event also revitalized the patients' interest in engaging with activities led by the b.sc. Nursing 5th-semester students, staff, and faculty members. Additionally, the students contributed by donating food and clothing to Prabh Aasra, benefiting the mentally disabled individuals residing at Prabh Aasra, Kharar







SESSION

03-12-2024

"AURA: Awakening Unique Radiant Abilities - Innovative Mind Care."

Chitkara University College of Nursing, Himachal Pradesh, in collaboration with the Centre of Excellence for Sustainability and Prabh Aasra (Home for Destitute), Kharar, organized a session on "AURA: Awakening Unique Radiant Abilities - Innovative Mind Care." The event aimed to promote inclusion, raise awareness about mental health and wellness, and provide essential resources for individuals with mental disabilities. Led by the 5th-semester B.Sc. Nursing students, the session featured patient participation in yoga, physical exercises, and brainstorming activities, fostering a holistic approach to well-being. Additionally, the students donated food and clothing to Prabh Aasra, supporting residents with mental disabilities. The session aligned with Sustainable Development Goals 3 (Good Health and Well-being), 4 (Quality

The session aligned with Sustainable Development Goals 3 (Good Health and Well-being), 4 (Quality Education), and 10 (Reduced Inequality), with a focus on creating a community that prioritises mental health.







CAMP

December 13-15, 2024

LIFESTYLE DISEASES SCREENING

. Chitkara University, Himachal Pradesh, reinforced its dedication to social responsibility by hosting a Lifestyle Diseases Screening Camp at the District-Level Red Cross Fair. Organized by the Red Cross Society of Himachal Pradesh, the three-day event took place in Nalagarh from December 13-15, 2024. Aligning with SDG-3, the camp aimed to raise awareness about preventing and detecting lifestyle diseases, with 435 individuals screened over the course of the event. Chitkara University's strong involvement and support for the fair's initiatives earned recognition, with the university's stall serving as a hub for community engagement. The fair featured a range of activities, including sports, cultural performances, and a thought-provoking Nukkad Natak on Cancer Prevention, for which the university received a memento. The event showcased Chitkara University's commitment to enhancing social well-being, fostering community engagement, and strengthening its role as a responsible institution within society.







HEALTH CAMP

24-12-2024

HEALTH CAMP: NADI PARIKSHANA

Chitkara university College of Nursing in collaboration with Vaidyaratnam Vrindavan Ayurveda Chikitsalayam, Baddi organized a free health camp.

The session was led by Dr. V. M. Gopal Menon, BAMS, Vaidyaratnam Vrindavan Ayurveda Chikitsalayam at Baddi. He is highly experienced Ayurveda practitioner with over 21 years of expertise. Dr. Menon began the camp with a brief description to *Nadi Parikshana, fundamental Ayurvedic practice used to assess the health of an individual.

He also highlighted the core principles of Ayurveda, emphasizing its holistic approach to healing.

A total of 31 participants, including faculty, students, and supportive staff, attended the camp. Various health concerns were assessed through Nadi Parikshan, and therapeutic guidance was provided by Dr. Menon to help address individual health needs.

This initiative was an important step in integrating traditional wellness practices into modern healthcare setting.







EVENTS ATTENDED BY FACULTY OF CUCN

WORKSHOP

16th- 22nd October 2024

EVIDENCE-BASED NURSING PRACTICE

A 7-days workshop on Evidence-Based Nursing Practice was organized by PGI, NINE, Chandigarh in collaboration with WHO Collaborating Centre and funded by the Ministry of Health and Family Welfare. The objective of the workshop was to enhance the skills and knowledge of nursing professionals in applying evidence-based practices (EBP) in their clinical settings. Ms. Bijialuxmi and Ms Simran from Chitkara University College of Nursing participated in the workshop, which offered valuable insights into the methodologies and tools used in evidence-based practice.

The focus of the workshop was to provide participants with an in-depth understanding of various aspects of evidence-based nursing, including the processes involved in evidence gathering, analysis, and its practical applications in nursing practice.

The practical insights and advanced skills gained from the sessions will not only support the participants in their academic roles but also help them in mentoring students and guiding them towards evidence-based practice in clinical settings.







STUDENT PARTICIPATION

SESSION

14-11-2024

IMAGINATION STATION: A STORY WRITING AND STORYTELLING

Ankita, Anshika, and Kunjal, students of B.Sc. Nursing, 1st Semester from Chitkara University College of Nursing, were honored for their exceptional performance and received awards in a story writing and storytelling competition. The event fostered creativity, idea exploration, and a passion for reading and writing. Each team crafted a unique story inspired by three assigned fiction books and presented it in a captivating manner. This competition offered an excellent opportunity for students to develop their creativity, expand their vocabulary, and enhance their imaginative skills.





EVENT

1-12-2024

PRATISPARDHA-CHANDIGARH 2024

Ms. Kanika, a 7th-semester B.Sc. Nursing student from Chitkara University College of Nursing, achieved an impressive 3rd place in Pratispardha-Chandigarh 2024. This esteemed inter-college knowledge competition, organized by Vision IAS, highlighted extraordinary talent, intellectual excellence, and a competitive spirit. Kanika's outstanding achievement, accompanied by a well-earned ₹10,000 cash prize, reflects her dedication and brilliance. Heartfelt congratulations to her!





EVENT

09-12-2024

BIBLIOPHILE AWARD

Ms. Himanshi, a 1st-semester B.Sc. Nursing student at Chitkara University, Himachal Pradesh, received certificates and was honored with "The Bibliophile Award." Her accomplishments are proudly showcased in the library to motivate and inspire others.







TOURNAMENT

08-10-2024

PARAKRAM (2024-25) INTERUNIVERSITY TOURNAMENT

Simranjeet Kaur, a 1st semester B.Sc. Nursing student, participated in the prestigious Table Tennis Tournament organized by Jaypee University. Demonstrating remarkable skill, determination, and sportsmanship, Simranjeet Kaur competed against talented players and secured the 2nd position in the tournament. Her achievement highlights not only her athletic prowess but also her ability to excel in extracurricular activities alongside her academic commitments.





INTERNATIONAL VISIT

06-20-12

THUMBAY HOSPITAL, DUBAI

Chitkara University College of Nursing students Ms. Tapur, Ms. Radha, Ms. Amandeep Kaur, and Ms. Esther Hardy had the honour of touring Thumbay Hospital in Dubai. The tour turned out to be a flawless experience that greatly aided in their professional and personal development. They conveyed their appreciation for the priceless chances to observe state-of-the-art medical facilities, excellent work ethics, and a caring atmosphere created by the hospital staff. The kindness they received was genuinely unforgettable, and they will always remember the information and understanding they acquired during this journey. They think that this enlightening experience will be very important in determining how they do things in the future.









Accolades

Journal Review

Journal: Nursing & Midwifery

Research Journal

Topic: Knowledge on obstetric fistula and associated factors among reproductive age women in Ethiopia. Systematic review and meta-analysis.





RESEARCH PAPER PRESENTATION

Conference: International Conference on Smart Computing and Communication for

Sustainable Convergence (ISCCSC 2024)

Topic: Factors Contributing to the Prevalence of Diarrhea Among Under-5 Year Children:

A Cross-sectional Survey

Date: 18 October 2024





RESEARCH PAPER PRESENTATION

Conference: Artificial Intelligence in Healthcare, Education & Industry

Topic: Machine Learning Models and Medical Data Analysis: An Experimental Analysis

Date: 29th-30th November 2024





RESEARCH PAPER PRESENTATION

Conference: SMART 2024 conference

Topic: Machine Learning Models and Diabetes. Prediction: A comparative Analysis of

Multiple Models Implementation **Date:** 6th- 7th December 2024





PUBLICATION

Journal: International Conference on Communication, Computing and Signal Processing.

Topic: Applying ML Models for Heart Disease Prediction: A Comparative Analysis.

DOI:

10.1109/IICCCS1609.2024.10763 847

Applying ML Models for Heart Disease Prediction: A Comparative Analysis

Ishu Rani Chitkara University College of Nursing, Chitkara University, Himachal Pradesh ishu.rani@chitkarauniversity.edu.in

Pradeepta Kumar Sarangi Chitkara University School of Engineering and Technology, Chitkara University, Himachal Pradesh pradeeptasarangi@gmail.com

Dibvahash Bordoloi Dept of CSE, Graphic Era Hill University; Graphic Era Deemed to be University, Dehradun, India

dibyahash.cse@geu.ac.in

Srikanta Kumar Mohapatra Chitkara University Institute of Engineering and Technology, Chitkara University, Punjab, India srikanta.2k7@gmail.com

Abhishek Tiwari Apex Institute of Technology, Chandigarh University, Mohali, Punjab, India abhi.tiwari23@gmail.com

Alok Kumar Agrawal Chitkara University School of Engineering and Technology, Chitkara University, Himachal Pradesh alok.agrawal@chitkarauniversity.edu.in

Abstract: The human body is always susceptible to disease. Heart-related issues are a major concern among them, leading to more annual fatalities than all other diseases combined. It includes various conditions that impact the heart arrhythmias, among others. Alarmingly, heart disease is increasingly prevalent among younger generations, particularly among youth. Research indicates that factors such as chronic stress. smoking, and unhealthy lifestyles contribute to this trend. Given the rising incidence of heart disease, there is a pressing need for advanced algorithms and methodologies for predicting its occurrence. This study aims to determine whether an individual is currently suffering from or is at risk of developing heart disease. Hospitals can leverage automated diagnostic tools that utilize computations for data science and data mining techniques for accurate predictions. This research paper examines the application of supervised ML methods, specifically highlighting the Decision Trees (DT) model, alongside two other models: the Random Forest (RF) model and the LR model. The dataset that was utilized in this investigation came from Kaggle. The Decision Tree and Logistic Regression algorithms demonstrated notable accuracy rates of 88% and 84%, respectively. In contrast, the Random Forest model outperformed the others, achieving an accuracy of 92.74%, almost 93%.

Keywords: Decision Trees, Logistic Regression, Random Forest

Several diagnostic tests are available for CVD, including blood sugar tests, cholesterol level assessments, and electrocardiograms (ECGs) [2]. Heart disease encompasses a wide range of illnesses that impact the cardiovascular system's structure and functionality. Currently, coronary heart illness stands out as one of the most critical heart conditions and is a major contributor to mortality in today's population. This condition happens whenever plaque builds up in the coronary artery walls, impending the heart's capability to pump blood and raising the chance of cardiac arrest [3].

In the context of cardiovascular disease, timely intervention is crucial for patient outcomes. Therefore, accurately predicting heart-related illnesses before they escalate is essential. Currently, numerous medical organizations are gathering various data on heart diseases [4]. However, not all data can be deemed reliable or entirely accurate, making it challenging to make informed decisions based on such information. Analyzing this complex data can be difficult for humans, which is where machine learning algorithms come into play. These algorithms simplify the process, enabling effective predictions of heart-related issues with impressive accuracy [5].

10.1109/IICCCS61609.2024.10763847 ©2024 IEEE 979-8-3503-9075-9/24/\$31.00