



## GOAL 2

## Zero Hunger

The Swami Rama Himalayan University (SRHU) is committed to achieving Sustainable Development Goal 2 (SDG 2) – Zero Hunger through a proactive and visionary approach. By integrating academics, healthcare, outreach, and research, the University addresses food security, malnutrition, and sustainable food practices.

SRHU's academic programs focus on building expertise in public health, nutrition, and sustainable agriculture, empowering students to address real-world challenges. Its healthcare initiatives provide nutritional support for vulnerable populations, while outreach programs engage rural communities to adopt sustainable farming and improve food security. Research at SRHU focuses on innovative solutions, including fortified foods and climate-resilient farming. These multifaceted efforts reflect SRHU's unwavering dedication to eradicating hunger and improving nutrition for a sustainable future.





## Academic Programs and Sensitization Efforts

The University is offering 83 courses across 18 programs concerned with nutrition and related topics to students under different programs, ensuring that future professionals are well-equipped with knowledge and skills to address food security and nutrition challenges.

Various academic units of the University are regularly sensitizing the community and patients attending its hospitals, outreach clinics, and health centers about safe motherhood and the importance of nutrition during pregnancy. On the occasion of Breastfeeding Week, faculty members and students actively promote breastfeeding through diverse approaches, including talks, lectures, rallies, role plays, and poster competitions.





# Health Education and Awareness Generation Activities

## World Breastfeeding Week

#### Date:-August 1 to 7, 2022

#### Activities:

The Himalayan College of Nursing's Department of Child Health Nursing and Pediatrics organized "World Breastfeeding Week" from August 1st to 7th, 2022. The event began with a welcome address by Dr. Sanchita Pugazhendi, Principal, emphasizing the importance of breastfeeding for babies and children's health. The program included a role play on breastfeeding importance, a quiz competition, and various group activities to raise awareness about breastfeeding techniques and advantages. A cervical cancer awareness campaign was also done under the joint efforts of the Department of Obstetrics and Gynecology and the Department of Oncology. The campaign educated all the women who came to the health facility on the day regarding the screening and vaccination against cervical cancer and thus how it can be prevented. Skits were also performed by the MBBS students regarding the above. The event ended with applause for all the participants by the people.

**Place of Event:** Department of Child Health Nursing and Pediatrics, HCN and Seminar room, Dept of Community Medicine, HIMS, SRHU

**Participants:** People from the Community area, students and Faculty members of HCN, Dept. Of OBG & Community Medicine, HIMS,SRHU







#### जागत्तकता

हमालयन हॉस्पिटल जौलीग्रांट में विश्व स्तनपान दिवस पर चलाया जागरूकता अभियान

डोईवाला, लोकसत्य।

हिमालयन हॉस्पिटल जौलीग्रांट में विश्व स्तनपान दिवस मनाया जा रहा है। सप्ताह भर तक आसपास के क्षेत्र व अस्पताल आने वाली महिलाओं को स्तनपान के महत्व के विषय में जानकारी दी जायेगी।

सोमवार को हिमालयन अस्पताल के बाल रोग विभाग व हिमालयन कॉलेज ऑफ नसिंग के संयक्त तत्वावधान में क्विज प्रतियोगिता का आयोजन किया गया। इसके लिए पांच टीमें बनायी गयी। जिसमें वंशिका और लम्बिनी को विजेता घोषित किया गया। नसिंग कॉलेज की प्राचार्या डॉ. संचिता पुगाजंडी ने सभी प्रतिभागियों को ु सम्मानित किया। इस अवसर पर



उन्होंने कहा कि विश्व स्तनपान सप्ताह स्तनपान से संबंधित विषयों पर जागरूकता बढाने के लिए एक वैश्विक अभियान है। स्तनपान को बढावा देना हमारी साझी जिम्मेदारी है। माँ का दूध सर्वोत्तम अमृत तुल्य है। सही तरीके और समचित स्तनपान से आने वाली पीढी निश्चित रूप से स्वस्थ रहेगी। पीडियाट्रिक नसिंग की विभागाध्यक्ष इमोन चाम ने कहा कि स्तनपान को बढ़ावा देने में नर्सों के सहयोग का काफी महत्व है। कार्यक्रमें में डॉ. दीपशिखा, डॉ.

सनोबर, डॉ. आदित्य, राजकुमारी सिल्विया देवी, वंदना चौहान, रश्मि भारद्वाज, नम्रता पुंडीर, सोना सिंह शामिल हुये। दूसरी ओर कम्यूनिटि मेडिसिन विभाग की ओर से कुड़कावाला आंगनवाड़ी केन्द्र में महिलाओं को स्तनपान के विषय में जागरूक किया गया। इस अवसर पर डॉ. रूचि जुयाल ,

डॉ. दिव्या शर्मा, डॉ. शुभांगी लिंगवाल, डॉ. शुभांगी जुयाल, डॉ. शुभम गर्ग, डॉ. गुनीत सिंह, रेनू, रूखसाना उपस्थित थे।



न दिवस पर महिलाओं को जागरूक करतीं एसआरएचयु की छात्रा। 🛲

#### महिलाओं को स्तनपान के प्रति किया जागरुक

संवाद न्यूज एजेंसी

डोईवाला। हिमालयन अस्पताल जौहतीग्रांट में बिरव स्तनपान दिवस मनाया जा रहा है। सप्लाह भर तक आस्यास के क्षेत्र और अस्पताल में आने वाली महिलाओं को स्तनपान के महत्व के विषय में जानकारी दी गर्न. गई ।

के महत्व का विषय म आननकारा दा गई। सोमवार को हिमाल पन अस्पताल के बाल रोग विभाग और हिमालयन कहिंज ऑफ नवियं की ओर से विवन प्रतिसंगिता आर्योजित की गई। पांच टीमों के बीच हुए मुकाबले में चंशिका और लुर्चिनी को विश्वेता चोबित किया गया। नविंग कलिंग की प्राचार्या ही संचिता पुरालडी ने विजेताओं को सम्मानित किया। प्राचार्य ने कहा कि विश्व स्तनपान सप्ताह से स्तनपान से संबधित विवयों में जागरूकता बढ़ाने के लिए एक यैरियक

हिमालयन अस्पताल में आयोजित किया गया जागरुकता कार्यक्रम

अभियान है। प्रति वर्ष एक से सात अगस्त तक सप्ताह मनाया जाता है।स्तनपान को बढावा देना हमारी सामूहिक जिम्मेदारी है। यह

जाता है। स्राम्यान का बढ़ावा देने। हमारी सामुहिक जिम्मेदारी है। यह हर शिशु का जन्मसिद्ध अधिकह है। इससे शिशु का सवांगींग किंग्रेकम में डॉ. दीपशिखा. डॉ. सनोबर, डॉ. आदित्य, रानकुमारी सिंत्ल्विया देवी, बंदना चौहान, रशिम भारद्वान, नसता पुंडीर आदि में। वहीं, दूसरी और कम्प्युनिटी मेंडिस्तीन विभाग की और से कुडकावाला आंगनबाइरी केंद्र पर महिलाओं को स्तनपान के लिए जगररूक किया गया। कार्यक्रम में डॉ. रुचि जुपाल, डॉ. दिल्या शमर्ग, डॉ. शुभागी लिंगवाल, डॉ. शुभम गर्ग, डॉ. गुनौत सिंह, रेषु





ZERO Hunger

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Presentations by MBBS students in the Department of Community Medicine, HIMS, SRHU



Participants of the event





## World Diabetes Day Observation

#### Date:- November 14, 2022

Activities:- On the occasion of World Diabetes Day, The Department of Physiology, Himalayan Institute of Medical Sciences, Swami Rama Himalayan University along with the Association of Physiologists of India(ASSOPI)organized a national online CME on the theme "Reversing Diabetes: A Road to Remission".It also explored the new avenues in Diabetic retinopathy, Exercise prescription and the scope of Bariatric Surgery. A scientific e-poster competition was also organized for the students.

Place of Event:-Conference room, HIMS, SRHU

**Participants:**-Faculty of various dept., HIMS, SRHU and other Nationwide colleges and universities.



Faculty participating in online CME, at conference hall, HIMS, SRHU.

Awareness sessions are conducted in the community and Anganwadi centres to emphasize the importance of nutrition for antenatal and postnatal women (ANCs and PNCs), under-five children, and the geriatric population. Mothers are educated about locally available, affordable nutritious foods and their preparation methods.





# Mother and Child Health Camps

The University demonstrates its commitment to improving maternal and child health by regularly organizing Maternal and Child Health (MCH) camps. These camps provide essential healthcare services to pregnant and lactating women, ensuring a comprehensive approach to their well-being. Key services offered include general health examinations, risk assessments, and primary investigations such as blood pressure monitoring, blood sugar tests, and haemoglobin estimation. Prophylactic treatments, including micronutrient supplementation and anaemia management, are also provided. Additionally, these camps emphasize the importance of health education through individual and group counselling sessions, covering topics such as nutrition, family planning, self-care during pregnancy, institutional delivery, breastfeeding, hygiene, and postnatal care. Through these efforts, the University plays a vital role in promoting maternal and child health within the community.

#### Maternal health camp

#### 2022-23 Menstrual Hygiene Management Trainings





## School Health Camps

The University plays an instrumental role in promoting the health and well-being of school-aged children through the implementation of regular school health camps. These camps are designed to deliver comprehensive health services, including systematic growth monitoring and the early identification of common health concerns such as nutritional deficiencies, developmental delays, and other preventable conditions. Alongside offering timely medical interventions, the camps emphasize the importance of health education and awareness as key components of sustainable well-being. Children are systematically educated on critical topics such as balanced nutrition, effective handwashing techniques, and personal hygiene practices, equipping them with essential knowledge to maintain and improve their health. By addressing health challenges at an early stage and fostering the adoption of healthy habits, the University significantly enhances the overall physical and developmental outcomes of children, thereby making a lasting impact on the well-being of the community it serves.















Health check up in progress during a school health camp

2022-2023 School Health Camps





# Extension and Outreach Activities, Livelihood Activities

All constituent units of the University actively participate in extension and outreach activities to address food security, nutrition, and sustainable agricultural practices. These initiatives involve collaborations with local communities to enhance awareness and provide practical solutions for achieving Zero Hunger.

## Comprehensive Community Development Program-SRHU

The Comprehensive Community Development Programme (CCDP) is being actively implemented in the Toli area of the Jaiharikhal block, Pauri Garhwal district, with the goal of fostering sustainable and inclusive community development. The programme focuses on creating income-generating opportunities and improving access to health services, thereby enhancing the overall well-being of selected local communities. Designed with a need-based, demand-driven, and community-oriented approach, the programme ensures the active participation of Panchayati Raj Institutions (PRI), local communities, and particularly women in its execution. Its core strategy revolves around improving the quality of life by implementing community- and individual-based action plans, positioning itself as a model for community-driven development.

#### Sustainable Agricultural Practices and Income Generation

One of the major initiatives under the CCDP has been the promotion of alternative uses for fallow land, focusing on cultivating high-value crops such as rosemary, black cardamom, ginger, turmeric, garlic, and chili. These crops, which thrive in non-irrigated conditions and are resistant to damage by wild animals, have significantly boosted household incomes. A dedicated





value-addition centre further enhances the marketability of these crops by improving sorting, processing, and packaging, thereby connecting local produce to large, sustainable markets.

Innovative technologies and practices have also been introduced to address labor shortages and make agriculture a more attractive and profitable option for youth. For instance, lemongrass cultivation has gained momentum, with 90 farmers across four villages producing 185,000 kg of raw lemongrass, yielding 67 kg of oil after processing. The lemongrass farmers benefited directly as payments were made at their doorstep, fostering greater satisfaction and participation.



Rosemary cultivation was another success, with 16.7 kg of fresh rosemary stock processed and sold in previous years. However, based on a two-year evaluation, harvesting of rosemary has been paused this year.



The cultivation of turmeric, ginger, black cardamom, and chili has also been impactful. Over 2,100 kg of turmeric from 28 farmers was processed into 325 kg of turmeric powder and sold within 30 days. Similarly, 85 kg of fresh red chili from 15 families was dried, processed, and





sold as chili powder within a week. Black cardamom and ginger powder production also contributed to household incomes.

#### **Infrastructure Development and Plantation Initiatives**

The establishment of a 100-square-meter poly-house has further diversified agricultural output, enabling the cultivation of crops such as chillies, cauliflower, and ginger. Additionally, 125 mango and 125 lemon saplings were planted by two farmers, while existing orchards received compost fertilizers and were linked with state horticulture departments for technical support.



#### Women Empowerment through Tailoring and Handicrafts

The CCDP also emphasizes skill development for women and youth. Tailoring programs have equipped women and girls across multiple locations, including Itharna, Laltappar, and





Mayakund, with essential skills. In Nagthat, 11 women are now producing woolen clothing after completing training. A one-year tailoring program was also introduced in the Bahadrabad block of Haridwar district.

The Bella Tailoring Course, tailored for the Flying Birds community, has trained 8-10 women and girls, enabling them to earn additional income for their families. This initiative requires no specific educational qualifications beyond basic literacy, making it accessible to a broader audience.



The tailoring units have also supported other institutional needs, such as stitching uniforms for university staff and students, producing items for hospital use, and preparing materials for special events like convocation ceremonies. The units contributed to the Swami Rama Scholarship Program by arranging essentials such as uniforms, sweaters, and shoes for children. Additionally, online art therapy sessions and handicraft training were conducted, further enriching community engagement.

#### **Holistic Community Support**

The CCDP extends its efforts beyond agriculture and skill development. It has actively supported the distribution of food, nutrition kits, clothing, and other essential supplies in vulnerable areas. The programme continues to integrate sustainable practices, skill-building, and health services to





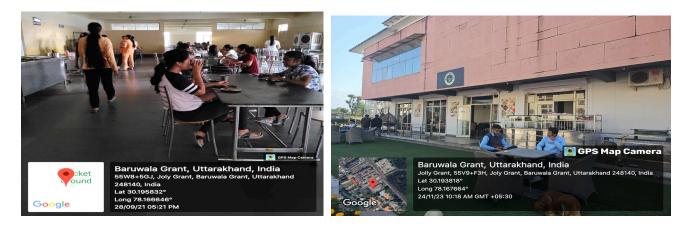
drive holistic community development, thereby serving as a replicable model for rural transformation.

# Healthy and Affordable Food Choices on Campus

Recognising the importance of nutrition for students, faculty, and staff, the University has implemented several initiatives to provide healthy and affordable food options on campus:

## Cafeterias and Canteens

Multiple on-campus outlets offer a variety of nutritious and affordable food options. These meals are prepared using fresh, locally sourced ingredients to ensure quality and sustainability.



PG Hostel mess

So Comida café in the SRHU Campus







Coffee shop in the New OPD Block



Baruwala Grant, Uttarakhand, India

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Coffee shop in the SRHU Campus





Aanchal Cafe in the SRHU Campus





## Hygiene and Food Safety

The University places a strong emphasis on maintaining high standards of hygiene in the preparation and serving of food. To ensure this, kitchens and food preparation areas undergo routine cleaning and thorough sanitization. Additionally, all individuals involved in food handling are provided with comprehensive training in food safety protocols to uphold the quality and safety of the food served.

## **Balanced Diet Accessibility**

The University prioritizes the promotion of a balanced diet and takes measures to ensure that wholesome and nutritious food is readily available to everyone within the campus community.

## **Research and Development Initiatives**

The University has made notable advancements in fostering sustainable food practices through dedicated research and development initiatives. A significant example is the work undertaken by the School of Biosciences, which focuses on the cultivation of diverse mushroom varieties. This initiative seeks to equip local farmers with the skills needed for mushroom cultivation, thereby empowering them to embrace sustainable and economically viable agricultural practices. Additionally, 32 publications, including SCOPUS-indexed papers, books, and book chapters, have been aligned with Sustainable Development Goal 2.

1.Article • Open access Insights into the harvesting tools and equipment's for horticultural crops: From then to now. Kaur, B., Mansi, Dimri, S., ...Rustagi, S., Preet, M.S. Journal of Agriculture and Food Research, 2023





#### 2.Review • Open access

Insights on bio-functional properties of Myrica esculenta plant for nutritional and livelihood security Bhatt, S.C., Vijay, K., Gupta, A.K., ...Rustagi, S., Preet, M.S. *Food Chemistry Advances*, 2023

#### 3.Article

Novel food materials: Fundamentals and applications in sustainable food systems for food processing and safety Gupta, A.K., Pratiksha, Das, T., ...Ranjan, R., Mishra, S. *Food Bioscience*, *2023* 

#### 4.Article • Open access

Interaction Mechanism between α-Lactalbumin and Caffeic Acid: A Multispectroscopic and Molecular Docking Study. Al-Shabib, N.A., Khan, J.M., al-Amri, A.M.S., ...Vijay, K., Sen, P. ACS Omega, 2023

#### 5.Review • Open access

A Perspective Review on Green Nanotechnology in Agro-Ecosystems: Opportunities for Sustainable Agricultural Practices & Environmental Remediation. Bhandari, G., Dhasmana, A., Chaudhary, P., ...Malik, S., Sláma, P. Agriculture (Switzerland), 2023

#### 6.Article • Open access

Exploring microbial diversity responses in agricultural fields: a comparative analysis under pesticide stress and non-stress conditions. Gangola, S., Joshi, S., Bhandari, G., ...Bukhari, N.A.W., Rani, R. *Frontiers in Microbiology, 2023* 

#### 7.Article • Open access

Nutritional Services in Hills of Uttarakhand– An Overview. Haldar, P., Viswanath, L., Srivastava, A.K. National Journal of Community Medicine, 2023

#### 8.Book Chapter

<u>Role of Nanoparticles in Agriculture</u> <u>Parveen, H., Chaudhary, P., Srivastava, P., ...Bhandari, G., Chaudhary, A.</u> *Advances in Nanotechnology for Smart Agriculture: Techniques and Applications, 2023* 

#### 9.Book Chapter

Impact of Nanoparticles on Abiotic Stress Tolerance. Bhandari, G., Chaudhary, S., Gupta, S., Gangola, S. Advances in Nanotechnology for Smart Agriculture: Techniques and Applications, 2023

#### 10. Article

Tobacco smoking-related risk for iron deficiency anemia: A case-control study. Vivek, A., Kaushik, R.M., Kaushik, R.M. Journal of Addictive Diseases, 2023





#### 11. Article

Pattern of nutritional status in node-negative versus node-positive head and neck cancer patients undergoing treatment: a prospective cohort study. Arora, A., Saini, S.K., Gupta, M. Supportive Care in Cancer, 2022

#### 12. Article • Open access

Nutritional Status and its Determinants in Toddlers: A case study of Hilly region of Uttarakhand Haldar, P., Viswanath, L., Srivastava, A.K., Sati, H.C. *Indian Journal of Community Health, 2022* 

#### 13. Book Chapter • Open access

Impact of endophytic fungi in biotic stress management. Tyagi, J.P., Chaudhary, P., Jyotsana,, ...Bhandari, G., Chaudhary, A. *Plant Protection: From Chemicals to Biologicals*, 2022

#### 14. Book Chapter

<u>Agricultural Science with IoT. Pant, Y.</u> Internet of Things for Agriculture 4.0: Impact and Challenges, 2022

#### 15. Article

Metal based nanoparticles trigger the differential expression of key regulatory genes which regulate iron and zinc homeostasis mechanism in finger millet. Chandra, A.K., Pandey, D., Tiwari, A., ...Dhasmana, A., Kumar, A.A. Journal of Cereal Science, 2021

#### 16. Book Chapter

Approach Towards Sustainable Crop Production by Utilizing Potential Microbiome. Rani, U., Kumar, M., Kumar, V. Microorganisms for Sustainability, 2021

#### 17. Book Chapter

Diversity and Function of Microbes Associated with Rhizosphere of Finger Millet (Eleusine coracana) Choudhary, R., Rawat, G., Vijay, K., Kumar, V.R. *Microorganisms for Sustainability*, 2020

#### 18. Book

In vitro plant breeding towards novel agronomic traits: Biotic and abiotic stress tolerance Kumar, M., Muthusamy, A., Kumar, V.S., Bhalla-Sarin, N. In vitro Plant Breeding towards Novel Agronomic Traits: Biotic and Abiotic Stress Tolerance, 2019

#### 19. Book

<u>Microbiome in Plant Health and Disease: Challenges and Opportunities</u> <u>Kumar, V.S., Prasad, R., Kumar, M., Choudhary, D.K.</u> *Microbiome in Plant Health and Disease: Challenges and Opportunities, 2019* 





#### 20. Book

Probiotics in agroecosystem. Kumar, V.R., Kumar, M., Sharma, S.V., Prasad, R. Probiotics in Agroecosystem, 2017

#### 21. Book Chapter

Current scenario of root exudate-mediated plant-microbe interaction and promotion of plant growth Vishwakarma, K., Sharma, S.V., Kumar, V.R., ...Varma, R.K., Tripathi, D.K. Probiotics in Agroecosystem, 2017

#### 22. Article • Open access

A study on infant feeding practices among mothers of a rural hilly area of district Dehradun Vyas, S. Bangladesh Journal of Medical Science, 2016

#### 23. Article

Anthropometric profile of children attending anganwadi centers under integrated child development sevices (ICDS) scheme in doiwala block. Kaur, G.D., Aggarwal, P.K., Kakkar, R. *Indian Journal of Community Health, 2015* 

#### 24. Article

Nutritional status and associated comorbidities among the elderly in Doiwala block, Dehradun Kritika, Deepshikha, Semwal, J., ...Juyal, R., Sati, H.C. Indian Journal of Community Health, 2015

#### 25. Article

Nutritional status in multi-drug resistance-pulmonary tuberculosis patients. Kumar, A., Kakkar, R., Kandpal, S.D., Sindhwani, G. *Indian Journal of Community Health, 2015* 

#### 26. Article

Undernutrition and the incidence of tuberculosis in India: National and subnational estimates of the population-attributable fraction related to undernutrition. Bhargava, A., Benedetti, A.L., Oxlade, O., Pai, M., Richard (Dick), M. *National Medical* 

#### Journal of India, 2014

#### 27. Article

Trends in weaning practices among infants and toddlers in a hilly terrain of a newly formed state of India

Vyas, S., Kandpal, S.D., Semwal, J., Chauhan, S., Nautiyal, V. International Journal of *Preventive Medicine*, 2014

#### 28. Article • Open access

Nutritional Status of Adult Patients with Pulmonary Tuberculosis in Rural Central India and Its Association with Mortality. Bhargava, A., Chatterjee, M., Jain, Y., ...Pai, M., Richard (Dick), M. *PLoS ONE, 2013* 





#### 29. Article

Pattern of prevalence of risk factors for non-communicable diseases in the geriatric population of district Dehradun. Kandpal, S.D., Kakkar, R., Aggarwal, P.K., Bansal, S.K. Journal, Indian Academy of Clinical Medicine, 2013

#### **30.** Article

<u>Megaloblastic anaemia in hospitalised children.</u> <u>Chhabra, A., Chandar, V., Gupta, A., Chandra, H.</u> *Journal, Indian Academy of Clinical Medicine, 2012* 

#### 31. Article

Effect of gender on correlation of anaemia with body mass index in medical students Saxena, Y., Shrivastava, A., Saxena, V. Indian Journal of Physiology and Pharmacology, 2011

#### 32. Article

Tobacco smoking-associated risk for tuberculosis: A case-control study. Gambhir, H.S., Kaushik, R.M., Kaushik, R.M., Sindhwani, G. International Health, 2010

## Conclusion

The University adopts a comprehensive and dynamic approach to achieving Sustainable Development Goal 2—Zero Hunger—by seamlessly integrating academic excellence, healthcare services, community outreach, and cutting-edge research. This multifaceted strategy not only fosters awareness of global food security and nutrition challenges but also emphasizes the development and implementation of practical, evidence-based solutions. By addressing these critical issues through education, innovation, and active engagement with local and global communities, the University continues to play a pivotal role in creating a sustainable and equitable future, leaving a lasting and transformative impact on society.