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Punargathan: Building Resilience to Create a Sustainable Future

WE CARE

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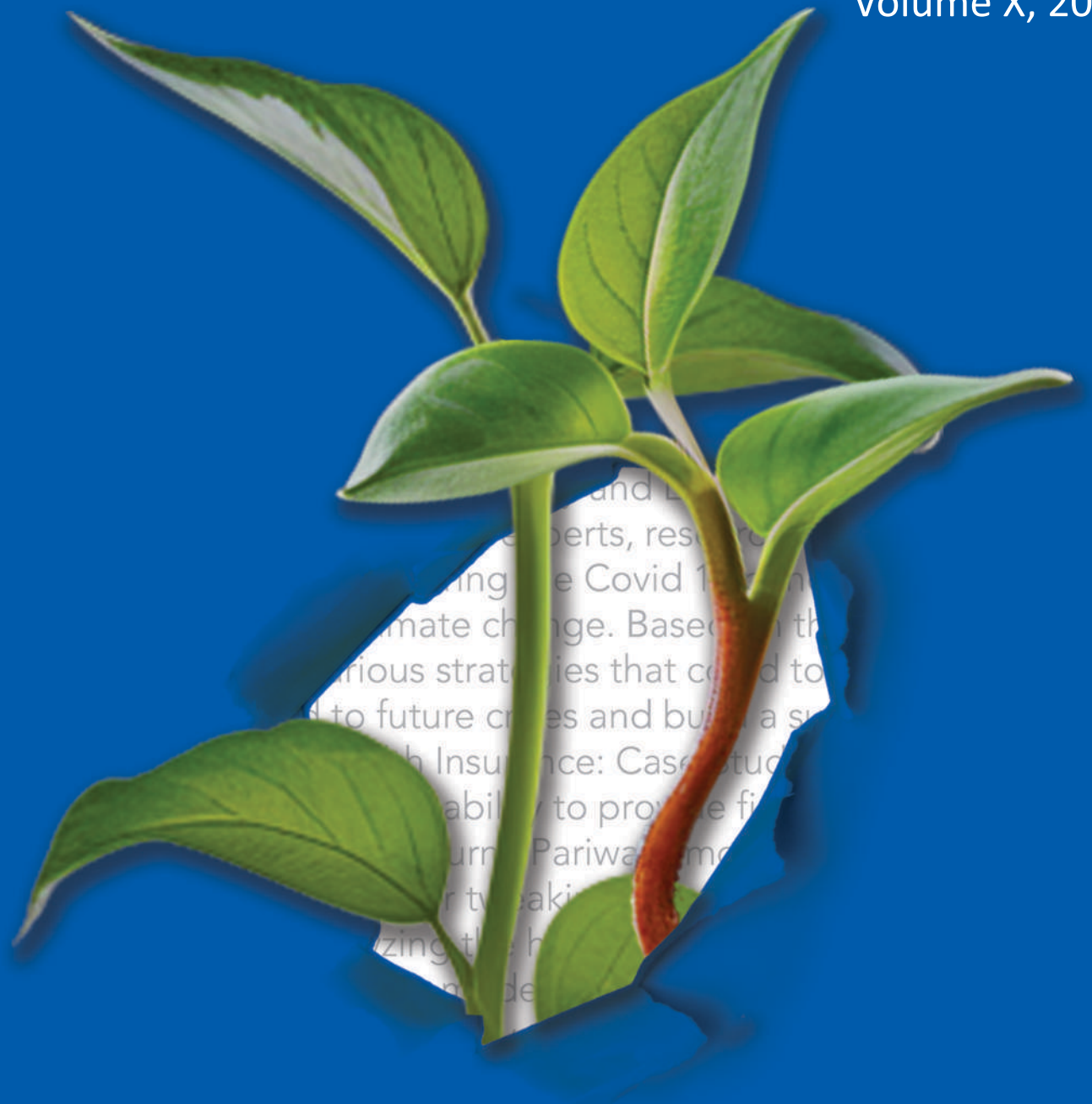
Anthology Series
Volume X, 2023



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PUNARGATHAN: BUILDING RESILIENCE TO CREATE A SUSTAINABLE FUTURE

A presentation

By

Jasani Center

For

Social Entrepreneurship

&

Sustainability Management

School of Business Management, NMIMS

SVKM's NMIMS, V.L. Mehta Road, Vile Parle (West), Mumbai – 400056 (India)

Foreword

The world has witnessed an unprecedented COVID-19 pandemic, which has left an indelible mark on our lives and the way we perceive the future. The confluence of crises, dominated by COVID-19, climate change, and geo-political conflicts, is creating spin-off impacts on attaining Sustainable Development Goals (SDGs).

The Sustainable Development Report 2022 ranks India at 121 out of 163 countries. The ranking has continued to decline since 2020. India's major challenge, as per the report, is achieving 11 of the 17 Sustainable Development Goals, which has resulted in a decline in its ranking. India's performance towards SDGs has worsened over the years due to the impact of the pandemic on poverty (SDG1), economic growth (SDG 8), and poor performance on climate, biodiversity, and sustainable urban development (SDG11-15). The report indicates that India has made progress on SDG 2 (ending hunger), SDG 3 (good health & well-being), and SDG 6 (clean water & sanitation), but ensuring decent work (SDG 8) has become more challenging.

The global health crisis has created an urgency to prioritize sustainability in all aspects of our lives. Sustainability encompasses various dimensions, including environmental, social, and economic aspects. It requires us to adopt a long-term perspective and make decisions that safeguard the health of our planet, ensure social equity, and promote economic prosperity without compromising the needs of future generations. As we navigate ahead, we must address disparities and ensure the attainment of SDGs. Successful implementation of the SDGs will require all the key stakeholders to champion the agenda. In this context, the role of higher education is to influence and motivate students to use their knowledge and skills to develop social innovations and strengthen the work undertaken by development organizations.

At the School of Business Management, since 2010, we have formally engaged our MBA students through our We Care Civic Engagement internship to contribute to various sustainability causes at the pan-India level. In February 2022, when COVID-19 restrictions eased in a few states, students were keen to have offline or hybrid mode of internship. They were eager to visit project areas to get first-hand information about the impact of the pandemic on resource-constrained communities.

I am delighted to learn that our students placed in 275 'Development Organizations' reached out to support beneficiary groups both in online and offline mode. They took an active interest in executing various projects, like undertaking impact assessment research, designing feasibility studies for new businesses, assisting community start-ups, promoting financial literacy, and other related areas. The stories of change triggered students' compassion and influenced them to contribute to various projects actively. They appreciated the need to mobilize concerted efforts to bridge the gaps to facilitate access to healthcare, education, and economic opportunities.

The current Anthology '*Punargathan:* 'Building Resilience to Create a Sustainable Future,' is a compilation of articles that are based on the projects undertaken by students in the area of healthcare, education, skilling, integrated farming, and environment-friendly mobility. Each article in the Anthology describes the strategic interventions designed by the NGOs during the pandemic to build resilience and their perspectives on creating a sustainable future. The articles indicate that the lessons learned from the collective trauma have ignited a sense of collective responsibility to strive for a future that is more equitable, sustainable, and equipped to address future crises.

Finally, let us remind ourselves that pandemics have always forced humans to break with the past and imagine their world anew. Our ability to work collectively and compassionately is crucial in building a more resilient, equitable, and sustainable world.

Dr. Ramesh Bhat Ph D
Vice Chancellor
NMIMS

Unfolding the Pages of the Anthology...

Acknowledgments

The *We Care: Civic Engagement* internship is being implemented successfully by the Jasani Center for Social Entrepreneurship & Sustainability Management for the past twelve years. The initiative has been actively supported by Shri Amrish Patel, Chancellor, NMIMS, Dr. Ramesh Bhat, Vice Chancellor, NMIMS, Dr. Sharad Mhaiskar, Pro Vice-Chancellor and Dr. Prashant Mishra, Dean, School of Business Management.

I would like to acknowledge the support extended by the office bearers of Shri Vile-Parle Kelvani Mandal (SVKM) for enabling us to undertake the We Care: Civic Engagement initiative. I sincerely thank them and look forward to their continuous support.

I also take this opportunity to thank all faculty colleagues and the administrative staff for supporting the We Care Civic Engagement Internship wholeheartedly.

My sincere appreciation is due to all the internship placement organizations for rendering their cooperation in placing our students.

Special acknowledgments to students who shared their experiential learnings based on which the articles have been documented for this Volume.

I sincerely appreciate and acknowledge the efforts taken by Ms. Swati Sisodia, our Ph.D scholar for sharing the burden of co-editing this Volume with me. Her support was crucial in publishing the current Anthology series (Volume X).

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Director,
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Preface

The inception of the We Care: Civic Engagement internship program in 2010 by the School of Business Management aimed to nurture a sense of socially responsible leaders among its cohort of full-time MBA students. The program's drive was to equip prospective business leaders with an awareness of the requirements and aspirations of the underprivileged segments of society. What commenced as a modest undertaking has since matured into a robust initiative. Now in its twelfth year, it encompasses a wide reach across 154 cities spanning 22 states and two Union Territories.

The current Anthology, "Punargathan: Building Resilience to Create a Sustainable Future," is an outcome of the profound experience gained by our students through the We Care: Civic Engagement internship. The word "Punargathan" encapsulates the essence of our collective pursuit - a journey of rejuvenation, rebirth, and transformation. In the Anthology, one will encounter various articles illuminating the path toward resilience and multifaceted dimensions of sustainability, offering valuable insights, innovative ideas, and inspiring stories of change. Each article sheds light on unique experiences, research, and initiatives, exemplifying how individuals and organizations can adapt, reinvent, and extend support to vulnerable communities, paving the way for a more resilient future.

The Anthology consists of two sections: The article on *Resilient Recovery and Lessons for Rebuilding for a Sustainable Future* Section I sets the stage by collating views of experts, researchers, and practitioners on efforts taken by NGOs to build resilience during the Covid 19 pandemic in key sectors such as health, education, skilling, and climate change. Based on the lessons drawn from the pandemic, the article recommends various strategies to build resilience to address future crises and create a sustainable future

Section II consists of six articles shedding light on different aspects of the pandemic, its impact on various sectors, and the endeavors of NGOs to overcome the challenges posited by the pandemic. These articles deliver in-depth, research-based case studies and analyses of specific NGO interventions. The coverage of articles is diverse, encompassing a wide range of topics, including health, education, sustainable agriculture, clean energy transition, and skilling rural youth. By presenting the NGOs' interventions, this publication provides a nuanced understanding of their contributions to addressing critical issues arising from the pandemic and building sustainable communities. These articles collectively emphasize the importance of NGO engagement and its positive impact in addressing multifaceted challenges.

The first article, *Community Health Insurance: Case Study of Annapurna Pariwar,* focuses on the relevance of micro insurance and its ability to provide financial protection to low-income households. The article presents Annapurna Pariwar's community health insurance model and describes the context for tweaking its health insurance scheme during the COVID-19 pandemic. By analyzing the health insurance data, a few strategies are recommended to strengthen its model further and to ensure access to quality healthcare to its members and scalability to other geographic locations.

The following article, *Food Assistance During Covid-19 Lockdown: A Study of Ration Distribution in Delhi NCR Slums,* sheds light on the commendable efforts of NIPUN in providing immediate relief measures to vulnerable communities during the COVID-19 pandemic. In response to the crisis, NIPUN launched "Project Sahyog" to ensure food security in Delhi NCR slums. Based on the beneficiary satisfaction survey, the article describes the effectiveness and gaps of the food assistance program. Suggestions to strengthen food assistance measures to meet the humanitarian crisis in the future have been articulated in the article.

The third article, *Covid-19 Pandemic: Reflections on Disrupted Schooling,* based on qualitative research, presents opinions of parents and teachers regarding the learning losses resulting from the closure of schools during the pandemic. It maps parents' and teachers' challenges in transitioning from offline to online education. An attempt has been made to recommend a few strategies to address the learning gaps and mitigate the long-term effects of disrupted education.

The fourth article, *Promoting Sustainable Agriculture: Case of Balajee Sewa Sansthan (BSS)*, explores the challenges faced by small and marginal farmers in India. Balajee Sewa Sansthan aims to increase farmers' ability to adapt to climate change and increase their incomes by training farmers to adopt an integrated farming system. The article describes the concept of an 'Integrated Farming System' and gives an overview of various activities that can be carried out on one acre of land. To establish the business logic for adopting integrated farming, an attempt has been made to provide a ready-to-use B-plan template. The article emphasizes the need to train farmers to become agripreneurs to create a sustainable future.

The fifth article, *Clean Energy Transition: Feasibility of Setting up Manufacturing Unit for E-Rickshaws in Assam,* delves into the transition from fossil-fueled transportation to electric

vehicles. By highlighting the efforts of the Centre for Rural Development (CRD) and its Rickshaw Bank initiative, the article showcases the potential of e-rickshaws in providing sustainable livelihoods and cost-effective transportation. The article presents a feasibility report for setting up locally assembled E-rickshaw units and emphasizes creating a conducive ecosystem to facilitate the adoption of E-rickshaws.

Lastly, *Challenges of Skilling Rural Youth: Case of Ambuja Cement Foundation* focuses on skill training and its role in harnessing India's demographic dividend. The article explains the context in which ACF set up the Skill and Entrepreneurship Development Institute (SEDI) in 2013. As the enrollment figures at SEDI have become a matter of concern, the article focuses on identifying factors for low enrollment. It proposes recommendations to bridge the gap and empower the youth to contribute to India's growth and sustainable future.

We invite the readers to reflect on the power of reinventing an inclusive, sustainable, and transformative future. The articles presented here not only inform and inspire but also provide valuable insights and recommendations for policymakers, practitioners, and individuals seeking to make a positive difference. May this Anthology catalyze further exploration, deliberations and all stakeholders embrace the opportunities presented by these narratives and collectively strive to transcend an equitable world

Though great care has been taken to ensure the writing accuracy, there remains a possibility of inadvertent grammatical or typographical errors in the final publication. We request the readers to excuse any such errors and appreciate their understanding.

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Prologue

The COVID-19 pandemic, with its devastating health, social, and economic impacts, has fundamentally altered the fabric of society and transformed our perspectives on life, community, and the future. The inequalities laid bare by the pandemic will require concerted efforts of all stakeholders to bridge the gaps in access to healthcare, education, and economic opportunities. There is a growing realization that economic growth, social equity, and environmental stewardship must converge to create a harmonious and sustainable society.

We at the School of Business Management firmly believe holistic education can foster students' skills and competencies to address social and environmental issues. Students should be empowered to become change agents, drive innovation, and challenge untenable societal norms. Since 2010 we have formally engaged our students to work on humanitarian causes at the pan-India level through a three-week We Care Civic Engagement Internship. In February 2022, we placed 698 MBA students in 275 Development Organizations across India. Students worked on strengthening NGO operations by providing online education, skill training, designing alternative livelihood options, embedding technology support, improving access to healthcare, undertaking field research, developing farm-to-market strategies, integrated farming, raising funds, and other allied areas. Cumulatively, they contributed 96,103 hours to the social sector.

The contributions made by students were noted as outstanding by over 90 per cent of Development Organisations. Students experienced a sense of gratification as they worked directly with beneficiaries who had been severely hit by the pandemic. Approximately 90 per cent of students were satisfied with their internship experience. Formal and informal discussions with the students indicated that the pandemic had exacerbated inequalities and inequities. Many groups, including farmers, the disabled, migrant labourers, and women, were at the threshold of marginalization. Students got an opportunity to learn how NGOs deployed agile strategies and transformed their operational models to develop resilience among beneficiaries.

The current Anthology '*Punargathan:* Building Resilience to Create a Sustainable Future' is a collation of articles that are based on the projects undertaken by students in the area of healthcare, education, skilling, integrated farming, and environment-friendly mobility.

The anthology conveys how NGOs modified their strategies to improve people's coping abilities during the global health crisis. The knowledge gained from the experience will direct them in building sustainable communities. Each article in the anthology describes the strategic interventions designed by NGOs during the pandemic to build resilience among their constituencies and their perspectives on creating a sustainable future.

Dr. Prashant Mishra,
Dean,
School of Business Management,
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Section I

The article in this section delves into resilient recovery and offers valuable insights for building a sustainable future. This article explores the challenges posed by the COVID-19 pandemic and highlights the measures taken by various organizations, including NGOs, to recover from the crisis and pave the way for a more sustainable and resilient society.

Resilient Recovery and Lessons for Rebuilding a Sustainable Future[1]

Abstract: *The Covid-19 virus changed the entire dynamics of human life. The pandemic imperiled our health and wellbeing, social and economic networks and has consequentially impacted the stability of the larger society. Section I of the current article captures the gravity of the global crisis and discusses the impact of the imposition of lockdowns and mobility restrictions on the public. Governments worldwide faced the challenge of balancing public safety and human rights. The crisis has amplified false and distorted information on the nature of the pandemic and the efficacy of the response efforts, which consequentially has fueled violence. Like other countries, the Indian government, too, sought to insulate its population and cautiously revive the economic engine by introducing several policy measures. Poor execution of the policy measures designed to protect the lives and entitlements of the vulnerable groups further widened the socio-economic inequities and disturbed the social fabric. In this regard, Section II describes the impacts of the pandemic on the education of children, access to health care, and livelihoods of the poor. The section conveys that the pandemic has indeed set back progress across all the Sustainable Development Goals.*

To combat the public health crisis, nations worldwide are racing to craft appropriate strategies to build back a better world. In this context, Section III elucidates the interventions undertaken by the private sector in India to complement the government's efforts to restore normalcy. The ensuing section makes a case for optimizing SDG 16 - a commitment to 'peaceful, just and inclusive societies' and SDG 17- 'Partnerships for goals' to rebuild a resilient India.

Health

Health remains India's topmost aspiration. During the first and second phases of the pandemic, NGOs contributed on-ground towards prevention and preparedness through information dissemination, education, distribution of medicine kits, and community-based health care drives. Organizations such as the Hemkunt Foundation, Plan India, Care India, Indian Redcross Society, and several others established makeshift health centers and arranged for medical resources, including oxygen concentrators, ventilators, and bedside monitors, to strengthen the hospital infrastructure.

[1] Dr. Meena Galliara, Director, Jasani Center for Social Entrepreneurship & Sustainability Management, SBM, NMIMS, Mumbai, India
Ms. Swati Sisodia, Ph.D. Scholar, SBM, NMIMS, Mumbai, India

India fought back admirably and displayed remarkable resilience in the face of the Covid 19 pandemic. Digital health apps like Co-Win, e-Sanjeevani, and Aarogya Setu exemplified our commitment to global health and our role in driving equitable access to critical health solutions (ANI, 2023). Our indigenous development of vaccines and administration of over 180 Crore doses is a stupendous achievement and a global benchmark. (PIB, 2022). Covid 19 has renewed our understanding of local vulnerabilities and opportunities in the post-COVID world. It has shown how governments can redesign their primary healthcare systems.

Gearing up for Future

Digital Technologies and tools/techniques implemented for fighting COVID-19 offer an opportunity for India to create a framework for integrated healthcare service. Ganjoo (2023) highlights, "The healthcare industry has recognized a significant opportunity to use technology to improve critical processes that pose a significant barrier to delivering high-quality treatment. These include, among others, reaching millions of geographically dispersed Indians, providing better and more accurate diagnoses, managing operations, and promoting efficient collaborations and communications among medical teams and professionals." Technology and healthcare must communicate seamlessly to accomplish the Universal Health Coverage (UHC) goal.

Digital Technologies and tools/techniques implemented for fighting COVID-19 offer an opportunity for India to create a framework for integrated healthcare service.

Dr. Devi Shetty states, "To improve accessibility and affordability to healthcare, our national narrative should change from 'universal healthcare' to 'universal health insurance' which should cover primary, secondary and tertiary care through integrated health insurance. Over 93 percent of our workforce works in the unorganized sector. They must cultivate a culture of Health Savings Accounts and start depositing Rs 100/- a month. It will help individuals to save on medical expenses. No tax should be levied on such savings." Four priorities for reimagining primary

health care are a) adopting a multi-disciplinary team-based approach, b) reforming health care workforces, c) financing primary health care systems, and d) designing integrated health insurance schemes.

Focus on Preventive Health

There is an increasing realization that biomedical procedures alone cannot guarantee better health. Empowering people to increase their control over their health is crucial. Many health sector NGOs emphasize behavioural changes through health literacy efforts and multi-sectoral action to increase healthy behaviors. In this context, Dr. Fernadez, Founder Trustee, Sneha, shared, "To deal with health emergencies that may arise in the future, as well as strengthen equitable delivery of routine health care services to vulnerable populations, we believe bolstering health-promoting behaviours is fundamental. There is a need to encourage community stewardship for preparedness for any health emergency. Optimum usage of effective, efficient, and user-friendly technology should be made to augment in-person interventions. This step would allow health systems to level their capacity and provide better curative service to critical cases."

Biomedical procedures alone cannot guarantee better health. Empowering people to increase their control over their health is crucial.

As people grappled with the physical, social, and economic impacts of Covid 19, mental health was also widely affected. Mr. Rulekar, Program Manager, VRTI, shared, "In view of increased mental health issues (anxiety, stress, mood disorders, and others) among school children during the pandemic, we realized school closures deprived children of social and emotional experiences essential for their development and wellbeing. We decided to network with local schools to provide online counselling services. The realization of convergence between health and school education has helped us design interventions in children's mental health."

Education

The government of India has already launched several E-learning platforms like EDUSAT, SWAYAM, and DIKSHA, which provide free access to e-books and radio channels. These platforms gained visibility during the pandemic. New online programs like PM eVidya, Swayam Prabha TV, provision of e-textbooks were launched during the pandemic (Singh et al., 2021). To prevent the educational crisis from degenerating into a catastrophe, NGOs in the education sector quickly collaborated with public and private partners and adapted to digital tools. Without internet services, they provided alternative ways of delivering classes. For instance, schools in remote areas used loudspeakers and village walls as blackboards, designed tree-top schools, and used community resources to deliver their lessons.

To prevent the educational crisis from degenerating into a catastrophe, NGOs in the education sector quickly collaborated with public and private partners and adapted to digital tools.

NGOs played a significant role in bridging the digital divide. For instance, eVidyaloka Trust designed the eVidyaloka model, which collaborated with Lenovo's SmarterEd. This multilingual platform identified a rural government school needing help and connected them to a suitable teacher virtually. This combated the severe shortage of teachers in government schools and benefitted more than 20,000 children in over 200 remote villages. Through live and interactive classes, children were connected to volunteer teachers worldwide **(**eVidyaloka, 2021**).**

Smile Foundation launched an initiative known as "Shiksha Na Ruke." Through this initiative, children had access to continuous learning through electronic devices. Teachers received training for handling virtual classes. Educational content was curated to suit delivery on digital platforms, and individual mentoring sessions were held for special students.

Pratham launched a daily engagement activity named "Karona, Thodi Masti, Thodi Padhai." This initiative equipped parents to continue their child's learning remotely. Hands-on learning

activities and educational content on various subjects were shared through a series of curated SMS and WhatsApp messages in 11 languages (Bilal, 2020).

Transforming for Future

Despite various challenges, technological innovations in delivering education have shown promising prospects. To remain relevant, schools and future-fit educational institutions in India must reinvent their teaching environments so that digital technology broadens but does not replace the relationship between learners and teachers. Through the help of online machine learning and artificial intelligence, we can easily bridge the learning gap of our students (Lockee,2021). A hybrid form of schooling will help optimum resource use and cater to the need to conserve resources, time, and the environment. Multiple delivery modes will likely remain employed with learners of all ages (Chaudhary, 2022).

Despite challenges, the transformation from offline to online mode of teaching and learning has paved the way for a change in the existing education system.

Despite challenges, the transformation from offline to online mode of teaching and learning has paved the way for a change in the existing education system. In this regard, Pradhan (2022) shares, "The pandemic underscored the importance of health and sanitation. Teachers conveyed to their students that cleanliness is not beneficial for us alone but is required for the well-being of our family and the people around us. The pandemic has compelled us to think that only bookish knowledge, which limits students only to their careers, is not the basic aim of our education system. Instilling life skills in the future citizens of our country should be our prime aim. They should be strong, self-confident, adaptable, and resilient to maintain balance even during difficult times or calamities. They should also be kind, tolerant, and respectful, apart from being able to make decisions during any situation."

Skill Training

Vocational education and training play a crucial role in ensuring the alignment between education and work for the successful

transition of learners into the labour market. While virtual learning offered some educational continuity, technical and vocational programs suffered a double disadvantage because of social distancing norms and the closure of enterprises. As the Nation surged ahead in digitizing work, new industries emerged, creating enormous potential for innovation, creativity, and progress. According to Gayathri Vasudevan, CEO LabourNet Services, the Covid 19 pandemic was a game changer. The skill training sector got an opportunity to innovate and increase its attractiveness by incorporating experiential virtual training to remote placements with employers. NGOs offering skill training showed resilience and creativity and promoted self-employment. They developed teaching methods, quality assurance, and assessment methods, which can no doubt be translated into long-term practice.

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Teachers and learners benefited by upskilling on digital tools and became more independent and resourceful in their approach to learning and work experience. In this context, Mr. Bhaskar Boda from Dr. Reddy's Foundation shared, "DRF is an agile organization. We invested in digital technology and conducted Training of Trainers (ToT) to help us survive the crisis and create something new. This helped in transitioning and managing all key processes of our 'core employability skills' training program online. However, in the case of our healthcare skilling programs, it was difficult for trainers to deliver classes online due to the 'technical' nature of the courses and the practical elements involved. We shared videos to familiarize students and their parents with virtual classes. Parents were encouraged to arrange for smartphones, at least temporarily. The training was made available at a discounted fee, which enabled them to buy the required data packs to avail of the virtual training. We developed short videos on core modules in vernacular languages. The training was virtually given in the first half of the day. The second half was reserved for addressing students' queries through

WhatsApp. The learning management system was designed to upload videos for self-learning and administer assessments. Online meetings with parents and extra sessions scheduled every Friday contributed to achieving good learning outcomes. Our study on virtually-delivered training indicates that 40 percent of our students were comfortable attending the program online. This insight helped us design a digital delivery model, which has been tested at scale with more than 10,000 participants. We have been able to do this without deprioritizing our classroom-led model.

Transformation through EdTech

The World Bank Report (2021) on 'Unleashing the Power of Educational Technology in Tvet Systems' provides context and recommendations on how to unleash the potential of EdTech for vocational training. The report articulates how the pandemic has accelerated learning through new digital learning models such as simulation-based learning, flipped classroom learning through open educational resources (OER); plug-and-play learning, conversational AI; adaptive learning; robotics; blockchain; and gamification. Highlighting the skill mismatch, the report indicates that EdTech solutions can play a crucial role in reskilling, upskilling, and lifelong learning. EdTech models are augmented with dynamic, responsive systems that link employers with learners and with training institutions. This will help to provide rapid, real-time information on the skills students need to be job-ready and offer new customizable methods to deliver those skills. For instance, the Indian company upGrad uses AI to extract data from job ads to predict employability and then suggest to learners the skills they should acquire to improve their employment outcomes.

The World Bank Report (2021) on 'Unleashing the Power of Educational Technology in Tvet Systems' provides context and recommendations on how to unleash the potential of EdTech for vocational training.

Vocational Training & Green Agenda

Most vocational training programs focus on mechanical/technical skills. In the context of growing threats of climate change, the world is moving towards formulating green growth agendas. This

implies that vocational training organizations should develop skills and equip people to work in new climate-friendly occupations (UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training, 2021). Green skills contribute to preserving or restoring environmental quality for a sustainable future, including jobs that protect ecosystems and biodiversity, reduce energy, and minimize waste and pollution.

Climate Change

Changes in precipitation patterns and warming weather conditions has negatively impacted water resources, human health, agriculture, and ecosystems (IPCC, 2022). According to the 6th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), approximately four billion people worldwide live under extreme water scarcity for at least one month per year (Caretta. Et.al, 2022). Therefore, holistic and inclusive adaptation efforts and mitigation actions are necessary to address the challenges posed by climate change.

India is one of the countries most affected by climate change. The threat is especially severe in places where people's livelihoods depend on natural resources. Climate adaptation strategies assume a special significance in these regions for preserving rural livelihoods and promoting sustainable development.

India is one of the countries most affected by climate change. The threat is especially severe in places where people's livelihoods depend on natural resources. Climate adaptation strategies assume a special significance in these regions for preserving rural livelihoods and promoting sustainable development.

Adaptation Strategies

To develop the capacities of people to cope with the current and future impacts of climate change on human and ecological systems, many NGOs like SRIJAN, Haritrika, Balajee Sewa Sansthan, Vivekanda Research & Training Institute, and several others are playing a significant role. They enable people to adapt to climate change by training them in water harvesting and watershed management, adopting integrated farming and climate-smart agriculture practices, and developing community infrastructure to prevent floods. Explaining this further, Nitin Bassi, Programme Lead at the Council on Energy, Environment,

and Water, shares, "From Kerala to Rajasthan, individuals and communities are making efforts to ward off the worst effects of global warming and adapt through solutions. They are embracing nature-based solutions using their traditional wisdom. They are able to mobilize collective action and collaborate with civil society, non-profit organizations, and local governments to build climate resilience."

The Environmentalist Foundation of India uses a holistic approach in its water conservation efforts comprising wildlife conservation and habitat restoration (India Environment, 2021). ISAP is one of India's largest networks of agriculture and allied sector professionals (ISAP India.org). The organization uses ICTs such as mobile phones, radio, TV, and video to disseminate climate change messages among vulnerable populations. During the pandemic, ISAP leveraged itself to help farmer-producer companies (FPOs) to transport their sales in urban establishments collectively (DEF 2020). Watawaran, a new start-up that works with tribals, uses GIS and remote sensing technologies to gather forestry information systems and geo-referenced databases of land tenure (Waatavaran, 2022).

Watawaran, a new start-up that works with tribals, uses GIS and remote sensing technologies to gather forestry information systems and geo-referenced databases of land tenure.

To arrest the pace of climate change, SankalpTaru Foundation, Green Yatra, Say Trees, and a few others run plantation drives on a digital platform, making it easier for volunteers to track their planted trees. They use GPS tagging and various other innovative technologies to track the progress of plantation drives. This has many proven benefits, ranging from the power to tackle pollution, ecosystem restoration, and strengthening farmers' livelihoods.

Engaging Children

Climate change and environmental degradation directly threaten a child's ability to survive and grow. To amplify the voices of young people and promote their leadership UNICEF India has designed several interventions to tap the potential and passion of young people and inspire them to be environmental champions. Raman

(2021) has documented innovative approaches designed by UNICEF India in partnership with NGOs and State governments for creating a sustainable environment for children by promoting community and youth-led action on climate change and conservation. For instance, in 2020, in partnership with NGO PRATYeK, UNICEF conducted a Climate Parliament with young climate champions from across India who presented their 'Climate Charter of Demands' to the President of India and Members of Parliament. They presented their request for a clean and green environment.

In collaboration with UNICEF, the Water Supply Department and the Government of Gujarat implemented the Gharna Pani Nu Budget (Water Budgeting) campaign to increase awareness of water conservation among children. The campaign spread across 10,500 schools and trained 65,900 teachers and 1,626,000 students to prepare household water budgets and strengthen their communities to conserve water.

The Youth4Water program designed by UNICEF promotes young people's actions toward securing water for the future and combating climate change. As young 'WASH ambassadors,' the volunteers form Youth4Water clubs to raise awareness on Water, Sanitation, and Hygiene (WASH) and climate change in their colleges. During the Covid 19 pandemic, Youth4Water also became a crucial platform for disseminating COVID-19 awareness campaigns.

In Bihar and Rajasthan, UNICEF has initiated work towards building 'Climate Smart Schools' and 'Green Schools.' UNICEF Maharashtra has involved youth in advocacy activities to hear their voices and understand their perspectives on environmental sustainability and climate change. UNICEF Telangana implemented School Innovation Challenge to encourage design thinking and problem-solving among students in government schools on climate change and the environment.

In collaboration with UNICEF, the Water Supply Department and the Government of Gujarat implemented the Gharna Pani Nu Budget (Water Budgeting) campaign to increase awareness of water conservation among children.

Climate adaptation goals must be integrated with education, skills development, and mass awareness. For this to materialize, firstly, we must mainstream policies and strategies for climate change education. Secondly, environment experts should initiate curriculum integration of climate-related issues. Thirdly to disseminate information across the country in local languages, we need to develop teaching and training materials for educators. Flooding, droughts, landslides, and cyclones have repeatedly destroyed schools and affected children's lives. Hence, there is a need to develop climate-resilient school structures (UNICEF India, 2023). UNICEF India has made some efforts in this direction but needs to scale up substantially.

Green Reboot

Climate change is an uphill battle. It needs to be addressed through adaptation and mitigation efforts. To create a sustainable future, the emphasis should be on developing an economic intervention that generates sustainable jobs and protects natural resources. For instance, restoring forests and mangroves and constructing low-carbon transportation options like cycleways and e-vehicles can create opportunities for sustainable community-based tourism (ADB, 2021). To increase the uptake of green mobility Government of India is creating a robust ecosystem. The Government of India has initiated the Green Skill Development Programme (GSDP) to promote green skills and jobs to develop green-skilled workers with technical knowledge and commitment to sustainable development. The first course was offered for skilling Biodiversity Conservationists (Basic Course) and Para-taxonomists (Advance Course) on a pilot basis in ten districts of India (GSDP (n.d). All these efforts need substantial scaling in the future as it has prospects of generating employment and preserving the environment.

Climate adaptation goals must be integrated with education, skills development, and mass awareness.

In the long run, India must surge its efforts toward building Green Economy. The IFC report "Ctrl-Alt-Del: A Green Reboot for Emerging Markets (2021) highlights, "It is possible to rebuild a

global economy that is more resilient in the face of future shocks such as climate change." The report stresses that India needs to invest in greening existing and future energy infrastructure, building climate-smart cities, and accelerating the "transition to green production practices. The report suggests that a green economy will deliver economic recovery, create millions of jobs, and help achieve the goal of limiting global temperature rise to well below 2 degrees Celsius.

Discussion

Global environmental risks like climate change, environmental degradation, and pollution weaken the natural foundations supporting the SDGs (UNEP, 2021). These risks deter efforts taken for poverty reduction (SDG1), food security (SDG 2), human health (SDG 3), education (SDG 4), water security (SDG 6), livelihoods (SDG 8), and safety of physical infrastructure (SDG 9) (Nerini et al., 2019). Environmental crises lead to migration and competition for natural resources (World Economic Forum, 2020), jeopardizing the development of peaceful and inclusive societies (SDG 16).

India needs to invest in greening existing and future energy infrastructure, building climate-smart cities, and accelerating the "transition to green production practices.

The global SDG agenda rests on human capital (SDGs 1 – 5), physical capital (SDGs 8 and 9), natural capital (SDGs 14 and 15), and social capital (SDGs 10 and 16). Moving ahead, we must create pathways that provide equitable economic growth and sustainable use of natural resources.

The health crisis and socioeconomic recession resulting from COVID-19 have severely impeded SDG progression in India. Discussing the state of affairs in India caused by the pandemic, Ghosh (2022) states, "From the pandemic-induced economic pandemonium, India has to rise like a phoenix to realize the US$10-trillion economy dream". According to Ghosh, we will need higher investments in health and education by inducing human and physical capital. However, there should be no compromise on the sustainability of the natural capital.

He further articulates that we need to make efforts to reduce inequality in all forms for long-run growth prospects.

According to Economic Survey 2022-23 tabled in the Parliament, developing social sector infrastructure will be the key to achieving the goal of more equitable economic growth in the country. We require broad-based, inclusive social policies supported by adequate financial resources to facilitate equitable development and a sustainable future. Accordingly, there has been an increase in social sector expenditure outlay for 2023 from the Centre and State Governments to Rs 21.3 lakh crore.

The pandemic has challenged many of our orthodoxies from the past. It has reminded us that we must continually learn to adapt to today's crisis and prevent the next one. The fundamental lesson the Indian government has learned during the Covid 19 pandemic is that managing a grave national crisis requires healthy stakeholder cooperation. NGOs have learned lessons related to rebuilding their operations, developing innovative practices, building community governance, partnerships, and accelerating the adoption of digital solutions. The pandemic has spurred corporations to protect lives, livelihoods, and the environment. It has also allowed them to reflect and realign priorities to help the underserved through CSR programs that have relevance, impact, and scale. Each sector has realized that a "siloed" approach may lead to unsustainable choices and pathways that would make it more challenging to respond to future shocks and achieve the SDGs. To build a better world and sustainable future, efforts from all stakeholders, including the government, corporate, and NGO sector, is crucial.

NGOs have learned lessons related to rebuilding their operations, developing innovative practices, building community governance, partnerships, and accelerating the adoption of digital solutions.

Conclusion

The economic and social disruption caused by the pandemic devastated the resource-constrained communities in India. They lacked access to food, medical facilities, and a clean environment. The health crisis identified severe gaps in social infrastructure.

To augment the efforts taken by the government, NGOs catalyzed innovations and transformed their operational models to provide relief and recovery measures to reach out to vulnerable communities.

NGOs strengthened the health infrastructure by establishing oxygen plants and supplying mobile medical vans, medicines, and medical and diagnostic equipment. Health literacy programs were used to promote a shift in behavior among community members to prevent the spread of infection. NGOs bridged the digital divide in the education sector and promoted alternative learning methods, emphasizing the need for life skills and adaptable education systems. Skill training programs were significantly transformed by incorporating virtual learning and experiential training. To sustain the agricultural incomes of small and marginal farmers, NGOs trained farmers to adapt to climate change by developing their knowledge and skills in water conservation, watershed management, climate-smart agriculture practices, and market connect.

It is evident that India effectively handled the health emergency despite numerous challenges. Lessons from the pandemic should form the foundation for charting the path for the future. In the post-COVID world, India must strengthen its social infrastructure by embracing innovative strategies, leveraging digital technologies, promoting preventive health, transforming education, and addressing climate change issues. To facilitate equitable development and a sustainable future, there is a need to develop broad-based inclusive social policies, mobilize financial investments, and foster multi-stakeholder partnerships.

References

ANI. (2023, April 19). India believes in democratised access to all digital health solutions: Mansukh Mandaviya. The Times of India. https://timesofindia.indiatimes.com/india/india-believes-in-democratised-access-to-all-digital-health-solutions-mansukh-mandaviya/articleshow/99603619.cms?from=mdr

Asian Development Bank (2021, July 8). A green economic reset will deliver an inclusive, lasting recovery for Asia and the Pacific. Asian Development Bank. https://www.adb.org/news/features/green-economic-reset-will-deliver-inclusive-lasting-recovery-asia-and-pacific

Bain Iain (n.d). Tech-based Vocational Learning Evolves with the Times. https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/insights/tech-based-vocational-learning-evolves-with-the-times

Banerji, D., & Shukla, R. (2021, August 30). *Lessons for non-profits from the COVID-19 pandemic | IDR*. India Development Review. Retrieved May 26, 2023, from https://idronline.org/lessons-for-nonprofits-from-covid-19/

Bilal, S. (2020, December 19). Thodi Masti, Thodi Padhai: The Pratham response to Covid. Kashmir Reader. Retrieved May 26, 2023, from https://kashmirreader.com/2020/12/19/thodi-masti-thodi-padhai-the-pratham-response-to-covid/

Caretta, M.A., A. Mukherji, M. Arfanuzzaman, R.A. Betts, A. Gelfan, Y. Hirabayashi, T.K. Lissner, J. Liu, E. Lopez Gunn, R. Morgan, S. Mwanga, and S. Supratid, 2022: Water. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the IPCC Cambridge University Press.

Chaudhary Abha. (2022, June 29). *Post-Covid, schools are not the same and hybrid learning is the new norm.* The Times of India. https://timesofindia.indiatimes.com/city/patna/post-covid-schools-are-not-the-same-and-hybrid-learning-is-the-new-norm/articleshow/92536375.cms

Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 551-712, doi:10.1017/9781009325844.006.

Def (2020, April 27). Episode 2: Supply-chain bottleneck amid country-wide lockdown. Digital Empowerment Foundation, DEF. https://www.defindia.org/episode-2/

Da Silva, L., & Robins, E. (2023, May 22). A green reboot for cities: Strategies for post-COVID growth. *World Bank Blogs*. https://blogs.worldbank.org/climatechange/green-reboot-cities-strategies-post-covid-growth

eVidyaloka. (2021, August 2). Bringing the school to every child's home. https://blog.evidyaloka.org/index.php/2021/07/31/bringing-the-school-to-every-childs-home/

Ganjoo, C. (2023, March 6). What role can technology play in improving the health infrastructure of India. Times of India Blog. https://timesofindia.indiatimes.com/blogs/voices/what-role-can-technology-play-in-improving-the-health-infrastructure-of-india/

Ghosh, N. (2022, March 22). Towards a 10-trillion-Dollar Indian Economy based on the SDG agenda. ORF. https://www.orfonline.org/expert-speak/towards-a-10-trillion-dollar-indian-economy-based-on-the-sdg-agenda/

GSDP (n.d) *Green Skill Development Programme*. (n.d.). http://www.gsdp-envis.gov.in/

Hafeez, S. (2022). 10 NGOs which have revolutionised healthcare in India. *Give's Blog*. https://give.do/blog/10-ngos-which-have-revolutionised-healthcare-in-india/
https://www.timbremedia.in/the-meaning-of-reinvention-in-the-post-covid-19-world/

India Environment. (2021, January 14). Home - Environmentalist Foundation of India. Environmentalist Foundation of India. https://indiaenvironment.org/

IPCC (2022). Climate Change: Impacts, Adaptation and Vulnerability. Working Group II contribution to the Sixth Assessment Report of the Intergovernamental Panel on Climate Change; IPCC: Cambridge, UK; New York, NY, USA, 2022; ISBN 9781009325844.

ISAP India Foundation (n.d). https://isapindia.org/

Khojasteh, D., Davani, E., Shamsipour, A., Haghani, M., & Glamore, W. (2022). Climate change and COVID-19: Interdisciplinary perspectives from two global crises. *The Science of the total environment*, *844*, 157142. https://doi.org/10.1016/j.scitotenv.2022.157142)

Le Got Claude Vivier (n.d). *The impact of COVID: the opinion of NGOs - Education* - Education. https://www.coe.int/en/web/education/the-impact-of-covid-the-opinion-of-ngos

Lockee, B. B. (2021). Online education in the post-COVID era. Nature Electronics, 4(1), 5–6. https://doi.org/10.1038/s41928-020-00534-0

Nerini FF, Sovacool B, Hughes N et al. (2019) Connecting climate action with other Sustainable Development Goals. Nat Sustain 2:674–680. https://doi.org/10.1038/s41893-019-0334-y

UNICEF India (2023, April 17).*Paving the way for a climate resilient education system (India)*. (n.d.). UNICEF. https://www.unicef.org/documents/paving-way-climate-resilient-education-system-india

PIB. (March, 20, 2022). Vice President addresses 8th Annual Summit of the NATHEALTH, Vice President's Secretariat. https://pib.gov.in/PressReleseDetail.aspx?PRID=1810512

Pradhan Seema (April 13, 2022). Changes in education system after Covid-19 pandemic. *The Times of India*. https://timesofindia.indiatimes.com/education/online-schooling/changes-in-education-system-after-covid-19-pandemic/articleshow/90825692.cms

Raman K (2021).Community and youth led action on climate change and conservation. UNICEF India. https://www.unicef.org/india/stories/community-and-youth-led-action-climate-change-and-conservation

Sane A (2021, October 18). *People Matters - Interstitial Site — People Matters*. People Matters. https://www.peoplematters.in/article/employee-engagement/importance-of-skill-transformation-in-post-covid-workforce-31307

Singh, M., Adebayo, S. O., Saini, M., & Singh, J. (2021). Indian government E-learning initiatives in response to COVID-19 crisis: A case study on online learning in Indian higher education system. *Education and information technologies*, *26*(6), 7569–7607. https://doi.org/10.1007/s10639-021-10585-1

SUMMARY OF THE ECONOMIC SURVEY 2022-23. (n.d.). https://pib.gov.in/PressReleasePage.aspx?PRID=1894932#:~:text=Nirmala%20Sitharaman%20tabled%20the%20Economic,ADB%20and%20by%20RBI%2C%20domestically.

The Statesman. (2021, September 29). Shiksha Na Ruke initiative. Retrieved from https://www.thestatesman.com/tag/shiksha-na-ruke-initiative

Thomas Sony (2022, February, 25). *World NGO Day: Role of partnerships in building an inclusive, resilient post-pandemic India.* Down to Earth. Retrieved from https://www.downtoearth.org.in/blog/governance/world-ngo-day-role-of-partnerships-in-building-an-inclusive-resilient-post-pandemic-india-81703

UNEP (2021) Making Peace with Nature—a scientific blueprint to tackle the climate, biodiversity and pollution emergencies. UNEP Secretariat, Nairobi. https://www.unep.org/gan/resources/report/making-peace-nature-scientific-blueprint-tackle-climate-biodiversity-and-pollution.

UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training. (2021). Skills Development and Climate Change Action plans Enhancing TVET's contribution. https://unevoc.unesco.org/pub/skills_development_and_climate_change_action_plans.pdf

Waatavaran. (2022). Home - Waatavaran. Waatavaran - Waatvaran Exists to Take Tangible Action to Protect the Planet and Vulnerable Communities. https://waatavaran.in/

World Bank Report (2021). Unleashing the Power of Educational Technology in Technical and Vocational Education and Training (TVET) Systems. World Bank Publications. Retrieved fromhttps://thedocs.worldbank.org/en/doc/61714f214ed04bcd6e9623ad0e215897-0400012021/related/EdTech-Report-FIN2-web.pdf

World Economic Forum (2020) The Global Risks Report 2020. World Economic Forum, Geneva. https://www.weforum.org/reports/the-global-risks-report-2020.

Section II

The section underscores the significance of NGO engagement as a driving force in overcoming the multifaceted challenges brought forth by the pandemic. The six articles in this section describe the strategies deployed to build resilience and the impacts created by NGOs engaged in Health, Education, Skilling, and Environment sector during the global health crisis.

Community Health Insurance: Case Study of Annapurna Pariwar

Abstract: *Microinsurance refers to the provision of insurance services to low-income populations. Vulnerability to minor events is a significant characteristic of poverty. In such cases, financial protection can be of great help, and micro-insurance provides such protection at an affordable cost for the insured. Annapurna Pariwar is a developmental organization implementing a community-based micro-insurance program providing insurance services to low-income households. It is significant for several reasons. Firstly, it offers financial protection for low-income families against adverse events, such as sickness or hospitalization, leading to further impoverishment. Secondly, it is client-driven, allowing members to have a say in premium rates, healthcare providers, and claim approvals. This approach helps to build trust and foster ownership among members, leading to increased participation and utilization of the program. Thirdly, the program's affordability makes it accessible to those who might not have been able to afford conventional insurance policies.*

The article describes the health insurance scheme and its usage by the beneficiaries of Annapurna Pariwar. The health insurance data for 2020 for the Pune region has been analyzed based on various parameters like the number of claims settled, the geographical distribution of shares, the claim amount disbursed, etc. The findings indicate that due to the COVID-19 pandemic, emergency claims were found to be a little over 1/3rd of the total claims. Due to medical emergencies, beneficiaries had to avail of healthcare from non-network hospitals. This can be attributed to the non-availability of hospital network information to beneficiaries or concerns related to the proximity of network hospitals or the availability of beds. This indicates that Annapurna Pariwar will have to create more awareness among the beneficiaries about accessing healthcare through network hospitals and consider expanding its network to onboard new hospitals located in the residential vicinity of the beneficiaries.

The findings can contribute to understanding microinsurance programs, with implications for other community-based health insurance programs nationwide. The article is based on the project handled by Mr. Malhar Mankar during his We Care Civic Engagement internship with Annapurna Pariwar in February 2022.

Introduction

Health and development are inextricably linked. Ensuring healthy lives and promoting well-being at all ages is essential to sustainable development (Nunes, Lee, & O'Riordan, 2016). India spends only 1% of its GDP on health; consequentially, public healthcare infrastructure needs to be more robust, strong, and underfunded (Berman & Ahuja, 2008). There is over-reliance on private healthcare. Lack of access to free treatment forces low-income people to borrow money or sell their property and assets to meet health expenses (Murdoch, 2006). Many are pushed to extreme poverty and financial catastrophe because of out-of-pocket health expenses (Roth et al., 2007; World Health Organization, 2022). Out-of-pocket expenses in India are estimated to be 62.6% of total health expenditure - one of the highest in the world. Lack of health insurance and inadequate coverage are important reasons for high out-of-pocket health expenditures (Sriram & Khan, 2020).

Health and development are inextricably linked. Ensuring healthy lives and promoting well-being at all ages is essential to sustainable development

One of the crucial components of SDG-3 is "Universal Health Coverage" (UHC), which signifies that all people should have access to quality health services when in need without facing any financial hardship. UHC plays a fundamentally important role in promoting equitable access to health. Over-reliance on direct payments, when people need care is a crucial barrier to achieving universal health coverage (Nandi & Schneider, 2020). Community insurance presents a workable model for providing insurance in resource-poor settings by emphasizing accountability and local management (Aggarwal, 2010). Micro Insurance helps bridge this gap and provides insurance coverage to the population that cannot afford commercial health insurance (Bhat et al., 2017). Microinsurance is insurance for low-income people that covers them for such financial risks (Radermacher & Brinkmann, 2011). It plays a significant role in ensuring that the household does not become further impoverished when a family faces a financial crisis. (Ito & Kono, 2010).

To pursue the goal of UHC Government of India and the state governments have launched targeted health insurance schemes like The Rashtriya Swasthya Bima Yojana, Pradhan Mantri Jan Arogya Yojana, Pradhan Mantri Suraksha Bima Yojana, Mahatma Jyotiba Phule Jan Arogya, Karunya Health Scheme, and others to bring quality health care within poor people's reach. These schemes have failed to capture significant numbers of eligible BPL households and as they have been limited mainly to the below-poverty-line (BPL) population, and they have mostly left out the country's sizeable near-poor and above-poverty-line populations (Karan, Yip, & Mahal, 2017), 2017). In this context, NGOs have mobilized communities to implement risk-pooling mechanisms to enhance access to quality health care and protect households from high OOP health expenditure.

NGOs have mobilized communities to implement risk-pooling mechanisms to enhance access to quality health care and protect households from high OOP health expenditure.

Annapurna Pariwar is one such organization that runs a micro insurance program. The organization had a well-functioning credit program that provided small loans to its members. Any sickness or related incident affected its members' ability to earn and thus repay the loan. Hence, to overcome the challenge of non-payment of loans due to medical expenses, Annapurna Pariwar added a micro-insurance service to its community (Annapurna Pariwar, 2022). This project attempts to study the overcall claim analysis of Annapurna's microinsurance program.

About the Organization Annapurna Pariwar

Annapurna Pariwar is a group of non-profit institutions empowering poor working women in the urban slums of Mumbai and Pune, serving more than 1,00,000 families (Annapurna Pariwar, 2022). Its main aim is to empower poor women and their families in terms of finance, education, and health. Based on the community's needs, Annapurna set up a group of six developmental organizations working in microfinance, micro insurance, daycare, education, and training (See Table 1).

Table 1: Annapurna Pariwar organization and services

S. No	Name of organization	Year of establishment	Services provided
1	Annapurna Mahila Mandal, Mumbai	1975	Educational sponsorship for children of single mothers
2	Annapurna Mahila Coop Credit Society Ltd.	1986	Microfinance for poor population
3	Annapurna Pariwar Vikas Samvardhan	2003	Community-based insurance program
4	Dada Purao Research and Training Institute	2003	Research on microinsurance, microfinance, providing training, and publication
5	Vatsalyapurna Swayamrojgar Seva Co-op. Society	2007	Daycare centers for children of working mothers
6	Purna E-Solution Foundation	2008	Providing IT solutions for Annapurna Pariwar

Source: Annapurna Pariwar Website

Annapurna's Micro Insurance

As per the information provided on Annapurna Pariwar's website, the death of a 29-year-old domestic worker in 2000 due to a cardiac ailment and its consequential economic and social impact on the family was a wakeup call for members of Annapurna to think about health insurance. Members expressed the need for health insurance coverage for themselves and their families with affordable insurance premiums and health guidance. A systematic study of available health insurance schemes revealed that no commercial insurer offered an affordable package with proper medical guidance to the poor, illiterate / less educated persons. This formed the genesis to set up a health mutual scheme in 2003 with the actuarial guidance of Mr. François-Xavier HAY from MACIF, France, and Inter Aide, a French NGO (Debnath, 2016). The scheme is India's first health financing initiative formed based on mutuality and collective pooling of health risks. The health mutual operates under Annapurna Pariwar Vikas Samvardhan, registered as a Section-8 company. Being a non-commercial entity, the purpose was to give health guidance in addition to financial help at the time of sickness. It was also aimed that if there are no claims, the money should stay with the mutual fund so that the

members own the profits. This reserve fund can be utilized to provide better coverage for sick members (Annapurna Pariwar, 2022).

Annapurna's insurance scheme targets informal workers who make up most of India's workforce but are neither served by government-funded health insurance schemes for BPL households nor costly commercial health insurance. The program is collaborative and client-driven. The clients in this approach decide the premium rates, network healthcare providers, claim approvals, and reimbursement rates (Mc Guinness, 2011). See Table 2 for key features of Annapurna Pariwar's Health Mutual Insurance Program and Table 3 for Program Performance.

Table 2: Annapurna Pariwar's Health Mutual Insurance Program

Community-owned and managed	Member-led, with the active participation of members in policy and decision-making, including scheme design and claim settlement. Members' elected Representatives, called Community Representatives, pass/reject claims. They try to settle all genuine claims as per the rule. The rejection rate is meager.
Low annual premium	The contribution made by the members is a minimum of Rs. 220/- per head to a maximum of Rs. 480/- per head
Range of benefits	Inpatient care (hospitalization); consultations and follow-ups; includes one-day discharge for primary care/emergency care needs not requiring hospitalization; discounts on outpatient care, drugs, and diagnostics; and health education and guidance
Data, Claims, and Fund management	Data is recorded and maintained in specialized and customized software. Nidhi card (health card) with family information and photos are provided to each member to avail services from network hospitals.
Claim settlement	Reimbursement-based, or non-cashless, claim settlement, where payment is made within **10-20** days **(figures in 2021, earlier the span was 30-40 days in 2019-2020)** of claim submission. Members must submit claims within **one month** of discharge from the hospital. 100% to 50% Refund for Hospitalization. Minimum Rs. 2,000/- to a maximum Rs. 40,000/- as financial assistance given to the member.
Empanelment of providers	The use of Public hospitals is encouraged. The hospital network is established through memorandums of understanding (MoUs) with private hospitals and letters of association with public and trust-run hospitals. Annapurna Pariwar empanels **more than 300** hospitals to provide healthcare services to its members.

Services offered besides claims	Health care support through a free 24X7 helpline that is trained to Guide the next steps to follow • Free health check-up at Annapurna premises (non-emergency) • Referrals to specialist OPD for concessional rates • Information on facilities at Public or networked Private hospitals • Health card ensures proper treatment at concessional prices • Laboratory investigations at concessional rates • Medicine at concessional rates • Regular client education on precautionary measures • Emphasis on member education to improve healthcare

Source: Created by Authors from information available on Annapurna Pariwar's website

Table 3: Performance: Community-Based Health Insurance Program

Year		2018	2019	2020
Individual on-going members		2,06,252	2,23,033	2,74,012
Contribution collected for claim fund	INR	1,77,21,232	2,28,71,303	2,61,03,961
	USD	2,72,634	3,51,866	3,44,107
Financial Assistance is given to members	INR	1,29,47,282	1,94,35,508	2,23,89,608
	USD	1,99,189	2,78,565	2,95,144
No. of members who received financial assistance		2,999	3,856	4,201
The ratio of Contribution vs. Financial Assistance		73%	85%	86%

Source: Annapurna Pariwar Website

Project Focus

Due to the COVID-19 pandemic, the member's needs for healthcare had increased. In this context, the We Care intern was requested to analyze Annapurna Pariwar's health insurance product database of the Pune region for 2020. The specific objectives of the assignment were:

Objective:

1. To analyze branch-wise data for a) number of claims, b) emergency claims, c) type of hospitals used by members, d) claim amount disbursed, e) out-of-pocket expenses incurred, f) duration of claim settlement, and e) Nidhi Card usage
2. To recommend a few strategies to improve the health access and availability of health care to the members of Annapurna's health insurance scheme.

Methodology

The study was conducted as a descriptive analysis of Annapurna Pariwar's health insurance claim database of the Pune region, which served as the data source for the study. The study aimed to gain insights into the pattern of community members' claims served by Annapurna Pariwar's micro health insurance initiative. The database provided a comprehensive set of data points, such as demographic information, the type of hospital, and treatment for each location/branch. These data made it possible to analyze patterns and trends related to claim utilization among the insured population. The database for the year 2020 was used for the analysis.

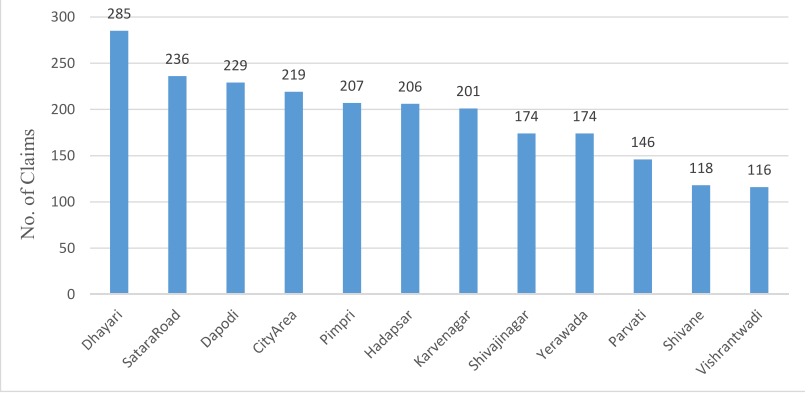
The study used a secondary data collection approach, which involved analyzing and interpreting data already gathered by Annapurna Pariwar as part of their micro health insurance program.

Key findings

Branch wise Claims

Annapurna Pariwar's Health Insurance Program is operated from 12 branches. In 2020 there were in all 2311 claims from Pune Region. Fig 1 indicates that all seven branches had more than 200 claimants. In descending order Dhayari, followed by Satara Road, Dapodi, City area, Pimpri, Hadapsar, and Karvenagar, received more than 200 claims. Discussion with the community representative revealed that the number of claims from a particular location was directly proportional to the number of COVID-19 cases in that area. The COVID-19 pandemic has caused a surge in healthcare demands, particularly in regions where the outbreak was more severe.

Fig 1: Claims: Branch-wise

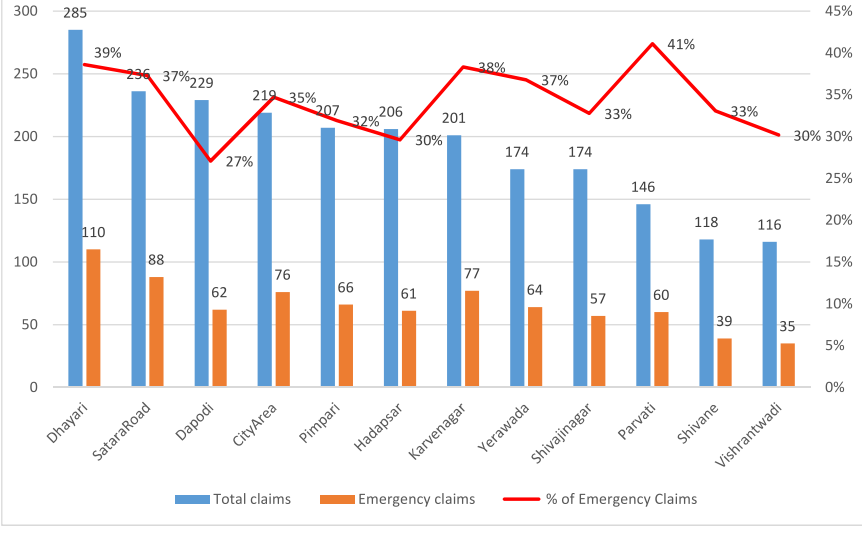


Emergency claims

Members can apply for emergency claims to cover medical treatments and hospitalization expenses to prevent catastrophic health expenditures during sudden medical emergencies. During the pandemic outbreak, COVID-19 treatment was included in emergency claims. The data observes that from 2311 total claims, a little over 1/3rd (34%) accounted for emergency claims.

Dhayari branch had the highest number of emergency claims in absolute numbers, followed by Satara Road and Dapodi (See Fig 2). However, the percentage of emergency claims to total claims in various branches were Parvati (41%), Dhayari (39%), Karvenagar (38%), and Satara Road (37%) were above 1/3rd of the total claims.

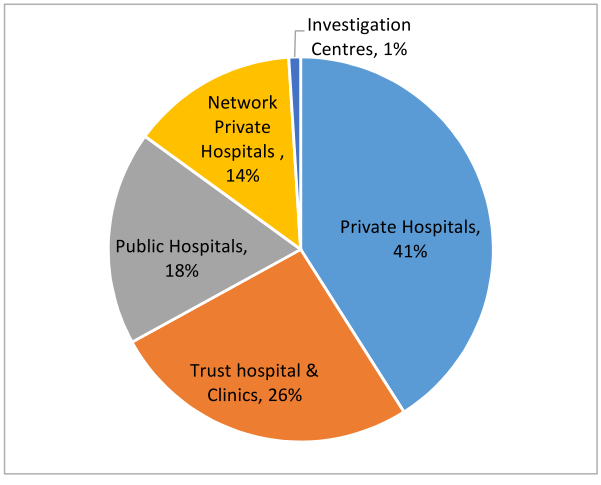
Fig 2: Total v/s Emergency claims



Claims: Network & Non-network

Annapurna Pariwar has developed a formal network with public and private hospitals to enable members to access and avail of affordable healthcare facilities. The data in Fig 3 indicates that 41 % of claims made in 2020 were from non-network private hospitals. Further discussion with community representatives revealed that members had accessed medical assistance from the closest non-empaneled healthcare facility near their residential location in case of emergency.

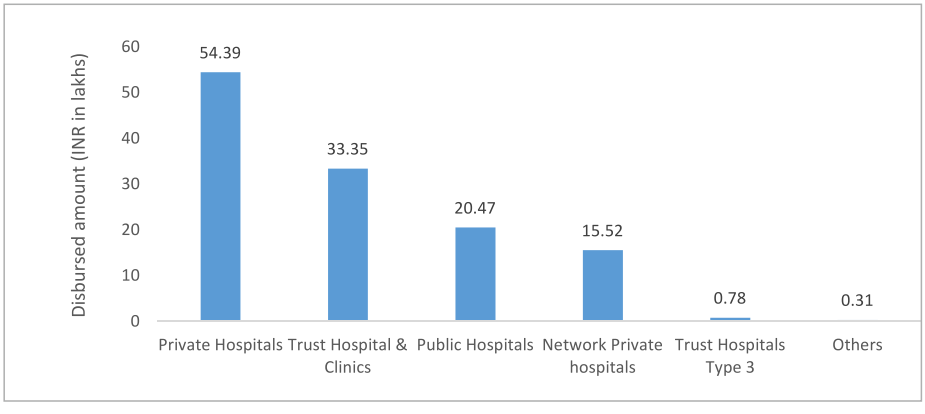
Fig 3: Claims: Hospital Type



Claim Amount Disbursed

Discussion with Annapurna Pariwar's staff revealed that due to the peak of the COVID-19 pandemic in 2020, members could avail of healthcare from non-network private hospitals, and the claim disbursement limit was also increased. Consequentially it led to significantly high claim disbursal. Fig 4 describes the distribution of claim amounts across various types of hospitals and healthcare facilities.

Fig 4: Claim Amount Disbursed (2020)

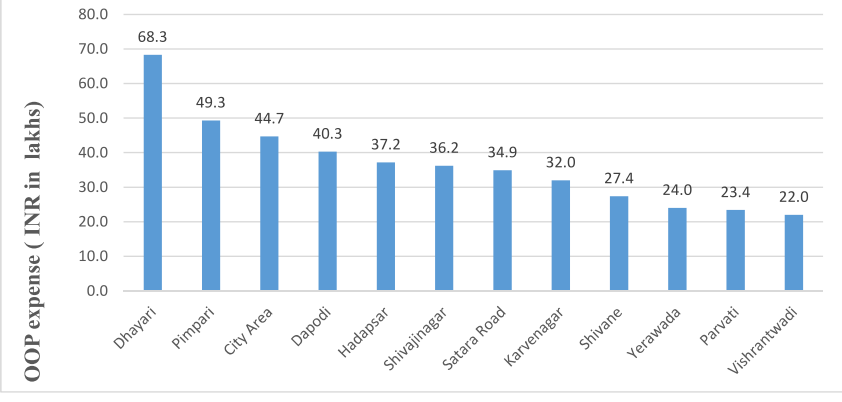


The total claim amount disbursed in 2020 was **1.25 Cr** compared to **1.18 Cr** in 2019. Data observes an increase of **5.93**% in claim disbursal in 2020 compared to 2019.

Out of Pocket expenses (OOPE)

Due to COVID-19 infection and other related ailments, many members had to access non-network private hospitals and incur out-of-pocket expenses. The total amount of OOPE across all branches in 2020 was Rs. 4.39 Cr. OOPE was found to be proportional to the total claims made by each branch. It can be inferred from Fig 5 that OOPE expenses were higher in Dhayari, followed by Pimpri, City Area, Dapodi, and other branches.

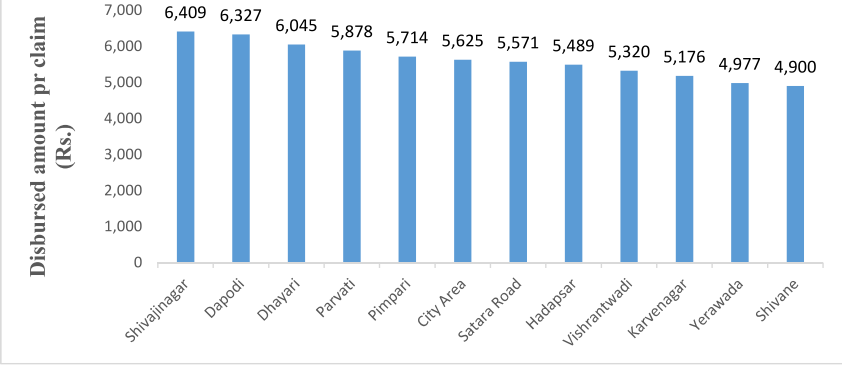
Fig 5: Branch-wise OOP expenditure



Disbursement: Average Claim Amount

The average claim amount 2020 varied between Rs. 4900 to Rs.6409/- across branches. Shivajinagar branch, followed by Dapodi and Dhayari, had average claim disbursement of more than Rs 6000/- See Fig 6.

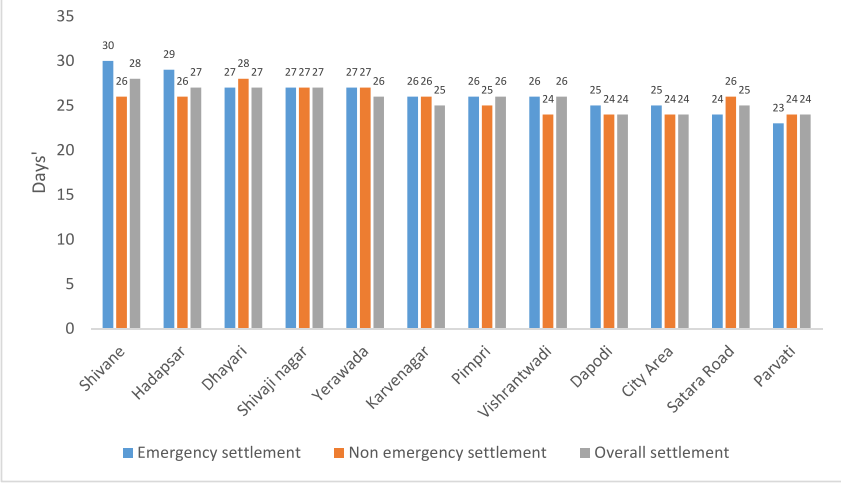
Fig 6: Average Claim Amount Disbursement (2020)



Claim Settlement: Duration

The duration of claim settlement is a crucial component of any insurance plan. As shown in Fig 7, the number of days taken to settle the claims was uniform across all the branches for all types of claims. This can be attributed to the mutual health model adopted by Annapurna Pariwar, where community members are involved in the decision-making process to settle the claim amount and duration. Unlike commercial insurance, where procedures and approvals may cause delays, the community's involvement streamlines accountability and transparency and ensures a uniform timeline across all branches.

Fig 7: Duration of Claim Settlement

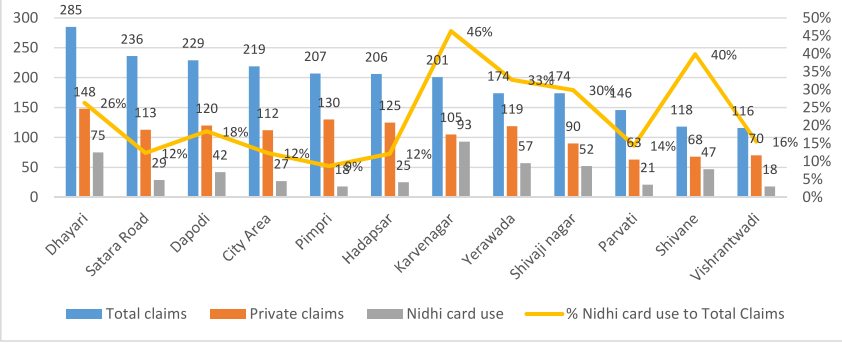


Nidhi Card Usage

Annapurna Pariwar issues a Nidhi Card (health insurance card), an identity proof issued at the time of purchase or renewal of the insurance policy. Members need to present this card at empaneled hospitals to seek cashless hospitalization or reimburse their health claims. The card contains all the relevant details of their health insurance policy, like name, date of birth, policy number, sum insured, date of expiration, and other related information.

Data indicates that across branches highest usage of Nidhi Cards has been found in Karvenagar (46%), followed by Shivane (40%) and Shivaji Nagar (30%). The lowest usage was found in Pimpri (9%), Hadapsar (12%), Satara Road (12%), and Vishrantwadi (16%). This implies that the branches with higher usage of health cards must have popularized the benefits of the Nidhi Card compared to branches with lower usage or might have faced other challenges in accessing healthcare.

Fig 8: Nidhi Card Usage (2020)



Conclusion & Recommendations

Annapurna Pariwar commenced its community-based health insurance to prevent health-related indebtedness among people with low incomes, improve their access to quality care and encourage the participation of beneficiaries to take care of their healthcare. The increased demand for health insurance services among low-income people significantly scaled up its membership from 700 in 2003 to 2,74,012 in 2020. The health insurance model has been sustainable due to various factors like a good hospital network, a democratic decision-making process by the community representatives, and using indigenous software to monitor the data and maintain data transparency. Anecdotal evidence suggests that beneficiaries have better access to quality healthcare facilities, and it has protected families from medical indebtedness.

A few recommendations are proposed based on the analysis of the claim database of Annapurna Pariwar's health insurance scheme. Firstly, Annapurna Pariwar could consider partnering with nearby private hospitals to expand its network and provide coverage for its members. Efforts could be made to educate members about the importance of using network hospitals. This could include targeted messaging and outreach campaigns to raise members' awareness and promote network hospitals' use.

Secondly, Annapurna Pariwar could conduct targeted outreach programs to educate members on the benefits of using the health card (Nidhi card) and increase awareness of network hospitals' availability and location. It could reduce out-of-pocket expenses for members and ensure that they receive quality healthcare services at affordable rates.

Thirdly, Annapurna Pariwar could consider introducing a tiered pricing structure for its microinsurance products, with different premium rates for different levels of coverage, such as emergency claims.

Fourthly, Annapurna Pariwar should work towards digitizing the claims process and creating a user-friendly mobile application for submitting claims. This would make it easier for members to submit claims and reduce the administrative burden on Annapurna Pariwar.

Lastly, Annapurna Pariwar should explore the possibility of partnering with other microinsurance providers and stakeholders to share best practices and improve the overall microinsurance landscape in India. It will enable improving microinsurance uptake in areas beyond Pune and Mumbai. Hence, scaling up to more extensive geography will contribute to improved access to healthcare by economically constrained communities.

References

Aggarwal, A. (2010). Impact evaluation of India's 'Yeshasvini'community-based health insurance program. Health economics, 19(S1), 5-35.Annapurna Pariwar (2020) *Annual report 2020*. Retrieved from https://annapurnafinance.in/wp-content/uploads/2020/10/Annual%20Report%202020.pdf

Annapurna Pariwar (2022). Micro Insurance - Annapurna Pariwar & Mahila Co-operative Credit Society, best NGO in Pune, Annapurna Pariwar. Available at: https://annapurnapariwar.org/micro-insurance/ (Accessed: April 5, 2023).

Berman, P., & Ahuja, R. (2008). Government health spending in India. Economic and Political Weekly, 209-216.

Bhat, R., Menezes, L., & Avila, C. (2017). Annapurna Pariwar community/mutual health insurance program: a case study in Maharashtra India. Bethesda, MD: Health Finance and Governance Project, Abt Associates Inc.

Debnath, K. (n.d.). Chapter 4. In Community-Based Health Insurance:Planting a Seed for Tomorrow's Need (p. 34). Pune: Dada Purav Research & Training Institute. doi:https://annapurnapariwar.org/wp-content/uploads/pubs/Community_Based_Health_Insurance_2016.pdf

Ito, S., & Kono, H. (2010). Why is the take-up of microinsurance so low? Evidence from a health insurance scheme in India. The Developing Economies, 48(1), 74-101.

Karan, A., Yip, W., & Mahal, A. (2017). Extending health insurance to the poor in India: An impact evaluation of Rashtriya Swasthya Bima Yojana on out-of-pocket spending for healthcare. Social Science & Medicine, 181, 83-92.

Morduch, J. (2006). Microinsurance: The next revolution. Understanding poverty, 337-356.

McGuinness, E. (2011). A Case Study of the Client Value of Health Microinsurance—Uplift IA.

Nandi, S., & Schneider, H. (2020). Using an equity-based framework for evaluating publicly funded health insurance programs as an instrument of UHC in Chhattisgarh State, India. Health Research Policy and Systems, 18(1), 1-14.

Nunes, A. R., Lee, K., & O'Riordan, T. (2016). The importance of an integrating framework for achieving the Sustainable Development Goals: the example of health and well-being. BMJ global health, 1(3), e000068.

Radermacher, R., & Brinkmann, J. (2011). Insurance for the poor? First thoughts about microinsurance business ethics. Journal of Business Ethics, 103, 63-76.

Roth, J., McCord, M. J., & Liber, D. (2007). The landscape of microinsurance in the world's 100 poorest countries.

Sriram, S., & Khan, M. M. (2020). Effect of health insurance program for the poor on out-of-pocket inpatient care cost in India: evidence from a nationally representative cross-sectional survey. BMC Health Services Research, 20(1), 1-21.

World Health Organization. (2022). Global monitoring report on financial protection in health 2021: executive summary.

Food Assistance During Covid 19 Lockdown
A Study of Ration Distribution in Delhi NCR Slums

Abstract: *The COVID-19 pandemic has brought unprecedented challenges to the world, affecting all aspects of life, especially vulnerable populations. (Rasul et al., 2021) As part of the efforts to alleviate the impact of the pandemic, numerous NGOs and government agencies have been actively providing relief to the affected communities. One such organization is NIPUN, a Delhi-based NGO working to provide education and healthcare to underprivileged children and women.*

The current article assesses the impact of NIPUN's relief efforts during the COVID-19 pandemic as part of its "Project Sahyog." Data was collected across five locations in Delhi with the help of a survey that covered various aspects of NIPUN's relief efforts, including ration distribution, the support provided, the behavior of frontline workers, and the overall happiness of the beneficiaries.

The findings suggest that the majority of the respondents were affected by the lockdown enforced by the government. Loss of jobs and scarcity of food were the most common problems faced. The ratio provided by NIPUN was perceived to be adequate by a majority of the respondents, with some variations across locations. Additionally, most of the respondents perceived the behavior of NIPUN frontline workers and the overall support provided by NIPUN were good or very good.

The article seeks to contribute to a better understanding of the role of NGOs in addressing social and humanitarian issues during times of crisis. The article is based on the project handled by Mr. Navratan Surana during his We Care Civic Engagement internship with NIPUN in February 2022.

Introduction

As per the reports (WHO, 2020), COVID-19, first reported in December 2019, put the whole world in an unprecedented crisis and lingering uncertainty with innumerable deaths, generalized economic depression, unemployment, quarantine, unavoidable lockdown, and travel ban that was imposed globally as a necessity to tackle the pandemic. Among the populace, the migrants were found to be one of the most vulnerable groups in this lockdown, as their very livelihood came to a complete standstill. (Bhagat et al., 2020). On March 14, the Indian government classified the COVID-19 outbreak as a notified disaster and adopted a

nationwide approach to addressing the situation. The pandemic posed various new challenges for the well-being of people across the country, and the government responded by imposing a phased national lockdown beginning on March 24, followed by a partial unlock phase. To combat the pandemic's effects on vulnerable communities, Prime Minister Shri. Narendra Modi called social welfare organizations and NGOs to provide relief and support to those affected by the pandemic by distributing essential items (medical and protective equipment, ration) to the underprivileged and participating in awareness campaigns promoting social distancing. (Oxford Analytica, 2020). Several NGOs and social developmental organizations played a crucial role in meeting the needs of vulnerable populations during the Covid crisis. This article is based on the project conducted by Mr. Navratan Surana during his We Care internship to study the emergency ration distribution drive conducted by the NGO NIPUN in Delhi NCR under "Project Sahyog" during the second wave of COVID-19 in India.

To combat the pandemic's effects on vulnerable communities, Prime Minister Shri. Narendra Modi called social welfare organizations and NGOs to provide relief and support to those affected by the pandemic by distributing essential items (medical and protective equipment, ration) to the underprivileged and participating in awareness campaigns promoting social distancing.

About the Organization

NIPUN is Delhi based NGO registered in 2005. The organization is dedicated to improving the quality of life for underprivileged individuals living under adverse conditions. It has a geographic presence in Delhi, Uttar Pradesh, Haryana, and Punjab. The name "NIPUN" comes from the Hindi word meaning "skilled" or "expert," reflecting the organization's commitment to empowering communities and building the skills and capacities of those it serves. The organization aims to work with socially and economically marginalized individuals, focusing on being differently abled. The organization recognizes the family as a fundamental unit for the community's overall development. It addresses various social issues in slum areas, such as education, health, self-help groups, gender equity, child development, and the well-being of physically and mentally challenged individuals (NIPUN 2020).

Ninpun's approach involves sensitizing and organizing community members to identify their developmental needs and initiatives, enhancing their skills, utilizing local knowledge, promoting participation, delegating responsibilities, developing linkages, maintaining follow-ups, and providing feedback.

NIPUN'S Project Sahyog

The COVID-19 pandemic has resulted in a global crisis, and governments worldwide have implemented measures to contain its spread. The government implemented an urgent lockdown at both the state and national levels. Initially, the Prime Minister set a one-day practice run for social distancing on March 22, 2020, which was later converted to a 21-day nationwide lockdown (Kaur and Mishra, 2020). While the lockdown was critical in the fight against the pandemic, it adversely impacted the livelihoods and mobility of millions across the country. Migrant laborers leaving cities to return to their respective villages have been particularly affected, and there have been several discussions surrounding the challenges faced by these workers (World Bank). The situation highlights the need for support to mitigate the adverse effects of the lockdown on vulnerable populations. In such a scenario, various NGOs nationwide supported the affected communities.

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NIPUN and several other NGOs played a significant role in providing relief and support during the pandemic. NIPUN conducted various activities to support needy people, including distributing food packets, emergency ration kits, and hygiene kits and providing medical aid and counseling services. They also raised awareness about COVID-19 and how to prevent it through community outreach programs.

Project Focus

NIPUN, through its Project Sahyog, played a crucial role in providing relief aid to those affected by the Covid 19 pandemic in 2020. NIPUN distributed kits in two phases, in May and

September, to areas such as Nihal Vihar, Meera Bagh JJ Cluster, VP Singh Camp, Kapas Hera, and three locations in Noida. NIPUN helped over 2,700 families, feeding approximately 12,500+ people for an average of 23 days. The emergency food kit included essential items such as flour, rice, oil, and sugar. Sanitary pads, masks, and sanitizers were also distributed to beneficiaries.

To assess the impact of its emergency ration distribution drive on the beneficiaries residing in the Delhi NCR region, the We Care intern was requested to carry out a research study with the following objectives:

- To study the demographic profile of the beneficiaries.
- To analyze the impact of the lockdown on the lives of the beneficiaries.
- To examine the impact of the emergency ration distribution drive conducted by NIPUN as part of "Project Sahyog."
- To measure the happiness and satisfaction levels of the beneficiaries regarding project Sahyog.
- To study the perception of frontline workers' behavior during ration distribution

The respondents were selected through stratified sampling, which divided the population into subgroups based on relevant characteristics, such as location, occupation, income, living conditions, native states, and lifestyle.

Methodology

The study used a combination of qualitative and quantitative data collection methods. As shown in Table 1, the sample consisted of 100 respondents from five locations in Delhi NCR. The respondents were selected through stratified sampling, which divided the population into subgroups based on relevant characteristics, such as location, occupation, income, living conditions, native states, and lifestyle. Then they selected a proportional number of participants from each subgroup.

The stratified random sampling technique improved representativeness by ensuring that the sample was drawn from each subgroup and, therefore, more representative of the population as a whole. Stratified sampling also increased

precision by making the sample more homogeneous concerning the characteristic being studied. By selecting a sample from each stratum, the sample was more likely to be composed of individuals who shared similar characteristics, resulting in a more accurate estimate of the parameter of interest.

Table 1: Sample size

S.No.	Location	Number of Families	Interviews Conducted	%
1	Nihal Vihar	600	20	3.33%
2	Meera Bagh	789	32	4.06%
3	VP Singh Camp	396	15	3.79%
4	Kapas Hera	395	11	2.78%
5	Noida	499	22	4.41%
	TOTAL	**2679**	**100**	**3.73%**

We Care student interaction with beneficiaries

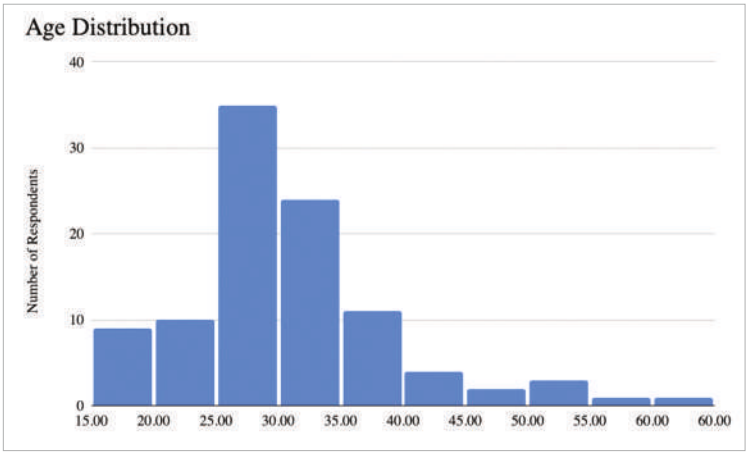
Key findings

Demographic Profile of Respondents

Age

Demographic profiling was conducted to gain insights about the respondents. The data observed that the majority of the respondents were in the 20-40 years age bracket, with an average age of 29.38 years (Fig 1). None of the respondents reported having any physical disability; All respondents possessed an Aadhaar card. In terms of literacy levels, 61% of the respondents were literate.

Fig 1: Age Distribution



Gender

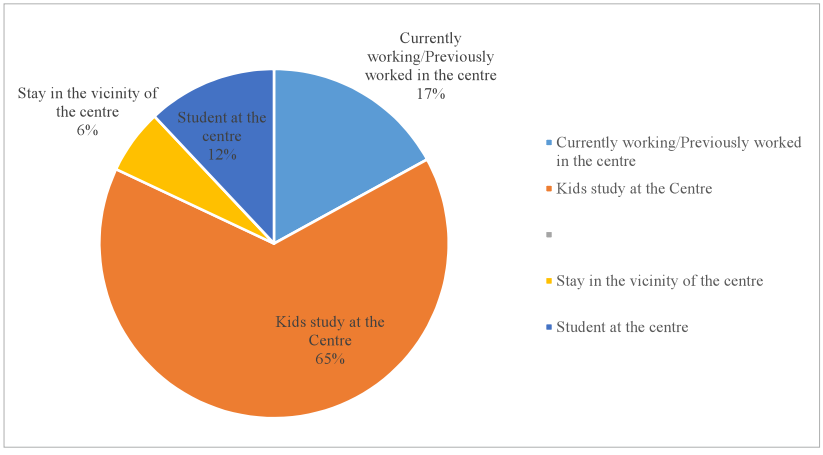
Of the total respondents, 86% were females, 3% were males, and 11% belonged to the transgender community.

Association with NIPUN

Respondents reported being associated with the NIPUN majority in the capacity of being their beneficiary. For instance, 65 percent of the respondents reported that their children were currently studying at NIPUN's Centres, and 12 percent of respondents were students of NIPUN's centers.

The fact that 11% of the respondents had been associated with NIPUN for a long time indicates trust and satisfaction with the organization's work.

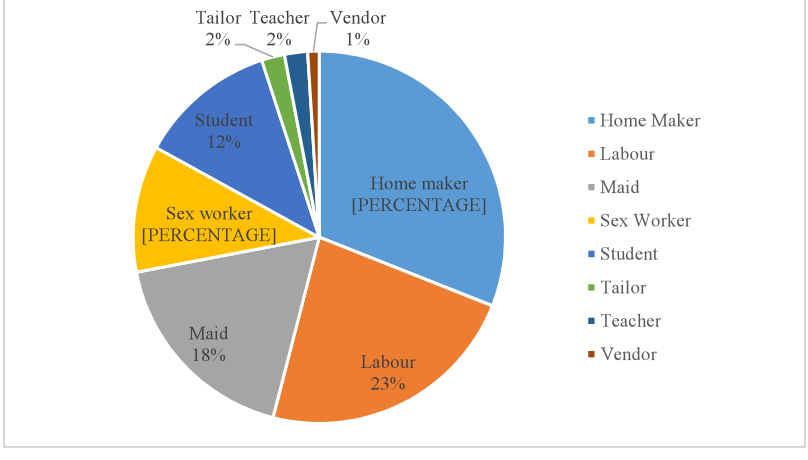
Fig 2: Association with NIPUN



Occupational Distribution

Respondents' had diverse occupational backgrounds and were predominately daily wage earners. (See Fig 3). A little less than 1/3rd were homemakers.

Fig 3: Occupational Distribution

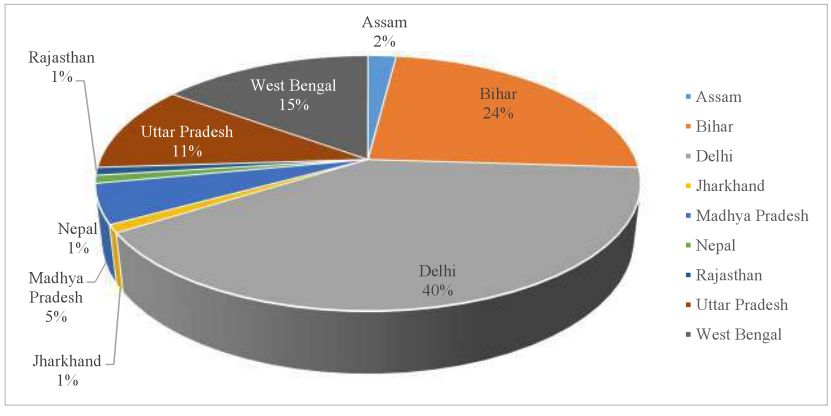


Respondent Distribution by Region

This information provides valuable insights into the geographical distribution of the respondents. It can be used to tailor the programs and services of the NGO better to serve the needs of the communities in different regions. As shown in Fig 4, respondents were natives of nine states. Of the total respondents, little less than one-fourth were from Bihar.

Further analysis revealed that the majority of the residents of Nihal Vihar and Meera Bagh were from Delhi, accounting for 75% and 62.5% of the respondents, respectively. Majority of residents from Noida mobile creche were from West Bengal, accounting for 63.6% of the respondents. Majority of residents residing in VP Singh Camp and Kapas Hera were from Bihar, accounting for 73.33% and 45.45% of the respondents, respectively.

Fig 4: Native Place Distribution



Problems Faced by Respondents during Lockdown

Respondents reported facing multiple problems (See Fig 5). Data suggests that as most of them were daily wage workers, they reported a loss of jobs, income, and food shortage as the most pressing issues faced by the respondents during the lockdown.

Fig 5: Nature of Problem*

Problem	Affected Respondents (%)
Loss of Job	89%
Scarcity of Food	76%
Complete loss of Income	74%
Inability to pay rent	21%
Inability to pay for Gas	19%
Inability to pay utility bills like electricity and water	15%
Reduction in Income	13%
No Problems	13%
Problem in child's education	11%
Sole Income Earner	5%

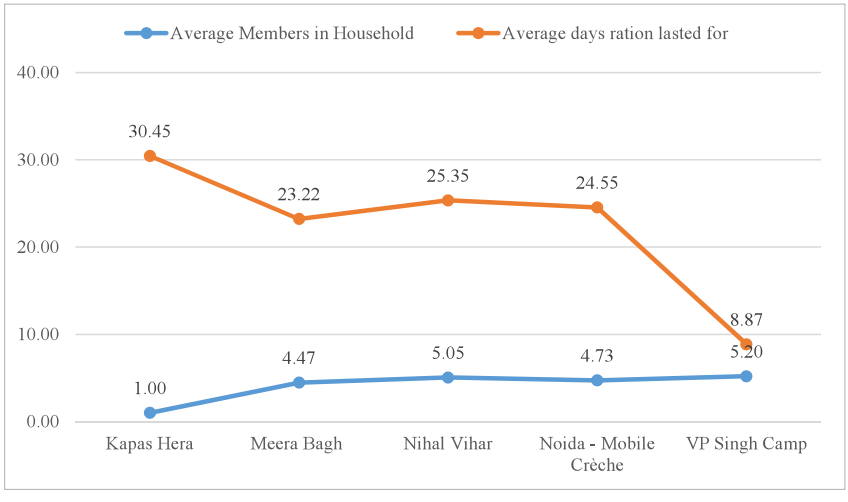
*Multiple Responses ≠ 100

Average Household Members and Ration Durations Across Locations

The data on the number of members in the households and the duration for which the ratio lasted is listed in Fig 6. The data was analyzed and compared across different locations. The average number of household members was highest in VP Singh Camp (5.20), followed by Nihal Vihar (5.05). The average number of members in Meera Bagh was 4.47. The average days the ration lasted were highest in Kapas Hera (30.45 days) and lowest in VP Singh Camp (8.87 days). The overall average number of members in a household was 4.37, and the average duration for which the ration lasted was 22.58 days.

This implies that households with more members had rations that lasted for a shorter duration. Conversely, locations with fewer household members, such as Kapas Hera, had a higher average number of days where the ration lasted for. This suggests that ration distribution policies may need to consider household size to determine the ration quota to be provided.

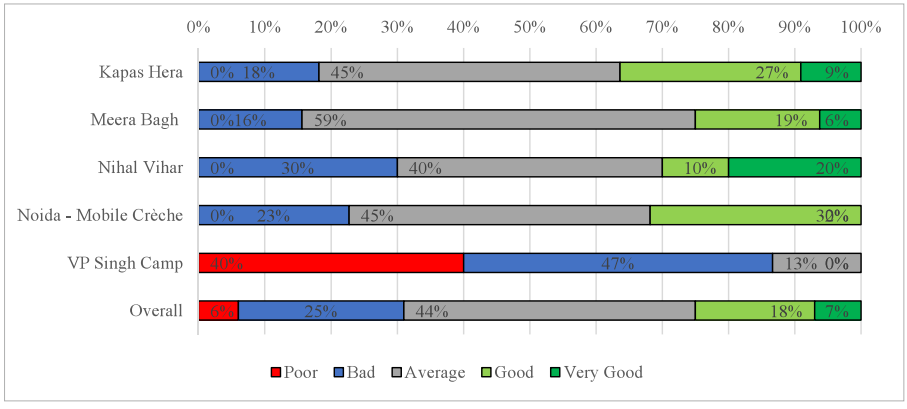
Fig 6: Average Household Members & Ration Durations



Perception of the quantity of ration distributed among the respondents

Respondents shared mixed responses regarding the quantity of the ration received during the lockdown (See Fig 7). Among the total respondents, only 44 percent reported having an adequate quantity of ration. Further analysis revealed that the respondents from VP Singh Camp reported that the quantity of ration was below average (87%). Majority of respondents from Noida mobile crèche (42%) reported that the quantity was above average. These findings suggest disparities in the quality and quantity of ration received by the respondents across different locations.

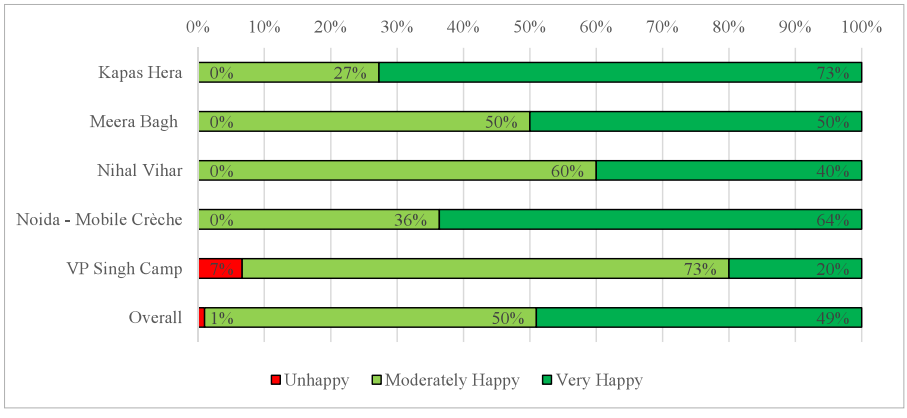
Fig 7: Perception of the Ration Quantity



Overall Happiness with Distribution Drive

The survey included a question about the respondents' happiness with the items distributed during the drive. Overall 49 percent were pleased with the distribution drive. The results displayed in Fig 8 suggest that while the majority of respondents were happy with the distribution drive, there were some variations in satisfaction levels across different locations. When the responses were analyzed by location, it was found that 73 percent of respondents from VP Singh Camp were moderately happy. In contrast, an equal percentage of respondents from Kapas Hera reported that they were very happy with the distribution drive.

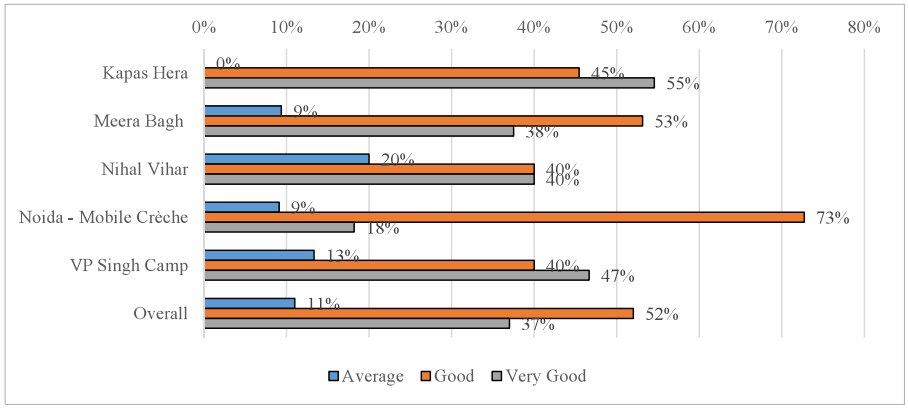
Fig 8: Overall Happiness with Distribution Drive



Behavior of NIPUN Frontline Workers

The behavior of frontline workers during ration distribution plays a crucial role in determining the program's success. Fig 9 indicates that 89 percent of respondents rated the behavior of frontline workers as good or very good. Only 11% of the respondents found it to be average. However, there were some location-wise variations in the perception. For instance, 13 percent of respondents from VP Singh Camp rated the behavior of frontline workers as average, whereas all respondents from Kapas Hera found it to be above average. The positive perception of respondents towards the conduct of NIPUN frontline workers can be attributed to the friendly and respectful attitude of the workers towards the beneficiaries. The workers also provided relevant information and assistance to the beneficiaries. However, the study also suggests that there is scope for improvement in some locations where the behavior of frontline workers was rated as average.

Fig 9: Perception of Respondents



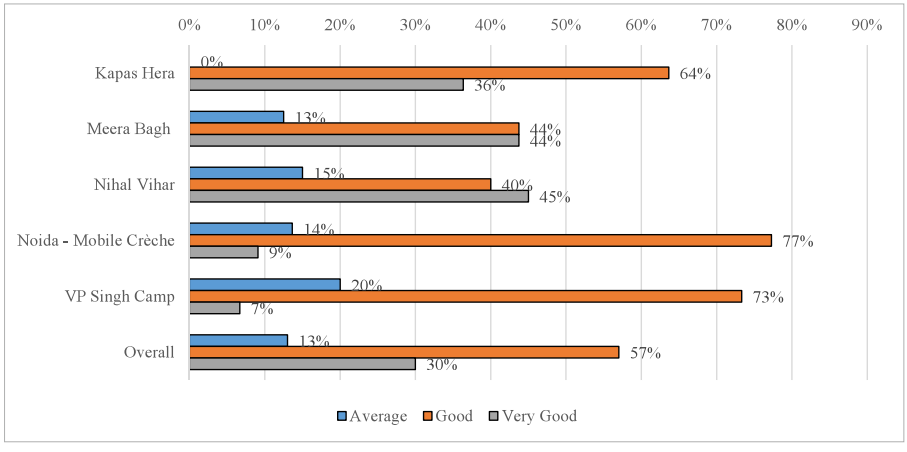
*Multiple Responses ≠ 100

Overall Support Provided by NIPUN

The study also enquired about the overall support provided by NIPUN to date. Overall, the findings indicate that a majority of the respondents were satisfied with the support provided by NIPUN, with a significant proportion rating it as very good. Data presented in Fig 10 indicates that 87 percent of respondents highly appreciated the support from NIPUN.

Further location-wise analysis revealed that respondents of Kapas Hera rated the support as above average. In other locations, 13 to 20 percent of respondents rated the support provided by NIPUN as average. This indicates room for improvement in specific locations, such as VP Singh Camp, where a higher proportion of respondents rated the support as average.

Fig 10: Overall Support by NGO



*Multiple Responses ≠ 100

Recommendations

Based on the findings of the study, several recommendations are made to improve the effectiveness and satisfaction of future distribution drives. Firstly, it is crucial to address the pressing issues faced by the beneficiaries, such as job loss, income reduction, and food shortages. The distribution drives should be designed not only to provide ration but also to support the livelihoods of daily wage workers. Secondly, the analysis of the household size and ration duration suggests that ration distribution policies should consider household size as a determining factor for the ration quota provided. Locations with larger households may require a higher quantity of ration to meet their needs adequately. By incorporating it, the NGO can ensure fair and proportionate ration distribution across different households. Thirdly, the disparities in the quality and quantity of ration received across different locations highlight the need for standardized and consistent distribution practices.

Further, the variations in satisfaction levels across different locations indicate the importance of focusing on the behavior and conduct of frontline workers during ration distribution. Training programs can be implemented to enhance the skills and professionalism of frontline workers, emphasizing the importance of friendly and respectful attitudes towards beneficiaries. Effective communication, providing relevant information, and offering assistance can significantly contribute to a positive perception of the distribution process. Lastly, while the majority of respondents expressed satisfaction with the support provided by the NGO, there is room for improvement in specific locations where a higher proportion of respondents rated the support as average. Conducting further in-depth analysis and gathering feedback from beneficiaries in these locations can help identify specific areas for improvement and address the gaps in the support provided.

Conclusion

The findings of this study highlight the significant impact of the COVID-19 pandemic on the livelihoods and well-being of the respondents. Providing food aid after the disaster is necessary to prevent hunger, particularly in low-resourced and low-income communities. Despite the relatively equitable distribution of food undertaken by NIPUN, a close examination of site operations revealed some areas of concern. The survey indicates the importance of ensuring food availability, uniform distribution, quality, and safety during critical circumstances. Another important function of the NGO staff while distributing immediate aid like food distribution is dealing with the beneficiaries humanely and checking the food quality. Since the distribution of food and food quality is a sensitive issue, it has to be handled with care; hence it is vital to ensure this aspect of food distribution/monitoring.

References

Bhagat, R. B., Reshmi, R. S., Sahoo, H., Roy, A. K., & Govil, D. (2020). The COVID-19, migration, and livelihood in India: challenges and policy issues. Migration Letters, 17(5), 705-718.

India lockdown: First lockdown announced. The Economic Times. (n.d.). Retrieved April 28, 2023, from https://economictimes.indiatimes.com/news/india/one-year-since-a complete-lockdown-was-announced-we-look-back-on-how-india-fought-covid/first-lockdown-announced/slideshow/81662838.cms

Kaur, G., & Mishra, A. (2020). PM Narendra Modi's appeal on fighting against Covid-19: A study. *Journal of Content, Community & Communication*, *12*, 140-149.

NIPUN (https://www.NIPUN.org/)

Oxford Analytica. (2020). Modi will look to philanthropists in the COVID-19 fight. Emerald Expert Briefings, (oxen-db).

Rasul, G., Nepal, A. K., Hussain, A., Maharjan, A., Joshi, S., Lama, A., ... & Sharma, E. (2021). Socio-economic implications of COVID-19 pandemic in South Asia: Emerging risks and growing challenges. Frontiers in sociology, 6, 629693.

World Health Organization. (n.d.). WHO-convened global study of the origins of SARS-COV-2. World Health Organization. Retrieved April 28, 2023, from https://www.who.int/publications/m/item/who-convened-global-study-of-the-origins-of-sars-cov-2

Covid 19 Pandemic & Reflections on Disrupted Schooling

Abstract: *According to a report jointly published by the World Bank, UNESCO, and UNICEF, the current student generation faces a significant risk of losing approximately $17 trillion in lifetime earnings (UN, 2021). This amount represents approximately 14 percent of the global GDP today, directly attributed to the school closures resulting from the COVID-19 pandemic. (Psacharopoulos, et al 2021) This alarming statistic underscores the urgency and significance of comprehending the far-reaching effects of the COVID-19 pandemic-related school closures, an issue that the article seeks to address through student assessments and primary research. This research assesses the extent of learning loss in school children resulting from the closure of schools due to the Covid-19 pandemic. Further, the article aims to provide valuable insights and recommendations for mitigating the learning gaps caused by the pandemic.*

The article underscores the significance of addressing the learning losses caused by the Covid-19 pandemic in relation to Sustainable Development Goal 4, which aims to ensure that all children achieve minimum proficiency in reading and mathematics by 2030. The current article is based on the project undertaken by Mr. Nikhil Kumar Chauhan and Ms. Ann Harsha Varghese during their We Care: Civic Engagement internship with Swadhar in February 2022.

Introduction

In the wake of the COVID-19 pandemic, unprecedented school closures disrupted the education of over 1.6 billion children worldwide, presenting significant challenges to learning continuity (World Bank, 2020). A previous study (Andrabi et al., 2021) analyzing the impact of the 2005 Pakistan earthquake found that children living in the affected areas, where schools were closed for an average of 14 weeks, experienced a significant learning deficit four years later. Comparing these children to their counterparts in unaffected areas, it was discovered that the learning gap was not limited to the duration of school closures but equated to a loss of approximately 1.5 years of schooling. This study is a relevant reference point for understanding the potential impact of the Covid-19 pandemic on children's learning. Drawing parallels between the two situations shows that even a relatively short educational disruption can lead to significant learning setbacks beyond the immediate closure period. Though education systems rapidly adapted to remote learning modalities, concerns about the potential learning losses incurred during this period have come to the forefront (Kuhfeld et al., 2020). Research conducted by UNICEF in India indicates that 80 percent of children had reported decreased levels of learning compared to when they were physically attending school. (UNICEF, 2020) This

negative impact has particularly pronounced for children in urban slums and rural areas. Despite the acknowledgment in India's Economic Survey 2020-21 of the progress made in online schooling during the Covid-19 pandemic (Economic Survey, 2020), these children have been disproportionately affected due to the stark digital divide, which has exacerbated inequalities in both access to and the quality of school education. Therefore, considering the prolonged duration of school closures during the pandemic, it is crucial to recognize the potential magnitude of learning loss and prioritize effective interventions.

About Swadhar

Swadhar, founded in 1983 by Prof. Meenakshi Apte of the Tata Institute of Social Sciences and social activist Mrinal Gore, is an organization dedicated to assisting and counseling distressed women. Initially established in Mumbai, Swadhar expanded its operations to Pune. Recognizing the need to address children's issues alongside women's empowerment, Swadhar transformed into Swadhar IDWC (Institute of Development of Women and Children), broadening its reach and scope. (Swadhar, 2021)

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Swadhar's overall child development program recognizes the importance of empowering mothers for the better future of their children. It focuses on providing a safe and nurturing environment for children aged 3 to 14, involving interventions in schools and communities. The projects under this program include Akshardeep, which aims to provide access to education for underprivileged children, and SCOPE (Strengthening Communities for Preschool Education), a collaboration with Forbes Marshall Company to enhance the quality of pre-primary education in Anganwadis. It has established programs such as MOHOR for providing shelter and care to children of commercial sex workers and Rays of Hope to support children affected by HIV/AIDS. These initiatives ensure the safety, well-being, and education of vulnerable children.

Swadhar's projects have expanded to encompass many initiatives, with an annual outreach to more than 30,000 women, girls, and children. (Swadhar, 2021) Swadhar's core objectives include empowering women, supporting children in need of protection and survival, and promoting the overall development of children, especially the girl child. The organization offers educational assistance to girls from low-income backgrounds, vocational training for school dropouts through Phulora centers, and awareness-raising initiatives for slum-dwelling women and adolescents.

Covid 19 Pandemic

During the pandemic, Swadhar took extensive measures to ensure uninterrupted education for school-going children and implemented development programs for preschool children through online modules. They contacted these children and conducted family counseling sessions over the telephone. Moreover, Swadhar organized awareness generation sessions to keep students and their families informed. They successfully completed an online training program for 16 pre-primary teachers as part of their commitment to teacher development. Despite challenges such as poor connectivity and limited access to digital resources, students attended online classes, completed assignments, and took examinations in online mode. Swadhar even reimbursed data pack charges to facilitate their participation. In addition to their educational efforts, Swadhar provided essential COVID-19 relief materials, including dry ration, thermometers, sanitizers, and oximeters. They also equipped nursing students to become frontline workers and contribute as corona warriors during these challenging times. Through their comprehensive approach, Swadhar demonstrated their dedication to ensuring the well-being and education of students amidst the pandemic.

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Project Focus

The prolonged closure of schools for two years in India resulted in significant disparities in learning opportunities among children, raising concerns about potential learning loss and the non-return of some children to school. After lifting Covid 19 protocols related to the closure of schools, Swadhar decided to map the student's competency level. The organization conducted a baseline assessment with a sample size of 3000 students. The baseline survey was conducted in the schools which had tie-ups with Swadhar. The data collected revealed a considerable gap in learning among these students. To decide further course of action, the We Care interns were asked to conduct a qualitative study to understand the perception of parents and teachers regarding the learning loss among children during the pandemic and behavioral changes among children after resuming offline classes.

The prolonged closure of schools for two years in India resulted in significant disparities in learning opportunities among children, raising concerns about potential learning loss and the non-return of some children to school.

Objective

- To understand parents' and teachers' perceptions of learning losses experienced by children during the Covid 19 pandemic
- To investigate the observed changes in student behavior after resuming offline classes
- To provide recommendations to key stakeholders (NGOs, policymakers, educators) on effective measures to mitigate the learning losses

Methodology

Qualitative Study

A qualitative study was conducted to understand the causes, effects, and potential mitigation measures related to the loss of learning phenomenon. The qualitative study involved in-depth interviews and observations. Key stakeholders, including parents and teachers, were interviewed to gather their perspectives and experiences related to the challenges faced by students and the extent of learning loss. Qualitative interviews were conducted

with parents (n=11) residing in urban slum areas of Pune, primarily consisting of blue-collar workers and homemakers aged 25-45. The study also included insights from two primary school teachers at Shrikant Bhadke Primary School, Pune, and Hutatma Babu Genu Vidyalaya, Pune. By involving diverse perspectives from parents and educators, various insights were gathered on views related to loss of learning, underlying causes, effects, and potential solutions. Data analysis techniques involved thematic analysis, content analysis, and coding to identify patterns, themes, and key findings from the interviews and observations. The findings from analyses were synthesized to provide a comprehensive understanding of the loss of learning in school children.

By involving diverse perspectives from parents and educators, various insights were gathered on views related to loss of learning, underlying causes, effects, and potential solutions.

Key Findings

Parental Perception

The Covid-19 pandemic resulted in an unprecedented and prolonged period of school closures. Closures had learners from pre-primary to secondary levels of schooling. Parental perception about learning loss, online learning, and strategies to overcome learning losses is important in developing parenting skills to assist children in crisis, such as the Covid-19 pandemic.

Learning Loss

Parents acknowledged learning losses, irrespective of their education levels or involvement in their child's education. Educated parents and children with older, educated siblings experienced relatively lesser learning losses, suggesting the positive influence of parental guidance and sibling support. Parents considered themselves primarily responsible for facilitating their child's education, even if they lacked education themselves. Parents also attributed a significant role to school teachers in bridging the learning gaps but felt that efforts from the school's side were lagging. Parents interpreted online learning as

a substitute for offline learning at school. They expected a similar learning process. They hoped that teachers' roles in online learning were the same as those in offline learning. Parents' perceptions of online education were unfavorable because it was time-consuming and interfered with their other economic responsibilities (increasing the family spending on education) and psychological (increasing stress, depression, worry, and so on). They also expressed a lack of awareness about school or government initiatives during the pandemic, suggesting improved communication to engage parents in their child's education.

Parents recognized the crucial role of NGOs like Swadhar in providing regular classes, conducting counseling sessions via telephone, providing parents with guidance and support to effectively navigate the challenges of remote learning, reimbursing data pack charges, and providing covid relief material. However, parents emphasized that the primary responsibility for ensuring access to education lies with schools.

To strengthen students' knowledge base and overcome the learning loss, parents felt that conducting extra classes as part of bridge courses on school premises would be beneficial.

Overcoming Learning Loss

Offline classes were unanimously recognized as more effective than online methods of learning by parents. As parents came from economically deprived strata, they opined that they could not afford private tuition facilities. Hence, to strengthen students' knowledge base and overcome the learning loss, parents felt that conducting extra classes as part of bridge courses on school premises would be beneficial. Additionally, they shared that modifying the course curriculum to include foundational subjects from previous standards would strengthen students' knowledge base.

Teacher's perception

It was clear from teachers' responses that they understood the precarious conditions that families, especially low-income families, faced during the pandemic. Teachers attributed

challenges in online classes due to limited smartphone access, internet connectivity, and effective communication. Some teachers resorted to assigning tasks over the phone due to financial constraints, resulting in the absence of live lectures. Teachers perceived that during the Covid 19 pandemic, students needed to be more productive, with little or no outdoor activity, which reduced their attention span and concentration levels. Lack of accustomed routines and reduced social interaction negatively impacted student motivation and intellectual development.

Swadhar's introduction of offline classes after the partial lifting of lockdown restrictions helped students catch up with their previous curriculum.

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In some schools, special schemes from the government were made available to help students cope with the new normal. E.g., a scheme named *"100 days Reading Campaign (vachan abhiyaan)"* was introduced. It focused on vocabulary building and reading and listening exercises. Teachers opined that despite such government schemes, many schools resumed syllabus as per the curriculum, with no significant revisions. They shared that students were estimated to be approximately one grade behind their current standards. Top performers experienced a decline in performance, while medium-level students witnessed a decrease in learning levels. Classroom behavior changes were observed, including disruptions and reduced participation.

Teachers felt that the vast learning gap resulted from the suspension of offline classes and difficulties accessing online classes. They believed the gap would widen unless corrective measures were taken before students progressed to higher standards. Teachers provided varying responses, ranging from 6 months to 12 months, as a sufficient period to compensate for the learning losses caused by the pandemic.

Bridging the learning loss

According to teachers, school initiatives varied in handling learning loss. By and large, schools took no action to address the learning losses. Few schools implemented government schemes like the "100 days Reading Campaign (vachan abhiyaan)," focusing on vocabulary-building reading and listening exercises. Students were grouped based on academic levels, receiving additional attention as needed. Teachers needed more time and incentives to conduct formal bridge or support classes. Teachers were expected to extend regular class time for additional guidance.

Few schools implemented government schemes like the "100 days Reading Campaign (vachan abhiyaan)," focusing on vocabulary-building reading and listening exercises.

Discussion

Parents were forced to accept online learning as the main alternative for learning during the COVID-19 pandemic but were highly disappointed with the practice of online learning. The family's socioeconomic status is an external variable significantly influencing parents' attitudes toward online learning. They had to bear additional costs for purchasing an internet quota and a gadget or wait for someone to donate the necessary equipment. In many families, only one smartphone is shared among two to three siblings. This created conflicts in the family. A few parents felt that access to the internet as a medium of instruction encouraged children to play rather than learn. Parents interpreted online learning as a substitute for offline learning at school. They expected a similar learning process. They hoped that teachers' roles in online learning were the same as those in offline learning.

Parents' dissatisfaction with online learning outcomes was multiplied by their difficulty in assisting children in learning. Parents with low education needed help understanding the school subjects, especially if teachers did not explain. They felt the school's assistance was inadequate. Difficulties with children's learning behaviors also contributed to conflict between

parents and children at home. Parents felt that online learning made children less disciplined and had low motivation to continue their education. An increase in parent-child conflicts had a detrimental effect on the child's development and was attributed to learning loss. Parent-child conflicts arising from coping with online learning highlight the need for parental education since parental awareness and skills will affect parenting practices in various contexts.

Overall, teachers had slightly positive perception towards virtual teaching. They felt that, to some extent, it did help in reducing the learning gap and enabled children to cope with their education. Nevertheless, they encountered several obstacles in online teaching, such as a lack of electronic gadgets, poor training, technical obstacles, poor internet connectivity, and difficulties in conducting classes, online exams, and assessments. Lack of interaction with students in virtual learning lead to an inability to determine students' psychological and emotional needs. There was difficulty in communicating with learners, an inability to address their doubts, and consequentially retaining them in the virtual classroom.

Parent-child conflicts arising from coping with online learning highlight the need for parental education since parental awareness and skills will affect parenting practices in various contexts.

Recommendations

On average, teachers of any school –whether government-aided and private have a positive opinion of online teaching amidst of COVID-19 outbreak as a the combined view of positive opinion was greater than the negative one for minimizing the learning gap.

It can be inferred from the above discussion that parents and teachers are important, influential entities in a child's life. There is a need for strengthening collaborations between schools and families in local communities to design support activities to ensure children's success in the remote instruction process. Due to the access gap in digital tools and lack of minimal access to

internet services, many children are deprived of online education. Hence, investing in the enabling environment to unlock the potential of digital learning opportunities for all students is paramount. This entails allocating resources to improve digital infrastructure, such as providing devices and reliable internet connectivity, particularly in underserved areas. Additionally, offering training and technical support to teachers and students will enhance their proficiency in effectively utilizing digital platforms for learning purposes.

Additionally, curriculum remodeling is vital to bridge the gap in learning. Foundational concepts from previous classes should be incorporated into the current curriculum, ensuring a smoother transition for students. This can be achieved by introducing new bridge courses and reducing the load of non-foundational subjects. This approach will help students build a strong foundation and enable them to progress effectively.

Curriculum remodeling is vital to bridge the gap in learning. Foundational concepts from previous classes should be incorporated into the current curriculum, ensuring a smoother transition for students.

There should be a focus on capacity building to support teachers in adapting to the changing educational landscape. Government and NGOs should provide training programs and resources to equip teachers with the necessary skills and knowledge for effective online teaching. This includes incorporating online resources and platforms into their teaching methodologies, such as PM e-Vidya and the National Repository of Open Educational Resources.

Furthermore, enhancing communication and involvement between teachers and parents is crucial. Regular meetings should keep parents informed about their child's progress, homework, assessments, and educational broadcasts. This increased engagement will reduce learning losses and ensure a supportive learning environment for students.

In terms of remote learning, educational broadcasts can play a significant role. Utilizing television to deliver audiovisual content can reach households with or without internet access. Additionally, voice calling and Interactive Voice Response System (IVRS) can be employed to engage with students through mobile phone pathways. Shared resources, such as the availability of digital devices in gram panchayat offices, can also be utilized to provide online educational content to students without smartphones or internet access.

Lastly, addressing the emotional and psychological needs of students is crucial. Establishing toll-free helpline services with trained counselors can support students, while teachers should also be trained to identify and address behavioral problems and provide basic counseling. By catering to the holistic well-being of students, we can create a conducive environment for learning and bridge the learning gaps caused by the pandemic.

Conclusion

Parents' perceptions of online learning are influenced by various complex, multi-dimensional factors and the context. It is important to design suitable interventions in developing parenting skills in assisting children in times of crisis, such as a pandemic. Tailored and sustained support is needed to address the learning gaps and promote the well-being of students. We can mitigate these challenges by implementing the recommended strategies and paving the way for a resilient and inclusive education system. Investing in digital infrastructure, strengthening parental involvement, supporting teachers' professional development, reviewing assessments, and allocating sufficient resources to education will contribute to a comprehensive approach to addressing the learning gaps caused by the pandemic. By prioritizing students' well-being and educational needs, we can ensure they are supported to readjust, catch up, and thrive in their learning journey. By investing in the

Investing in digital infrastructure, strengthening parental involvement, supporting teachers' professional development, reviewing assessments, and allocating sufficient resources to education will contribute to a comprehensive approach to addressing the learning gaps caused by the pandemic.

enabling environment, reinforcing parental involvement, supporting teachers, and allocating adequate resources, we can create a resilient education system that ensures every student receives the necessary support to thrive academically and holistically.

References

Andrabi, T., Daniels, B., & Das, J. (2021). Human capital accumulation and disasters: Evidence from the Pakistan earthquake of 2005. Journal of Human Resources, 0520-10887R1.

Brief, U. P. (2021). Education during COVID-19 and Beyond. 2020. *United Nations*.

Economic Survey. (2021). Key indicators. Government of India. (2021). Chapter 10. Government of India.

Kuhfeld, M., Soland, J., Tarasawa, B., Johnson, A., Ruzek, E., & Liu, J. (2020). Projecting the potential impact of COVID-19 school closures on academic achievement. Educational Researcher, 49(8), 549-565.

Psacharopoulos, G., Collis, V., Patrinos, H. A., & Vegas, E. (2021). The COVID-19 cost of school closures in earnings and income across the world. Comparative Education Review, 65(2), 271-287.

Swadhar IDWC Pune (2021). Annual report. https://www.swadharpune.org/Swadhar%20annual%20report%202020-%202021.pdf

UNICEF. (2020). What have we learned?: Overview of Findings from a Survey of Ministries of Education on National Responses to COVID-19.

World Bank. (2017). World development report 2018: Learning to realize education's promise. The World Bank.

Promoting Sustainable Agriculture: Case of Balajee Sewa Sansthan (BSS)

Abstract: *Agriculture remains the primary source of income for India's population, and the majority of India's farmers subsist on small farms. Poor agricultural knowledge, fragmented landholdings, deteriorating natural resources, lack of access to technology, credit, markets, and other factors impact the economic life of small farmers and pose challenges to attaining sustainable development. To increase the incomes of small and marginal farmers, the Government of India has launched various schemes and promoted new arrangements like the formation of cluster farming, farmer's collectives, or producer organizations and collaborated with NGOs and corporations to build supply chains and infrastructure catering to small farmers.*

Balajee Sewa Sansthan (BSS), a leading NGO, provides direct and indirect services to small and marginal farmers in Uttar Pradesh, Uttarakhand, and Bihar districts. Due to the reverse migration triggered by Covid 19 pandemic, people decided to work on their fragmented farmlands. To increase the farm incomes and bring overall development to Kurampur, Kharsiani, Titoli, and Sorha villages of Bareilly District, Uttar Pradesh, the organization trained sixty farmers to adopt the 'Integrated Farming System' (IFS). BSS felt that when the community sees the tangible results of IFS in three years, other farmers would be motivated to adopt sustainable agricultural practices, double their income, and prevent migration. Besides, in the long term, it will also ensure food security and help attain sustainable development. To help the farmers adopt IFS, BSS sought financial support from NABARD.

The article describes the concept of an 'Integrated Farming System' (IFS) and gives an overview of various activities that can be carried out on one acre of land. The estimated financial costs, returns associated with adopting IFS and the need to train farmers to become agriprenuers explains the business logic for adopting IFS. The article is based on the business proposal designed by Mr. Anubhav Rawat, Mr. Devashish Joshi, Ms.Muskan Singhal, and Mr. Fareed Sethi during their We Care Civic Engagement internship with Balajee Sewa Sansthan in February 2022.

Agriculture Sector in India

The share of agriculture in GDP increased to 19.9 percent in 2020-21 from 17.8 percent in 2019-20 (Shagun, 2021). Agriculture, with its allied sectors, is the largest source of livelihood in India and accounts for almost 45. 6 percent of employment in India (Mahapatra, 2021). Smallholders

owning less than 2 hectares of land account for 86% of all farmers in India (Agri-tech… 2021) and contribute 51 percent of agricultural output with 46 percent of operated land and a much higher share (70 percent) in high-value crops (Singh, 2021). According to the Agriculture Census 2015-16, Uttar Pradesh accounted for 23.8 million small farmers, followed by Bihar (16.4 million) and Maharashtra (14.7 million).

It has been observed that Small farms are more efficient, especially in cultivating labor-intensive crops or tending livestock, but land holdings are too small to generate sufficient household income (IDFC Rural Development Network, 2013). “To improve the condition of small and marginal farmers and to double the income of farmers by 2022, the government is realigning its interventions from a production-centric approach to farmers' income-centric initiatives, focusing on better and new technological solutions. These include the implementation of schemes like Pradhan Mantri Krishi Sinchai Yojana (PMKSY), Paramparagat Krishi Vikas Yojana (PKVY), Soil Health Card, Neem Coated Urea, Rainfed Area Development under National Mission for Sustainable Agriculture (NMSA), Pradhan Mantri Fasal Bima Yojana (PMFBY), National Agriculture Market scheme (e-NAM), National Food Security Mission (NFSM), National Mission on Oilseeds & Oilpalm (NMOOP), Mission for Integrated Development of Horticulture (MIDH), Rashtriya Krishi Vikas Yojana (RKVY), National Mission on Agriculture Extension & Technology (NMAET), and related others. In addition, farmers are provided information through Focused Publicity Campaigns, Kisan Call Centres (KCCs), Agri-Clinics and Agri-Business Centres (ACABC) of entrepreneurs, Agri Fairs and exhibitions, Kisan SMS Portal, and others" (Ministry of Agriculture & Farmers Welfare, GOI, 2019). To improve farm incomes government is promoting the adoption of modern technologies and practices like multiple cropping, intercropping, and integrated farming systems. NGOs like Balajee Sewa Sansthan, Uttar Pradesh, are complementing

To improve the condition of small and marginal farmers and to double the income of farmers by 2022, the government is realigning its interventions from a production-centric approach to farmers' income-centric initiatives, focusing on better and new technological solutions.

the efforts of the government to make agriculture more remunerative for small farmers by facilitating behavioral change. Recognizing the contribution made by small farmers in ensuring food security for all, they believe that they need to be nurtured.

About Balajee Sewa Sansthan

Balajee Sewa Sansthan (BSS) is a non-profit organization founded in 2002 in Dehradun which aims to serve ten lakhs of poor urban, semi-urban, and rural marginalized families by 2030. In alignment with its philosophy that every life has equal value and the right to live with dignity, the organization provides need-based services to economically and socially disadvantaged groups. The primary focus areas of its services center around livelihood support for women and farmers, comprehensive rural development, financial inclusion, microfinance, education, eco-tourism, preventive health interventions, and disaster/epidemic relief services. Besides Uttarakhand, BSS has extended its reach to Uttar Pradesh and Bihar. BSS aspires to become one of the most preferred member-centric NGOs in North India by 2030 (BSS,2020). To provide an opportunity for farmers to increase economic yield per unit area by intensifying crop and allied activities, BSS proposed to orient and engage farmers from Uttar Pradesh to a sustainable agricultural system called Integrated Farming Systems (IFS).

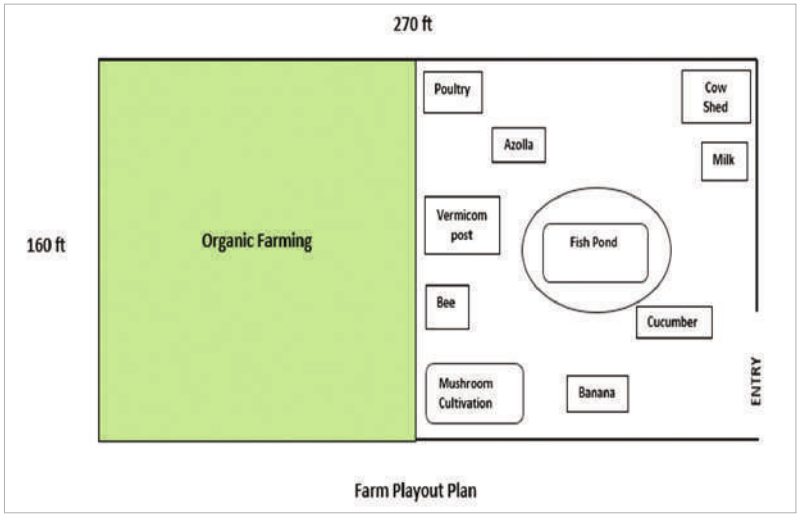
In an Integrated farming system, agriculture can be integrated with livestock, poultry, and fish maintained at the same place to generate employment around the year and earn additional income.

Integrated Farming Systems (IFS)

Integrated farming systems are systems with various synergistic enterprises on a single piece of land, resulting in resource transfer among enterprises (Behera & France, 2016). In an Integrated farming system, agriculture can be integrated with livestock, poultry, and fish maintained at the same place to generate employment around the year and earn additional income. The IFS model efficiently recycles or upcycles farm-work waste to integrate all activities into a system or series of systems.

By considering a rectangular acre for each farmer, as shown in Fig 1, several farm-related cross-dependent activities would be introduced to increase farmers' income flow. The introduction of these activities, coupled with technological innovations, would allow mitigation of risks faced by farmers in Uttar Pradesh due to seasonal changes and disposal of crop residue due to inefficient post-harvest current practices.

Fig 1: Farm Layout Plan



Proposed Project

BSS had seen that the market for most farmer produce, i.e., agricultural products, is competitive. The paramount issue farmers in Uttar Pradesh face is securing fair prices for the sale of their produce as they are exploited by the moneylenders and the mandi. Despite huge demand for agricultural and dairy products most farmers are moving away from agriculture due to lower levels of profit and high expenses. To retain farmers in agriculture, BSS proposed to work on a 'Integrated Farming' project to raise the income of farmers to enhance their livelihood through the adoption of sustainable agricultural practices.

In the above context We Care interns, were assigned to develop a business proposal on 'Integrated Farm Systems' (IFS) to secure funding from National Bank for Agriculture & Rural Development (NABARD). The project deliverables at the end of three years were anticipated to benefit the farmers and the community (See Box 1) and also assist in replicating the IFS model in other villages.

Box 1: IFS Project Deliverables

1. Increased farm productivity and income through cross-dependent activities
2. Creation of additional employment opportunities in the agricultural sector
3. Save 40 to 60 percent of resources in every activity
4. Provide 100 percent household nutritional security for the families of each farmer
5. Reduction in cost of production of feed for livestock
6. Minimization of environmental pollution from the agricultural sector and improvement in the nutritional content of the soil

Proposed Methodology

To execute the IFS project, selecting farmers who believe in innovation and have a learning attitude is crucial. As the adoption of IFS requires behavioral change, the selection of farmers should be inclusive, where both male and female, young and old farmers should have a fair chance of being selected. To begin with, it was proposed to implement the project in Kurampur, Kharsiani, Titoli, and Sorha in district Bareilly of Uttar Pradesh. As a first step, from each village fifteen farmers having land between one to two acres would be selected. All the selected farmers would use one acre of land for IFS. The project would be executed over three years to deliver the deliverables mentioned in Box 1.

Proposed Farm Activities

The total land holding per farmer would be one acre (43,560 sqft). Based on the discussion with BSS staff and a few farmers, the proposed farm layout plan displayed in Fig 1 and the dimension of proposed interventions were decided (See Table 1).

Activity Integration

As shown in Fig 1, around 50% of the total land area would be used for organic farming involving sugarcane, rice, pulses, and wheat crops. The poultry droppings and cattle dung would be collected and used as manure for the fishery pond. The cow dung and farm waste would be collected and used for vermicomposting. Azolla Pond would generate nutritious feed for livestock. Native bees valuable as cross-pollinators would increase yield quantity, so the cages were to be placed close to organic farms. Farm ponds would be dug as a source of storing water which would serve the purpose of irrigation. Full-grown banana plantations could be intercropped with vegetables like peas and soyabeans. These can be grown in vertically. The

interaction of different by-products could be utilized as input for others. For example, the by-product of banana such as suckers, leaves, pseudo-stem fruits, and banana flowers could be used to prepare vermicomposting. Waste from banana trees has a very high potential for utilization as substrate in edible mushroom cultivation.

Table 1: IFS Activity Dimensions

Activity	Description	Approximate Projected Investment	Approximate Projected Income per annum
Dairy Farms	A total of 20 cows and buffaloes will be housed in a single cow shed of 12 ft. x 10 ft. with a height of 8ft. A separate barn about half the size will be reserved for milking operations. The estimated output would be around 220 liters of milk per day.	Rs.29,500	Rs. 90,000
Poultry Farming	Fifty hens will be catered to in a 10ft. x 8ft. poultry shed. The shed will have a cage system of small compartments. Feeders and waterers will be attached to the cages and are supplied through a pipeline. The estimated monthly production would be around 1,500 eggs.	Rs.25,000/-	Rs. 90,000.
Azolla Fern Cultivation[1]	The cultivation will take place in a 6ft. x 4ft. shallow pond with a height of 5 ft. With a harvest of two to three weeks, the Azolla fern can produce about 1 kg of fodder per day, satisfying about 80% of the fodder requirement of the cows and buffalos.	Rs.5225/-	
Vermicomp-osting	Within an area of 48 sq. ft., coupled with layers of cow dung, farm waste, and worms, organic waste is upcycled to rich compost, which can be reused for farming.	Rs.3700/-	

[1] Azolla backyard cultivation is a sustainable technology that generates nutritious feed for livestock.

Activity	Description	Approximate Projected Investment	Approximate Projected Income per annum
Inland Fisheries (Fish Pond)	Creating an artificial tank of 30ft. x 15ft x5 ft to rear fish and other organisms like algae. The fishery can be supplemented by using poultry dropping as fish feed.	Rs. 24,000/	Rs. 60,000/-
Vertical Cucumber Farming[2]	Sow 8.3 grams of cucumber seeds for an area of 240 sq. ft.	Rs. 3268/-	Rs. 30,000/-
Banana Cultivation	The size for a pit of banana plantation requires a dimension of 5ft, giving an area of 25 sq ft. Grow Bananas in an area of 60 sq. ft. Moreover, up to 25-40 kg of bananas come out per plant.	Rs. 6300/-	Rs. 20,000/-
Mushroom Cultivation	In an area of 450 sq. ft., mushroom cultivation can be carried out with the help of paddy straw, wheat straw, and other agricultural residues rich in nitrogen and carbon sources.	Rs. 26,200/-	Rs. 30,000/-
Bee Keeping	Two bee colonies. The beekeeping activity allows for the harvesting and subsequent sale of honey.		Rs. 40,000/-
	Total	**Rs.1,23,193**	**Rs. 1, 80,000**

As shown in Table 2 the total investment per acre of land per annum is estimated to be Rs Rs1,23,193/-and returns are expected to be Rs 1,80,000/-. The surplus per acre would be Rs.56,807/-

[2] Vertical farming is an optimized method of plant growth through technology to control the environment.

The cost of each farm activity is listed in Table 2.

Table 2: Costing of IFS Farm Activities

Dairy Farm (12x10x8ft)		
	Item	**Amount**
	Cost of Shed	11000
	Cost of Equipment	10000
	Cost of Fodder	3000
	Labour Cost	5500
	Total (A)	**29500**
Poultry Shed (10x8ft)		
	Item	**Amount**
	Cost of Shed (including labor)	15000
	Cost of feeder equipment for hens	1500
	Electrical equipment (lights etc.)	1000
	Cost of feed for 50 hens @3.5kg per hen	7500
	Total (B)	**25000**
Azolla Cultivation (6x4ft)		
	Item	**Amount**
	Labour Cost @200for 2man days	400
	Silpauline tarpaulin sheet	400
	Fertile Soil @15kg	2250
	Cow dung @5kg	75
	Super Phosphate fertilizer @ 10kg	400
	Fresh Azolla culture @2kg	100
	Shady or poly net	500
	Wooden sticks or bamboo	1000
	Micronutrients	100
	Total (C)	**5225**

Vermicomposting (12x4x2ft)		
	Item	**Amount**
	Cow dung (1 tractor load)	1000
	Organic residue (1 tractor load)	500
	Vermiform (2kg)	800
	Miscellaneous (gunny bag, packing material)	500
	Labour @300 for three man-days	900
	Total (D)	**3700**
Inland Fisheries (30x15x5ft)		
	Item	**Amount**
	2000 Fish seeds	1500
	Labor cost for Construction of the pond of size 30x15x5 ft for 30 days	12000
	Electricity and Water expenses	6000
	Medicines used for disinfection and fish breeding purposes	1500
	Plastic sheets and other Miscellaneous Equipment	3000
	Total E	**24000**
Vertical farming (24x10ft)		
	Item	**Amount**
	Cost of cucumber seeds for 240 sq ft area	11
	Pesticides (Imidacloprid, thiram, carbofuran, Trichoderma)	10
	Fertilizers (Nitrogen, Phosphor, Potassium)	15
	Insecticides, fungicides, chlorpyriphos, etc.	40
	Land preparation, plowing, and labor cost	3000
	Support cost	55
	Miscellaneous Activities (weeding, irrigation, etc.)	82
	Harvesting cost	55
	Total (F)	**3268**

Banana Cultivation (10x6ft)		
	Item	**Amount**
	Bamboo Fencing	1000
	Manure cost	2000
	Seedling Cost	500
	Spray tools	1500
	Micronutrients	400
	Labor costs @300 for three man-days	900
	Total (G)	**6300**
Mushroom(30x15ft) & Bee Keeping(2x1.5ft)		
	Item	**Amount**
	Bamboo Materials and wooden shelves for mushroom farming	6600
	Polythene sheets	3300
	Labor cost	4900
	Room construction for mushroom farming	1400
	2 Bee containers	2500
	Beekeeping equipment	5000
	The labour cost of beekeeping	2500
	Total (H)	**26200**
	Total (A to H)	**123193**

Discussion

Small farms face various production challenges, especially regarding access to essential factors of production (credit, farm inputs, information, production technologies, etc.) and market support. “As the majority of global agricultural production takes place on small farms, and about two billion of the world's poor directly depend on the sector for their livelihood, working as cultivators or wage-earning laborers, the centrality of small farm development and growth to achieving the SDGs is undeniable. Nine of the 17 SDGs, on poverty eradication (SDG 1 and SDG 8), hunger and nutrition (SDG 1 and SDG 3), social emancipation and inequality (SDG 5 and SDG 10), and the environment (SDG 12; SDG 13 and SDG 15), are directly linked to the agricultural sector" (Abraham & Pingali, 2020). Therefore, addressing the concerns of small farm productivity and designing solutions like IFS to address them is central to achieving SDGs.

In order to prevent migration and bring overall development in a group of villages, BSS has made an important decision to sustain the livelihood of farmers by developing their skills to adopt IFS. Helping a model of 60 small and marginal farmers implies helping 60 families double their income within a year. Thus, empowering them will have the long-term impact of improving food security, reducing local poverty, and motivating other farmers to adopt sustainable agriculture practices. Along with providing inputs in IFS, it is important to train farmers to become agriprenuers to market their agricultural produce. Educating farmers in agribusiness management, marketing, and entrepreneurship can be highly beneficial. Inputs in various areas of marketing management of agricultural produce are crucial (See Box 2). B-Schools can help NGOs like BSS build farmers' marketing, business, and entrepreneurial skills.

Box 2: Agriprenuers Training Topics

Customer Segmentation	Customers who prefer home-cooked food buy local and organic produce and are interested in supporting social causes.
Marketing Mix-Product	Farm products include milk, eggs, fish, honey, and crops such as cabbage, cauliflower, bottle gourd, and cucumber. Over a period of time, BSS can try to get private labeling for farm products.
Positioning & Promotion	To develop a credible image in the minds of consumers' farm products should be positioned as organic and locally produced. Dairy products can be positioned as low-fat, sugar-free products, etc. Swadeshi sentiment among customers can be evoked through various campaigns.
Price	The pricing of the products will be based on the cost incurred and market analysis.
Place	Bareilly being a Tier 2 city, efforts to primarily target customers in local mandi who prefer locally grown organic produce supporting a good cause will make a huge difference. Local Farmer Producer Organizations and local retail outlets can also be contacted to support the marketing efforts. Partnering with existing big players in the market can also be explored.

NGOs like BSS are making tremendous efforts to form clusters of small farmers to promote behavioral change and retain farmers in agriculture. However, NGOs need support to help farmers improve their market access. Here, corporate employees can use their network to connect these NGOs and farmers to access high-value chains and form contacts with retailers and other end-users to improve the incomes of smallholders. Similarly, corporations, through their CSR investments, can help governments promote transparency and efficiency in all APMC mandis by installing electronic weighing machines, grading machines per Agmark standards, and differential prices for graded products. Policy interventions are needed to reduce the cost of accessing credit, quality inputs, and R&D to support intensification and diversification among small farm holders.

Conclusion

Maintenance of biological diversity and nutrient cycling mechanisms are essential in the design of sustainable agricultural systems. IFS is an evolved system, it adapts to climate change, market forces and many other bio-physical stresses. Providing awareness about benefits of IFS to farmers, and providing necessary support is essential to promote large-scale adoption of region specific IFS models. Both the public and private sectors need to come forward for livelihood improvement through integrated farming for climate-resilient agriculture promotion.

References

Abraham, M., Pingali, P. (2020). Transforming Smallholder Agriculture to Achieve the SDGs. In: Gomez y Paloma, S., Riesgo, L., Louhichi, K. (eds) *The Role of Smallholder Farms in Food and Nutrition Security.* Springer, Cham. https://doi.org/10.1007/978-3-030-42148-9_9

Agri-tech can improve value capture for India's small farmers. World Economic Forum. (2021, June 17). Retrieved April 27, 2023, from https://www.weforum.org/agenda/2021/06/agri-tech-innovation-can-improve-value-capture-and-transform-ecosystem-for-india-s-small-farmers/

Behera, U K & France, J.. (2016). *Integrated Farming Systems and the Livelihood Security of Small and Marginal Farmers in India and Other Developing Countries*. 10.1016/bs.agron.2016.04.001.

BSS. (2020). *Balajee Sewa Sansthan Annual Report 2019-2020*. Retrieved April 27, 2023, from https://guidestarindia.org/Uploads/4261cb0e-0947-40c0-8cbd-c9ce3c0593cf/Annual%20Report%20BSS%202019-20.pdf

IDFC Rural Development Network. 2013. India Rural Development Report 2012|13. Delhi: Orient BlackSwan. Retrieved April 27, 2023, from https://www.i3s.net.in/uploads/pdf/Resources/India_Rural_Development_Report_2012-13.pdf

Ministry of Agriculture & Farmers Welfare, GOI, P I B. (2019, February 5). *Categorization of Farmers*. Retrieved April 28, 2023, from https://pib.gov.in/newsite/PrintRelease.aspx?relid=188051

Shagun. (2021, January 29). *Agri share in GDP hit 20% after 17 years: Economic survey*. Down To Earth. Retrieved April 27, 2023, from https://www.downtoearth.org.in/news/agriculture/agri-share-in-gdp-hit-20-after-17-years-economic-survey-75271

Shagun. (2021, January 29). *Agri share in GDP hit 20% after 17 years: Economic survey*. Down To Earth. Retrieved April 27, 2023, from https://www.downtoearth.org.in/news/agriculture/agri-share-in-gdp-hit-20-after-17-years-economic-survey-75271

Singh, S. (2021, February 2). *Future of Indian agriculture and small farmers: Role of Policy, Regulation and farmer agency*. Down To Earth. Retrieved April 27, 2023, from https://www.downtoearth.org.in/blog/agriculture/future-of-indian-agriculture-and-small-farmers-role-of-policy-regulation-and-farmer-agency-75325

Clean Energy Transition
Feasibility of Setting up Manufacturing Unit for E-Rickshaws in Assam

Abstract: *To reduce CO2 emissions and tackle air pollution globally, many governments are in the process of phasing out vehicles using conventional petrol engines. To promote the adoption of electric vehicles, the Government of India (GoI) has announced tax incentives for manufacturers and subsidies for drivers. One of the major modes of transportation across income groups in India is the autorickshaw, mainly fuelled by compressed natural gas. As India plans to phase out vehicles using fossil fuels by 2040, the electrification of traditional rickshaws will gain momentum.*

In places like Assam, Odhisha, Gujarat, and others, ' Cycle Rickshaws' has been quite popular. The rickshaw pullers had a callous life full of suffering. To address the issues of these rickshaw pullers, the Centre for Rural Development (CRD), in 2004, started the Rickshaw Bank initiative in Guwahati. Through the micro-credit route, Rickshaw Bank provided an ergonomically designed rickshaw to the rickshaw pullers and provided value-added services. With the technological shift, CRD has mobilized rickshaw owners to convert traditional rickshaws to E-rickshaws.

The present article elucidates the growth of the E-rickshaw market and briefly portrays the work CRD undertook to cater to the needs of the rickshaw pullers. The feasibility of locally assembled E-rickshaw Unit in Assam is discussed to facilitate clean energy transition and affordability of E-rickshaws. The article reinforces that at the intersection of health, mobility, and the economy, E-rickshaws have the potential to offer sustainable livelihoods and cost-effective transportation. However, high upfront costs, lack of financing, and charging options remain significant barriers. To address the barriers CRD needs to influence the government and the automotive industry to create an ecosystem conducive to promote adoption of E-rickshaws.

The article is based on the project handled by Simran Ajit Saria and Urvi Mangal during their We Care Civic Engagement internship with CRD, Assam, in February 2022.

Introduction

Climate change is a global issue. Erratic weather patterns, intense heat waves, unpredictable monsoons, and increasing frequency of cyclones, storms, and floods have impacted India's natural environment, economy, and society. Multiple sectors have contributed to the increasing amount of pollution levels. Prominent among those being transportation and road transport. Globally, countries have decided to check carbon emissions by gradually reducing the use of fossil fuels. India has decided to cut the intensity of greenhouse gas emissions by 45 percent of what it was in 2005. It has prioritized incentives for those buying green, including a tax cut and subsidies for certain electric vehicle (EVs).models. This has resulted in a push for EVs.

In the Indian EV market, 83 percent is dominated by E-rickshaws. Stringent emission norms, rising fuel prices, and incentives drive consumer preference toward E-rickshaws. In 2021 India had over 15 lakh E-rickshaws, with roughly 11,000 new ones being sold each month (Gupta, 2021). The expected ban on fuel-powered vehicles is likely to propel the demand for E-rickshaws further. By 2024, 9.25 lakh E-rickshaws will be sold in the market (Singh, 2021). According to P &S Intelligence Report 2021, India's E-rickshaw battery market will hit $295.4 million by 2030.

The major players in the manufacturing segment are Lohia Auto, Adapt Motors private limited, Mahindra Electric Mobility Limited, Kinetic Green Energy & Power Solutions Ltd & Terra Motors India Pvt. Ltd (Business Markets Insights, 2020). According to Mordor Intelligence, Uttar Pradesh is expected to be the largest E-rickshaw market in India, followed by Delhi. In addition, other states, such as Bihar, West Bengal, and Assam, are witnessing significant demand for these rickshaws. Since the demand will increase, combined with the policies issued by the state government and the GoI, understanding the feasibility of setting up an E-rickshaw manufacturing plant across various states becomes crucial.

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E-rickshaws provide dignified livelihoods to the youth, promote affordable, sustainable transportation, and help conserve the natural environment. Mission-driven NGOs like C R D in Assam, who focus on addressing the concerns of rickshaw pullers, have a huge role in enabling their shift from traditional rickshaws to E-rickshaws.

About Centre for Rural Development & Rickshaw Bank

CRD, a leading NGO founded in 1994, aims to create sustainable livelihoods for low-income families in North East India. The organization has developed income-generating interventions in agriculture, animal husbandry, and fishery to prevent the migration of landless laborers, youth, and small traders. CRD has also started executing village adoption with a vision of protecting villages from pollution by tourists, increasing the standard of living, and higher the employment rate. Gyaan Ashram is a major project which educates children from backward communities.

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According to Dr. Sarmah, Executive Director CRD, *"In 2004, we started the Rickshaw Bank initiative in Guwahati, Assam, to provide a means of self-employment to poor and marginalized rickshaw drivers with a unique style of service delivery and a design that addresses the causes of poverty through asset based entrepreneurship. Under the project, CRD manufactured ergonomically designed rickshaws with the support of corporate and individual donors. It offered rickshaws on rent to the pullers. The daily rent of rickshaws was regarded as a repayment towards the cost of the rickshaw. Within one year, the ownership of rickshaws was transferred to pullers."* Rickshaw Bank aimed "to make rickshaw puller owner of rickshaw rather than the traditional system of renting which is a major blow to their financial security" (Hazarika, 2010).

Dr. Sarmah further shared, *"Over a period of time, local banks too started providing loans to Rickshaw Bank to enable more rickshaw pullers to benefit from the project. The loan of approximately*

13,000 rupees for the rickshaw also covered money for a uniform, an identity card, a license, and two-year insurance. Besides rickshaws, momo-carts were also manufactured by CRD. Based on the project's success, CRD scaled this initiative to Agartala, Delhi, Noida, Surat, and Chennai. The Rickshaw Puller Cooperative Society in Guwahti was formed to provide value-added services to rickshaw owners."

As per the Government of Assam Welfare of Minorities & Development Directorate of Char Areas Development, E-rickshaws were introduced in Assam in 2014 after the amendment under the Motor Vehicles Rules of 1989 by the Ministry of Road Transport and Highways 2014. With the technological shift, CRD is in the process of mobilizing rickshaw owners to convert traditional rickshaws to E-rickshaws.

Project Focus

As per the NITI Aayog report, Assam stands fifth in the state-wise three-wheeler electric vehicle use with 24,605 units till 2020. The price of an E-rickshaw ranges from Rs. 1,00,000 to 1,40,000. Assam does not manufacture E-rickshaws, so the cost of procuring them from other states is high. This has restrained a lot of rickshaw pullers from using E-rickshaws as they felt that the investment involved was very high and did not generate adequate income. They felt that if an E-rickshaw manufacturing plant existed in Assam, it could substantially reduce the cost. CRD staff also felt that the manufacturing plant of E-rickshaws in Assam can be beneficial for various reasons like cost reduction, easy availability, promotion of a better way of transport, employment opportunities, and less dependency on other States. Against this backdrop, the We Care interns, were assigned to develop a feasibility report and define the basic parameters to open a manufacturing unit for E-rickshaws in Assam.

Blue Print of E-Rickshaw

Project Methodology

Data for the feasibility report was sourced through both primary and secondary sources. Interactions with various rickshaw pullers gave insights about their current condition and barriers in shifting to E-rickshaws. Predominantly it helped in getting an estimate of their willingness to pay for E-rickshaws.

To examine the policy support extended by the Government to promote the usage of e-vehicles, Assam's E-vehicle Policy 2021 and North East Industrial Development Scheme (NEIDS), 2017, were studied in depth. Websites like Zig Wheels, International Energy Agency, and others were referred to understand the market share of various companies and their costing and pricing strategy for e-vehicles. Information about e-vehicles from NITI Aayog's website was also studied. This helped in arriving at the average cost and price incurred to implement the project and the average sales needed to sustain the enterprise.

Policy Support

Assam's Electric Vehicle Policy, 2021, aims to rapidly adopt Battery Electric Vehicles (BEVs), with E-Vehicles accounting for 25% of all new vehicle registrations by 2026. The strategy also encourages the development of dedicated infrastructure for charging electric vehicles by subsidizing investment. During the 5-year policy period, the State would target and assist in deploying the first two lakh electric vehicles for personal or commercial use. The goals for each vehicle segment are:

1. Two-Wheeled Vehicles: 100000 Units
2. Three-Wheeled Vehicles:75000 Units
3. Four-Wheeled Vehicles: 25000 Units

As per the policy, the State Government would exempt EV charging stations from paying 90% of the electricity duty, while the entrepreneurs will pay 10%. In addition to the 30 percent capital investment subsidy provided under NEIDS, 2017, manufacturers of electric vehicles or their components would be eligible for the following additional incentives:

1. Micro Units are eligible for a 20% discount on plant and machinery costs up to Rs. 15 lakhs.
2. Small Units are eligible for a 20% discount on plant and machinery costs up to Rs. 50 lakhs.
3. For Medium Units, 20% of the cost of Plant & Machinery is up to Rs. 1 Crore.
4. For Large Units, 10% of the cost of Plant & Machinery up to Rs. 10 Crore.

The policy further states that units manufacturing electric vehicles or their components will be eligible for an extra Interest Subsidy of 2% on Working Capital Loans, in addition to the 3% Interest Subsidy provided under NEIDS, 2017, or any later policy from the Central or State Government.

It could be inferred from the policy documents that the Indian Government has sparked interest with its Faster Use and Manufacturing of (Hybrid &) Electric Cars (FAME) programs, which encourage and, in some cases, compel the adoption of electric vehicles (Evs), to attain 30% EV penetration by 2030.

Technical Feasibility Findings

Costing

Based on secondary research and discussion with experts, the cost of setting up the manufacturing plant indicated that the minimum land requirement to set up the manufacturing plant in Assam would be around 10000 sq. ft. As per the local land prices, the land cost was Rs. 520 per sq. ft. The required machinery for operating the manufacturing unit would be outsourced and shipped from the current manufacturing unit. These can be bought in and assembled in the factory itself. The cost of such machinery was estimated to be Rs. 45 lakhs. The annual maintenance cost of the plant would be around 20 Lakhs. Water and electricity charges for the year would be around 9 lakhs. The plant will be manned by 100 workers, three managers, and 20 area heads. The annual remuneration expenditure was estimated to be around Rs. 35 lakhs. Annual marketing and sales expenses were estimated to be around ten lakhs.

Considering all the costs of managing the entire manufacturing unit, an investment of Rs. One crore and seventy-one lakhs (Table 1) would be required.

Pricing & Sales

The logic of a manufacturing unit is located in the market and the market-based principles. The manufacturing unit has fixed and variable costs. These costs are to be recovered from the market. To create a profitable enterprise based on discussion with experts, market demand, and capacity utilization of the unit, it would be prudent to consider sales of 5000 E-rickshaws at a price point of Rs.1,10,000/-.

Operational Feasibility

The operational feasibility of this project depends on various factors like the adequacy of charging stations, electricity or alternative energy source, skilled labor supply, availability of technology, and funding support.

Implementation Plan

The interns' research revealed that Jezza Motor's E-rickshaws have the highest market share in India, and the demand for their vehicles is highest in Assam. Based in Delhi and Haryana, the company manufactures high-quality E-rickshaws at reasonable prices and is a pan-India supplier. CRD may consider having this company set up its plant in Assam. To implement the plan, the following steps are to be followed:

- Seeking permissions from the concerned authority for the opening up of a manufacturing plant
- Conversing and communicating with the chosen company and coming to terms with all resource requirements
- Making an agreement
- Acquiring the Land to set up the manufacturing unit
- Setting up the manufacturing unit and equipping the same with the required machinery
- Hiring the required workforce at the entry-level
- Starting with the marketing groundwork by making the current dealers aware of the existence of the plant
- Finalizing deals with distributors for sales. Making sure that prices are not over hiked
- Post implementation, doing an annual market study to check and overcome any roadblocks.

We Care Interns with E-Rickshaw

Discussion

E-rickshaws offer livelihood support and socio-economic and environmental benefits. The maintenance issues related to E-rickshaws are less, which saves maintenance costs. Indian Government sees the value in low-cost electric vehicles. It has embraced it as part of its broader strategy to reduce carbon emissions. Policy support through National Electric Mobility Mission, 2013; National Urban Livelihood Mission 2013; Pradhan Mantri Mudra Yojna, 2015; Smart City Mission, 2015; Faster Adaptation of Manufacturing of Electric Vehicles (FAME I and II), State's electric vehicle policy in the form of loans, regulatory framework, and direct subsidies have been a major growth driver for this sector.

Despite the mass deployment of E-rickshaws in the country, several issues are associated with regulating E-rickshaws. India has roughly 1.75 million electric three-wheelers; the figure is likely higher since many are not registered or tracked (Shivji, 2022). There is the proliferation of E-rickshaws sold by the unorganized sector, which need to be of better quality and operate on a lead-acid battery that needs to be changed after every six-eight months. The components for E-rickshaws are imported but are assembled in non-standardized local workshops. Considering the rampant growth of E-rickshaws in the absence of a regulatory framework, it is essential to bring the supply chain into a formal channel. Hence, organizations like CRD should lead in setting up manufacturing plants to produce high-quality and cost-effective E-rickshaws. However, finding the right components for manufacturing E-rickshaws can prove to be a challenge, and hence the organization should select the right partner for setting up the plant. Also, the cost of replacing batteries can be high. Though electric vehicles of all kinds are becoming popular, the charging infrastructure is yet to be in place. Anecdotal evidence indicated that there are no charging points in the towns. Hence, rickshaw drivers rely on home electricity to charge their vehicles, which stresses the electricity bill.

Considering the rampant growth of E-rickshaws in the absence of a regulatory framework, it is essential to bring the supply chain into a formal channel.

Conclusion

The electrification of traditional rickshaws and the integration of locally assembled E-rickshaws is the key to the clean energy transition. The need to establish a local E-rickshaw manufacturing plant in North East exists. Considering the opportunity to empower vulnerable communities and sustainably promote cost-effective, sustainable transportation, it is crucial to break down barriers to rickshaw electrification. The State Government of Assam has been proactively supporting this initiative, and the adaptability of E-rickshaw is higher in Assam compared to most of the metropolitan cities. However, the development of the manufacturing plant has to be in sync with the infrastructural development of the State. The task before CRD is to influence the Government and the automotive industry to create an ecosystem conducive to the smooth operation of E-rickshaws in Assam.

References

Business Markets Insights (June 2020). *India and Sri Lanka electric three Wheeler market forecast to 2027 - By size, share, growth by end user and Forecast* Retrieved from https://www.businessmarketinsights.com/reports/india-and-sri-lanka-electric-three-wheeler-market

Government of Assam Welfare of Minorities & Development Directorate of Char Areas Development. (n.d.). *Distribution of e-Rickshaw*. Distribution of e-Rickshaw | Directorate of Char Areas Development | Government Of Assam, India. Retrieved from https://dircad.assam.gov.in/schemes/detail/distribution-of-e-rickshaw

Gupta S. (2021, March 4). *Why E-rickshaws have emerged a winner in the transition to electric mobility race.* Down To Earth. Retrieved from https://www.downtoearth.org.in/blog/air/why-e-rickshaws-have-emerged-a-winner-in-transition-to-electric-mobility-race-75767

Hazarika, M. (2010, June 19). *Dr. Pradip Kumar Sarmah to take part in Copenhagen Conference*. Retrieved from Assam Times. https://assamtimes.org/node/3887

Mordor Intelligence. (n.d.). *India Electric Rickshaw Market Size*. Retrieved from https://www.mordorintelligence.com/industry-reports/india-electric-rickshaw-market/market-size

P&S Intelligence Report (July 2022). *India electric rickshaw battery market size and share analysis by vehicle (Passenger carrier, load carrier), battery capacity (101 ah), end-use (OEM, replacement), battery type (lead-acid, lithium-ion) - Growth forecast to 2030.* Global Information, Inc. (GII) - Premium market research reports. Retrieved from https://www.giiresearch.com/report/psm1121742-india-electric-rickshaw-battery-market-size-share.html

Pradip Sarmah, Centre for Rural Development (CRD): Case study: Rickshaw Bank (n.d). Ashoka India. Retrieved from https://www.ashoka.org/en-in/story/pradip-sarmah-centre-rural-development-crd

Shivji, S. (2022, November 7). *India's Electric Vehicle Revolution is built on the rickshaw. CBC news*. Retrieved from CBCnews. https://www.cbc.ca/news/world/india-electric-rickshaw-revolution-low-carbon-future-1.6642423

Singh Ravinder. (2021, July 27). *Will electric mobility be a harbinger of economic prosperity?* ETAuto.com. Retrieved from https://auto.economictimes.indiatimes.com/news/auto-technology/will-electric-mobility-be-a-harbinger-of-economic-prosperity/83886749

Challenges of Skilling Rural Youth: Case of Ambuja Cement Foundation

Abstract: *India's sizeable working-age population can significantly contribute to its growth, provided it is equipped to be productive. This working-age population is estimated to rise many times in the coming decades. India's demographic dividend, where more than 50% of the population is under 25 years of age, presents a unique opportunity to boost economic growth and development through skill training. More so, with the nation focusing on 'Make in India,' campaign skill training has become more vital than ever before. SEDI (Skill and Entrepreneurship Development Institute) is an initiative launched by Ambuja Cement to contribute to India's skilling challenge.*

The article explores the reasons for low enrollment in skilling programs and the youth's challenges and proposes recommendations to overcome them. This article is based on the project undertaken by Mr. Amit Saha during his We Care Civic Engagement internship with ACF in February 2022.

Introduction

India entered the demographic dividend phase in 2010. Due to its 51 % working population, India was predicted to be advantageous if it multiplied its efforts in skilling its youth. To create a trained workforce of employable youth, in 2015, the government launched the "Skill India Mission" to promote skill training to train over 40 crore youth in different industry-related jobs and create an empowered works force by 2022. Even though the government has made various efforts to upscale skill development through programs like Pradhan Mantri Kaushal Vikas Yojana," the penetration of vocational training in rural India is abysmally low. Almost 93.7% (2017–18) of youth have not received any vocational training. A dearth of quality trainers, inadequate training programs, and high dropout rates remain hurdles to skill development. Most training institutes are located in the nearest small towns, inaccessible to most, especially women, due to the lack of public transport facilities. The Government-run Industrial Training Institutes (ITIs) have severely limited capacity and offer outdated courses with limited placement options. In the absence of skills, most literate rural youth end up working as unskilled migrant workers in the nearest towns and cities" (Tiwari, 2020).

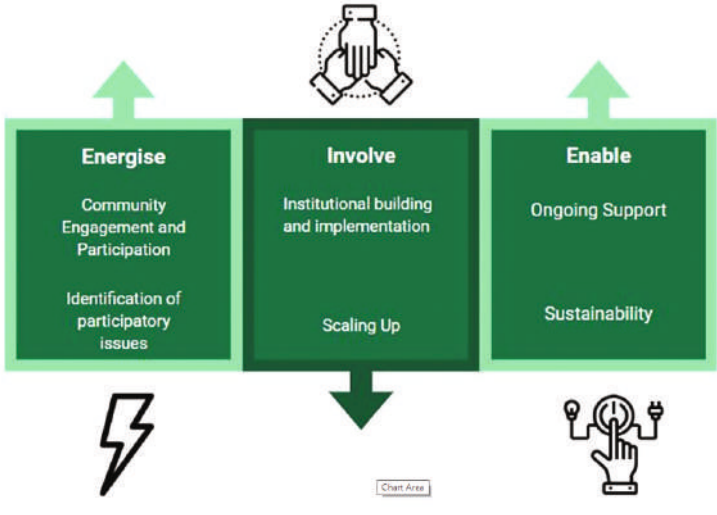
Recent externalities (such as the COVID-19 pandemic) have further aggravated this gap by inducing the lay-off of workers from the unorganized sector who contributed to more than 90

percent of the employed workforce in India (NITI Aayog, 2020). With the absence of relevant soft and hard skills, limited access to training facilities, and the lack of support facilities, the population in the below-poverty region continues to suffer invariably. Ambuja Cement Foundation (ACF) has bridged this gap with its Skill & Entrepreneurship Development Institute (SEDI) initiatives. This article aims to understand the challenges and recommendations for improving SEDI course content and delivery mechanism.

About ACF

ACF is the corporate social responsibility (CSR) arm of Ambuja Cements Limited, a leading cement manufacturing company in India. The Foundation was established in 1993 with a vision to create a sustainable society, solve pressing community problems, foster prosperity by harnessing the power of partnerships – (between communities, Governments, and other like-minded corporates), and empower local people to be the drivers of change for themselves. The three-decade-old initiative has pioneered a major transformation at the grassroots level and has affected the lives of 2.6 million people across 2313 villages, 45 districts, and 11 Indian states. (Amuja Cement Foundation, 2019) To create sustainable communities, ACF has invested in water, agriculture, skills, women, health, education, and 'livelihoods.' The Foundation follows a unique model called the "Energise, Involve and Enable Model" (EIE Model) in its community development efforts, which is based on the belief that communities have the potential to be self-reliant and sustainable if they are provided with supportive eco-system (See Fig 1).

Fig 1: EIE Model



Source: Ambuja Cement Foundation Website

The first phase, 'Energise,' involves conducting awareness through community meetings, personal discussions, and mobilizing residents to take collective responsibility for addressing local civic issues. Subsequently, in the second phase, community members are 'involved' in developing participatory approaches and designing solutions for problems identified by them. ACF facilitates the formation of community groups and provides training and support to these groups to help them develop the skills and knowledge necessary to implement practical solutions.

The final phase, Enable, involves empowering communities to sustain the solutions that have been developed. ACF does this by building the capacity of community groups, providing them with access to resources, and creating an enabling environment that supports the long-term sustainability of the initiatives.

Each phase is critical in ensuring the success and sustainability of ACF's community development initiatives.

To provide a practical solution to the issue of unemployment in rural areas of India and to equip the local youth with the skills and knowledge needed to secure gainful employment or start their businesses, ACF established the Skill and Entrepreneurship Development Institute (SEDI), a vocational training center in 2013. SEDI is responsible for providing employable skills to rural youth. It has 33 centers spread across ten states of India. The centers have 43 accredited running courses and have rolled out 78,000 candidates with a 75% job placement rate. Apart from providing training, it sensitizes society against societal stereotypes.

SEDI imparts eight kinds of vocational training to the students:

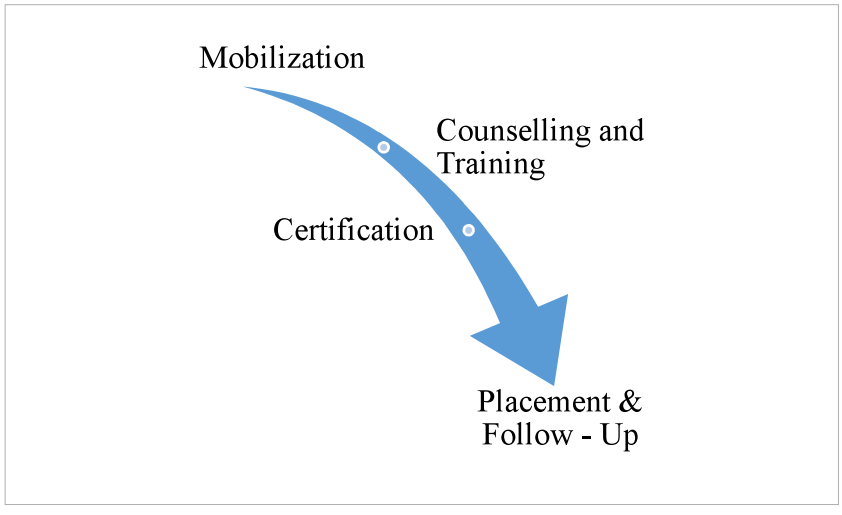
1. Hospital Assistant Technician (HAT)- Diploma Nursing
2. General Duty Assistant (GDA)- Nursing
3. Wireman Control Panel (WCP)- Electrical
4. PCB Assembly Operator- Electronics
5. CNC Machine Operator
6. Business Processing Outsources (BPO)
7. Welder
8. Fitter Fabrication

Project Focus

SEDI works with the industry to identify local skilling needs and find and support rural youth to obtain those skills and gain employment.

The process, from encouraging the students for the classroom-based skill program to their placement, is divided into four steps. See Fig 2

Fig 2: SEDI Training Process



Source: Created by author

Considering the changing nature of job requirements post the COVID-19 pandemic, the project focus for the We Care intern was to understand the reasons for low enrolment, identify challenges in each of the four steps adopted by SEDI and recommend strategies to over the same. The project's geographic scope was limited to Ambujanagar (Kodinar) area. The specific objectives of the project were:

1. To examine reasons for less enrolment in the SEDI program
2. To identify the challenges faced by the participants of the SEDI program
3. To recommend strategies to overcome the challenges

Methodology

The methodology for the project involved a comprehensive approach to data collection and analysis. The study used primary and secondary data sources, including previous records, interviews, and focus group discussions.

First, the study examined the existing records of the SEDI program, including previous years' program reports, student records, and other relevant documents. These records were analyzed to understand better the program's objectives, structure, and activities. Additionally, data from these records were used to assess the main enrollment activities, uptake of skill development by girls and boys, representation as per education background, employment prospects, and entrepreneurial activities.

To study the perception of SEDI's vocational trades based on a convenient sampling method, the intern conducted 15 unstructured interviews with students, parents, staff, and recruiters. FGDs were conducted in Kalapan, Rajpara, Gadadha, and Sutrapada villages of Gir Somnath and Gadadha District. Students, staff, and parents attended the FGDs. FGD and interviews aimed to understand the mobilization process comprehensively, barriers to enrolling, and experiences with the program from multiple perspectives.

The students undergoing training at SEDI aged between 14-19 years were included in the interview and FGD to understand their aspiration to join the program, the challenges faced, and other earning options.

The critical questions in the interview and FGDs were:

1. Why do students want to join the SEDI's vocational courses?
2. What are the problems faced by the students? (Especially girls and students belonging to mining villages?
3. Why do they want to join the vocational courses offered at SEDI, and which course?
4. How do they come to know about the courses?
5. What other earning options are available to them?

Discussions were also held with SEDI staff about challenges faced by new joiners, low enrollments, dropouts, and steps taken to bring back those students. They stressed long travel and lack of proper hostel facilities near SEDI as one of the key issues faced by the students while attending the classes. SEDI has started a hostel facility for girl students, but that is still in the nascent stage.

Another discussion with a company recruiter at SEDI revealed that students passing from SEDI acquire employable skills which can be later honed by training. He further mentioned*, "Girls are better than boys even for shop floor roles*," as they are more diligent than their colleagues. The only problem in hiring girl students is that they work for 2 – 3 years and then discontinue post their marriage.

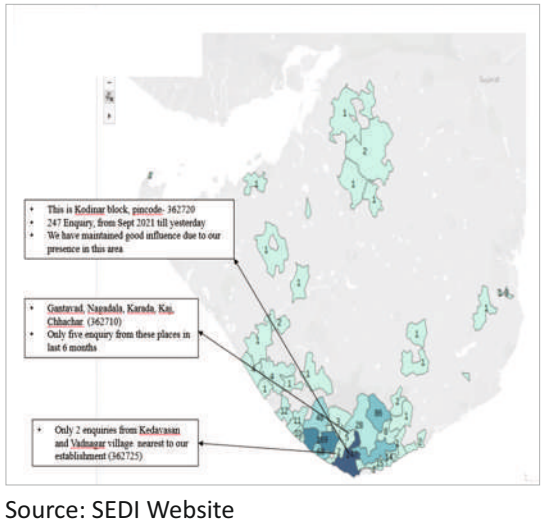
The data collected from the interviews and focus group discussions were analyzed thematically to identify the key findings and themes that emerged from the data. Overall, the mixed-method approach used in this study provided a comprehensive understanding of the SEDI program, its impact, and its relevance to the local context. Using multiple data sources and analysis techniques allowed for data triangulation and strengthened the study findings' validity and reliability.

Major Findings

Enrollment

Data on enrollment (Fig 3) indicates that SEDI received 247 inquiries between September 2021 till February 1, 2022, from the Kodinar block. In contrast, only single-digit inquiries were obtained from peripheral villages like Kedavasan, Vadnagar, Gantavad, Nagadala, Karada, Kaj, and Chhachar. The inquiry-to-enrollment ratio of the Kodinar and Sutrapada blocks was 49.18% and 29.29 %, respectively. However, the average conversion rate (Inquiry to Enrolment ratio) of the top 30 blocks was only 7.18 %.

Figure 3: Mobilization map



Source: SEDI Website

Discussions with the youth and villagers concerning their opinion about SEDI's vocational trade revealed that most teenagers chose to prepare for government jobs (such as constable, PSI, etc.) or preferred to take up fishing jobs as they would fetch them around Rs. 30,000/- per month (not realizing that fishing is seasonal & precarious and hence not a reliable source of income). Some expressed skepticism about the stability of private companies too.

SEDI Initiative Awareness at Kalapan village, Una, Gir Somnath, Gujarat

Sharing his views, Mr. Ramdeen, a parent who came for inquiry at the SEDI office, said, *"Sahab, Jeena hai to risk uthana padega aur private companyion ka bharosa nahi*" (One has to endure risk in life and Private companies cannot be trusted)

Respondents also expressed concerns about not completing the vocational training due to their personal reasons (work pressure, marriage, and lack of family support), expectation mismatch (low salary, poor job experience), and lack of documents (school certificates and other records required for placements).

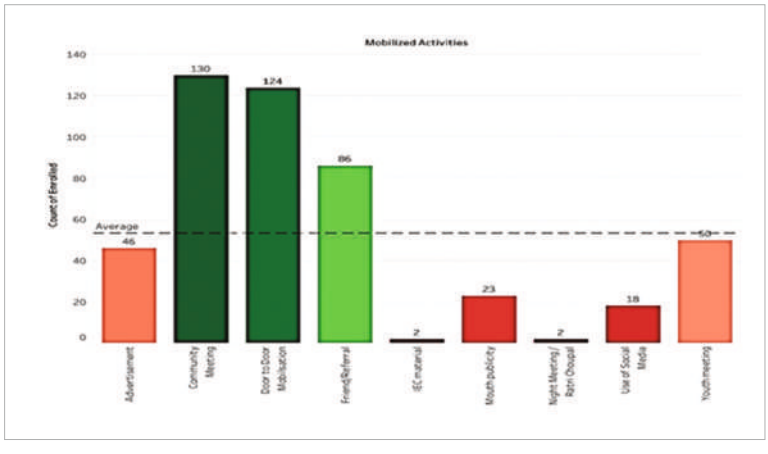
Another girl, Ms. Abha, mentioned, *"Sir, company wale bohot kagan manage hain jo hamare pass nahi hote, aur parent ke liye bhi muskil ha banana kyunki unke roz kaam pe jaana hota hai"* (Companies ask various document which is difficult to arrange as our parents are daily wagers.)

SEDI Initiative Awareness: Mobilizing Women at Rajput Rajpara, Una, Gir Somnath, Gujarat

Mobilization: Tools & Techniques

Various marketing tools and techniques were used to mobilize youth to attend the vocational training courses. It was also observed that the top three activities leading to the highest student enrolment are door-to-door mobilization, referrals, and meetings. (See Fig 4)

Fig 4: Mobilized Activities V/S Enrolment



Source: SEDI Website

SEDI Trainers' Perspective

Interaction with SEDI staff revealed that primary and secondary education is typically free in rural areas, so students are reticent to pay for skilling. There is an opportunity cost for skill training as the youth from low-income families have to lose daily wages and incur the cost of

travel and food. They can easily lose interest when they start incurring these costs. Additionally, aspiration levels are also very low. Many rural youths have focused on labor-related jobs; they want to continue doing that. They do not aspire for a career path.

The staff felt that establishing personal rapport with families and youths has a higher impact on increasing the enrolment figures. Mr. Dilip, Mobilization In-charge, explained, "In door-to-door mobilization, a strong relationship is created with parents as we can clear their doubts. This is a slow and extensive process but an effective one. For community meetings, Anganwadi workers greatly assist as they have a rapport with the villagers and know parents looking for vocational courses for their children. Through community meetings, our field workers spend time with families and youth to educate them on the types of jobs and salaries available in the market and their qualifications to attain them. Once one vocationally trained youth from a family starts earning, the credibility is established, and referrals happen".

Discussion on the dropout scenario revealed that during training, students often struggle with classroom types of training. As the students attending vocational training are high school dropouts, they are not accustomed to learning theoretical aspects.

Discussion on the dropout scenario revealed that during training, students often struggle with classroom types of training. As the students attending vocational training are high school dropouts, they are not accustomed to learning theoretical aspects.

Discussion

Skill development in rural India is highly important. Lack of proper education and training restricts people from opportunities for self-advancement by limiting their access to well-paid employment. The younger generation in the villages have the ability to learn if they are given the opportunity for support. Accordingly, the Ambuja Foundation has launched the SEDI initiative to train youth across various trades that prepares them to enter the occupational world. The Foundation believes job creation and skilling rural youth in farming and non-farming jobs are needed in local economies. Mechanization and

modernization are crucial to raising the aspirational quotient of farming and agri-based roles. There are opportunities to promote skills required for pre- and post-harvest handling to reduce wastage, better cropping techniques, and better water use.

The interactions with the youth at Kodinar revealed that the preference for government jobs is highest as the trust in private sector jobs is low. Contending that the private sector does not offer better salaries is indicative that the skill sets are not being valued. Some companies treat both the trained and skilled and unskilled workers equally. A person who has completed a certificate course in a particular skill set expects better pay than an unskilled one. But, the industry does see them as one. So, skilled candidates would prefer to go for jobs that will pay them more or try to get government jobs that offer them stability. Ultimately it is about money and aspiration. However, rural youths' obsession with procuring only government jobs for livelihood is highly destructive to their growth. This mindset needs to change as such jobs are few, and when one does not get it, the person is likely to lose confidence and label themselves as a failure. Hence, there is a need to give them proper guidance, opportunities, and encouragement to deploy the entrepreneurial approach and increase their canvas.

SEDI skill centers should start looking at the complete value chain and take ownership of the system. The successful implementation of any intervention depends on the awareness of the youth to adopt it.

It can be inferred from the field discussion that the youth drop out of the course for various reasons, reflecting that the aspiration for some courses is very low. SEDI skill centers should start looking at the complete value chain and take ownership of the system. The successful implementation of any intervention depends on the awareness of the youth to adopt it. There is a need to begin removing biases about the job market right at the school level when minds can be molded easily.

Despite rural women's significant role in agriculture and other rural activities, they face more barriers to completing their education and skill training. Social, cultural, and economic

constraints can limit rural girls' access to vocational training. This limits their participation in more productive and remunerative work. Targeted action is needed to dismantle these barriers.

Recommendations

Based on the in-depth discussion with various stakeholders, a few recommendations are elucidated below:

a) Enrolment

Considering lower enrolment figures, it was recommended that SEDI could target villages near SEDI's office. By training the youth of nearby areas, the local business can create a pool of potential employees already familiar with the area and its culture. This can make recruitment more manageable and efficient. It will also garner local support. By investing in the community, the business can gain support from local residents and authorities. This can help to create a positive image for the business and improve its chances of success. Since door-to-door mobilization, referrals, and community meetings were the major activities leading to student enrolment, more focus should be on these activities.

By investing in the community, the business can gain support from local residents and authorities. This can help to create a positive image for the business and improve its chances of success.

SEDI can organize villager meetings with the youth who have completed the training and worked for over two years. This will instill confidence in villagers and encourage them to enroll their wards in SEDI programs. SEDI may also consider organizing a reward recognition program for the alums. This will encourage others (particularly the youth of the targeted and adjoining villages) to train themselves, join the mainstream workforce, and lead a better life.

SEDI can identify the placement partners/organizations that can provide jobs to the students closer to their home locations. Encourage placement of a group of students in a single company so that they get group support and ease the process post job training.

It was found that present batches have a good representation of students from 10th or 12th pass but a minimal representation of 8th-pass students. ACF's arm focusing on school education can ensure that a maximum number of students complete their matriculation. Then SEDI can enroll these students in their vocational training course to make them employable and job ready for the market. This will enable completion of matriculation, integration of ACF's activities, and provide a captive pool for enrolment in SEDI's programs.

b) Counseling Parents

Parents have an influence on the development of their children in different ways. They play a crucial role in helping their children make decisions about their livelihoods. Hence, it is essential to counsel parents and help them to understand the value and benefits of the skill development program, address their misconceptions, and garner their support for allowing their son/daughter and daughter-in-law to continue training and seek suitable jobs. Lack of participation by parents affects enrolment and the level of skilled individuals in the workforce and labor market. It also affects the self-confidence of an individual.

Lack of participation by parents affects enrolment and the level of skilled individuals in the workforce and labor market. It also affects the self-confidence of an individual.

c) Counselling Youth

Young people live in a society in which creating sustainable career opportunities is complex. Guidance is crucial to support motivated, smart career choices and prevent dropouts from vocational training. Guidance avoids the usual biases about learning pathways, focusing on personal skills and interests. Appropriate guidance helps young people understand their learning needs and career preferences based on their strengths and characteristics. It can lead young people to have an active, engaged attitude to education and learning in general. Hence, bridging the gap between student expectations and on-the-job experience is vital. As placements in the formal sector require good documentation of certificates and achievements, students can be trained in using the ' Digi Locker app.

Conclusion

The article highlights the crucial need for skill development in rural India and the significance of the Ambuja Foundation's SEDI initiative in addressing this challenge. The preference for government jobs, skepticism towards the private sector, personal reasons such as work pressure, marriage, lack of family support, and expectation mismatch contribute to low enrollment and high dropout rates. However, by targeting villages near training centers, conducting community meetings, and leveraging successful alumni, the SEDI initiative can raise awareness and encourage enrollment. Counseling parents and guiding youth are crucial for overcoming misconceptions, fostering informed career choices, and minimizing dropouts. With concerted efforts to address these challenges, SEDI can unlock the potential of rural youth, create employment opportunities, and contribute to their growth and development. Overall, the SEDI initiative is vital in unlocking rural India's potential by providing opportunities for self-improvement, employment, and economic growth. By addressing the aspirations and challenges of rural youth, promoting private sector recognition of skills, and empowering rural women, these initiatives contribute to a more inclusive and prosperous society.

References

Ambuja Cement Foundation (2019) is a Non-Government Organisation NGO in India. Available at: https://www.ambujacementfoundation.org/ (Accessed: March 23, 2023)

National Institution for Transforming India (NITI Aayog). 2020 annual report SEDI, [online] Available at: https://sedi.org.in/ (Accessed: March 23, 2023)

Tiwari, P. (2020) Importance of skilling and re-skilling in rural India, Times of India Blog. Available at: https://timesofindia.indiatimes.com/blogs/developing-contemporary-india/importance-of-skilling-and-re-skilling-in-rural-india/ (Accessed: March 23, 2023)

Epilogue

The post-COVID era affords us an opportunity to transform our societies and communities by utilizing the current disruption to build a sustainable future. Restructuring involves encompassing innovative developments ushered in by the COVID-19 pandemic and empowering individuals and organizations to cultivate greater resilience to handle future crises.

In the context of India, securing resilience entails a perpetual trade-off between the equitable allocation of support and the imperative of directing aid to the most susceptible population segments. To help remote populations, we need to prioritize their needs and preferences. We can join forces to create inclusive economies for all. Collective actions can be deployed to establish economies that ensure inclusive economic growth, well-being, and security for all.

The COVID-19 pandemic has cascading impacts on public health, economic stability, education, livelihoods, and social well-being. The articles compiled in the Anthology suggest that NGOs demonstrated promptness in adopting digital solutions and partnership strategies to address the needs of communities. They were confident that digital transformation would continue and expand further with advancements in artificial intelligence, automation, and virtual reality in the post-COVID world. To be relevant in the current and future, they need to comprehensively digitize their operations and enhance the technical skills and capabilities of their staff and beneficiary groups.

The tech industry is fuelling economic growth, innovation, and job creation. It is an opportune time to reskill the youth to enable broad-based participation in the job market in the post-COVID world, where new skills are in demand. The exponential increase in e-commerce has created new jobs and income-earning opportunities, which have the potential to spur household income, lift people out of poverty, and increase the resilience of poor communities. However, a considerable asymmetry in accessing digital resources impedes the achievement of inclusivity and equity. A significant proportion of the Indian population is marginalized due to inadequate resources or inadequacy in effectively utilizing specialized hardware. To address this, we must develop partnerships with corporates to mobilize technical resources and facilitate technical training.

As we move forward, there is an opportunity to prioritize environmental sustainability and slow down the pace of global warming. This may involve transitioning to alternative energy sources, implementing sustainable industry practices, and adopting greener transportation alternatives.

To achieve a sustainable future, we must address socioeconomic disparities and focus on building a more inclusive society. Efforts may include investing in education and healthcare access for all, promoting gender equality, community harmony, livelihood support, and strengthening the social safety nets. Greater focus should be on providing mental health support for building community resilience. Based on their experiential learning from the pandemic, all organizations should create contingency plans for unexpected crises to ensure the continuity of their operations.

To build social infrastructure, governments may implement stimulus packages, invest in infrastructure projects, and promote entrepreneurship and innovation to drive economic recovery and resilience. To limit the impact of the future health crisis on lives and livelihoods, governments must take urgent action to strengthen health systems, including strengthening prevention and response capacities, strengthening primary care, and improving preparedness.

Building human capital for a sustainable future is crucial for long-term social and environmental sustainability. The significance of education in building a sustainable future is amplified in the globalized world. Specifically, Business Schools have a vital role in creating a sustainable future by equipping future business leaders with building knowledge, skills, and mindsets necessary to address social and environmental challenges. Besides integrating sustainability aspects into the curriculum, handling live projects in the field can inspire students to become change agents.

About the Jasani Centre for Social Entrepreneurship and Sustainability Management

The Jasani Centre for Social Entrepreneurship and Sustainability Management, NMIMS, has been established to execute social commitments of NMIMS University. The centre addresses social concerns through its comprehensive academic, training, research, and field interventions. Its interventions include contributions to the professional development of executives working for the social sector, capacity building for the resource poor and social entrepreneurship development. The centre supports a variety of curricular, extracurricular and career programs to provide MBA students as well as corporate executives with the tools and opportunities to engage effectively with the social sector. The centre offers a uniquely architectured MBA programme in Social Entrepreneurship which aims at developing a new generation of change makers/leaders who can create global social impact by combining passion of a social mission along with a business-like discipline, innovation, and determination.

As a catalyst and innovator, the centre's mission is to create a new generation of business leaders and social entrepreneurs who are knowledgeable about and are committed to create a sustainable society. The centre's objectives serve as a bridge between academia, the corporate world and the civil society organizations. The research, as well as the teaching strengths combined with the experiential learning approach and guiding principles of the centre, connect sustainability focused knowledge and research to students, businesses and the civil society organizations. The centre has increasingly been involved in research and providing consultancy in areas of management of social enterprises, CSR, micro-enterprise management, disaster management, impact assessment and conducting social audits.

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