

Stakeholders’ Perspectives on the Effectiveness of the
Mid-Day Meal Program in Nepal

¹Mahesh Pokhrel; ^{2*}Bhagwan Aryal; ³Devaraj Acharya; ⁴Tribhuwon Sharma
¹Graduate School of Education, Tribhuvan University, Kathmandu, Nepal;
ORCID: 0009-0002-4624-3457
²Central Department of Education, Tribhuvan University, Kathmandu, Nepal;
ORCID: 0000-0002-9215-3551
³CERID, Tribhuvan University, Kathmandu, Nepal; ORCID: 0000-0003-0847-4836
⁴Graduate School of Education, Tribhuvan University, Kathmandu, Nepal;
ORCID: 0009-0000-9466-5510

Article Info

Received : July 19, 2024
Accepted : September 30, 2024

Keywords

local stakeholder,
mid-day meal program,
school nutrition, stakeholder
perspective, standardized meals

Abstract

The mid-day meal (MDM) program is vital in improving nutritional status and academic outcomes, particularly among basic school students from economically needy backgrounds. The MDM program provides nutritious meals to enhance school attendance, concentration on learning, class activities, and overall academic performance. This study synthesizes data from 2015 to 2024 regarding stakeholders' perspectives on the effectiveness of the MDM program, analyzing 18 academic research papers, policy documents, and reports accessed through Google Scholar, Research Gate, and Nepali institutional repositories. These sources were assessed on relevance keywords, publication, and methodological thoroughness, including a thematic analysis to identify key themes and gaps in the related literature. It revealed an enhancement in student educational participation, improving nutritional status and community engagement, fostering ownership, promoting social equity, health awareness and education, and increasing school attendance due to the Nepal MDM program. Yet some ongoing challenges such as food quality and nutritional standards, hygiene concerns, infrastructure challenges, stakeholder engagement, funding limitations, policy and implementation gaps, stakeholder collaboration, local food integration and strong monitoring to optimize program effectiveness and sustainability appear to be lacking. Despite their substantial benefits in enhancing student nutrition and educational outcomes, MDM programs face challenges such as the quality of food being served, hygiene, funding, and infrastructure deficiencies in Nepal. Strategic stakeholder collaboration, improved school facilities, and sustainable practices are essential for maximizing the program's long-term impact of these initiatives. This study contributes to a broader understanding based on stakeholders' perspectives, linking pathways for future research, policy development, and effective program implementation of the MDM program in Nepal.

*Corresponding Author:
bhagwan.aryal@cded.tu.edu.np;

Introduction

The mid-day meal (MDM) program of the Nepal government is an initiative to improve children's nutritional status in community schools. Initiated to address malnutrition and encourage school attendance, the program provides students with free meals during the school day. This initiative aims to contribute to positive child health outcomes (Cohen et al., 2021) and increase academic

performance (World Health Organization, 2021) by ensuring children receive at least one nutritious meal daily. The program involves a variety of stakeholders, including government agencies, schools, parents, cooks, food suppliers, health experts, non-governmental organizations (NGOs), and the community, who work together to enhance the students' educational experience and well-being.

The MDM program addresses nutritional inadequacy and academic outcomes of school students, especially in developing countries such as Nepal. As a positive result of the MDM program, fighting hunger and malnutrition has helped to increase school attendance, concentration levels, and academic performance of school students (Ministry of Education, Science, and Technology [MOEST], 2021; Prabhat & Chetana, 2018). According to the Ministry of Health and Population (MOHP) (2023), Nepal faces nutritional challenges, especially for economically disadvantaged children. The MDM program has proven critical in ensuring access to essential nutrients and promoting an environment conducive to learning for school students.

Providing MDMs for school students dates back several decades, from supplemental efforts to simple nutrition as an educational strategy driven by holistic child development goals. Implementation of the MDM program appears to vary across regions, influenced by factors such as socioeconomic conditions, cultural norms, and government policies. In Nepal, the MDM program has played an important role in improving nutrition outcomes, reducing dropout rates, and creating a more inclusive educational environment (Shrestha et al., 2020). Upreti et al. (2024) discussed the development of a school-based nutrition education program (SBNEP) aimed at improving the nutritional behaviors of basic-level schoolchildren in Nepal through participatory action research (PAR). Conducted in a public school in the Chitwan district from 2018 to 2022, the study involved collaboration between university researchers and school stakeholders, including teachers, students, parents, and school leaders. Utilizing methods such as in-depth interviews, focus groups, and workshops, the study found that co-designing the SBNEP through PAR was time-consuming and required significant commitment and negotiation skills. The research underlines the potential of PAR in fostering transformational change in students' nutritional behaviors.

Ghimire (2024) explores Nepal's MDM policy and its impact on school retention from the perspective of community school teachers in the Lalitpur district. Through in-depth interviews, the study revealed that teachers felt funding for midday meals was insufficient, requiring more local contributions, even though allocated funds were fully utilized. The program positively impacts education quality and reduces dropout rates, especially among disadvantaged students. The research underscores the need for additional financial support to sustain and enhance the midday meal program, highlighting its benefits in improving student retention and overall education quality.

In a similar socio-economic setting, Acheampong (2022) studied the Ghana School Feeding Program (GSFP) and its impact on school enrolment, attendance, and retention, showing significant growth in these areas despite limited empirical evidence to support its effectiveness. Based on qualitative methods and interviews with 20 informants, the study found that communities and key stakeholders were often excluded from program implementation, unaware of food and school selection criteria, and uninvolved in formal monitoring. This exclusion undermines community ownership, resource contribution, and program sustainability. In addition, delays in reimbursement and low budget allocations have compromised the quality and quantity of food. Acheampong recommends improving stakeholder and community engagement to increase program sustainability and accountability.

Similarly, studies in India show similar results. The MDM program in India aims to eradicate malnutrition, increase nutritious food in school meals, encourage attendance, reduce absenteeism, and bridge gaps between different backgrounds (Paltasingh & Bhue, 2022). Parents and teachers report significant improvements due to MDM in various aspects of life, including height, weight, classroom hunger, enrollment, retention, attendance, and dropout rates (Pal et al., 2024). Despite the success of the MDM program, challenges have emerged in ensuring the continuous distribution of nutritious food, maintaining hygiene standards, and raising adequate funds. To face such challenges effectively, it is necessary to attract the attention of the stakeholders (Tripathi, 2024). These challenges highlight the

need for critical reform of existing policies and practices to maximize the impact of the MDM program on student well-being and educational outcomes.

Given the significant impact of MDM programs on educational outcomes and the nutritional well-being of school students, there is a need to monitor their implementation and effectiveness in schools implementing various MDM practices, which will indicate future effective strategies. Therefore, the goal of our review was to analyze the implementation and impact of the MDM program over the past years, the response of relevant agencies to the program, and the effect of the program through the mentioned iteration to see its situation in diverse populations, including economically disadvantaged communities, urban settings, and rural areas. Additionally, we aim to explore potential future directions and challenges for optimizing these programs' nutritional benefits and educational outcomes based on the stakeholder's perspectives.

Methods

This study adopted a narrative review methodology to thoroughly explore and synthesize data on stakeholders' perspectives on the effectiveness of the MDM program in Nepalese schools, which encompasses stakeholder perspectives including students, parents, teachers, government officials, NGOs, and community members. A systematic search was conducted to identify and access relevant literature from academic journals, articles, reports, and policy documents via electronic databases and search engines like Google Scholar, Research Gate, and Nepalese institutional repositories. Search keywords such as "Mid-Day Meal program," "stakeholder perspectives," and "school feeding program" guided the literature search process. The review comprises the timeframe from 2015 to 2024 to ensure a comprehensive review of recent developments in the MDM program. This review critically analyzes 18 papers in this process. The sources were chosen based on their assessment, relevance to the topic, publication quality, and methodological thoroughness. The study included qualitative or quantitative research, written in English or Nepali, and focused on MDM program challenges, best practices, or outcomes. Studies not related to Nepal or lacking methodological rigor were excluded.

Data synthesis involved thematic analysis in identifying key themes and gaps in current research and practice regarding MDM program effectiveness and stakeholder contributions. Inclusion criteria encompassed qualitative and quantitative studies in English or Nepali, analyzing challenges, best practices, and program outcomes. Highlighting, coding, and organizing the literature findings involved an analysis based on various thematic and sub-thematic literature selections and relevant stakeholder categories. The synthesis of findings provides a comprehensive overview of the effectiveness of the MDM programs offering valuable insights for future research directions and policy enhancements for stakeholders.

Results

This section of the paper covers a different theme-wise overview based on various stakeholder groups, such as government institutions, schools, students and guardians, community members, researchers, and non-governmental and international organizations. The findings contrast positive impacts and challenges, with specific data and examples from relevant studies for each stakeholder group. Its purpose is to present concise themes and sub-themes of the various perspectives related to these stakeholders.

Government Institutions

Shrestha et al. (2020) found that implementing MDM programs varies across regions, shaped by socioeconomic conditions, cultural norms, and government policies. This program has significantly improved child nutrition outcomes, reduced dropout rates, and created a more inclusive educational environment in Nepal. However, lack of monitoring and inconsistent funding still challenge the program's effectiveness. The World Food Program (WFP) (2022) initiatives addressed increased food insecurity and malnutrition in Nepal due to the COVID-19 pandemic, natural disasters, and the global food crisis. Key initiatives include emergency nutrition assistance to vulnerable groups, fortified food distribution in schools, maternal and child health programs, advancing rice fortification standards, and supporting farmers through climate adaptation activities. These efforts support the achievements of Sustainable Development Goal (SDG) 2 (Zero Hunger) and SDG 17 (Partnership for the Goals). SDG

2.2 aims to reduce stunting in children below five by 40% between 2012 and 2025, reduce wasting to less than 5%, and prevent overweight, thereby achieving global goals (Central Bureau of Statistics [CBS], 2020).

School-based MDM programs can support this goal. Nevertheless, continued governmental and multi-sectoral collaboration is critical to sustaining these initiatives and expanding their reach to meet national nutrition goals. A study on home-developed school feeding showed improvements in the provision and quality of home-based school feeding compared to cash-based MDM programs, highlighting benefits such as standardized meals, local stakeholder engagement, and strong community ownership. However, it noted increased funding needed to sustain these improvements (Shrestha et al., 2020). However, some gaps in implementation and monitoring remain, requiring strong policy support and multi-sectoral collaboration to increase program effectiveness.

Schools

A study by Tripathi (2024) examined disparities in food provision and school facilities between institutional and community schools, emphasizing the need for targeted interventions to improve student well-being and academic outcomes. The research highlighted significant disparities in mid-day meal provision and school facilities between institutional and community schools, influenced by parental education level and socio-economic factors. This emphasized the need for targeted interventions to ensure and enhance nutritious meals across all school types and fulfill their educational rights. Similarly, Chhetri et al. (2024) studied the transformative effects of the mid-day school meal program in the Nuwakot district, Nepal through the homegrown model. Using a mixed-methods approach with 64 interviews from 16 government schools, the study found that the program significantly increased stakeholder awareness and promoted collaborative efforts between parents, schools, and local farmers. The consumption of locally produced food increased, leading to a change in eating habits. The study emphasized the crucial role of cooperatives in ensuring a continuous supply of food items and the importance of local markets to meet the program's demand. In addition, the research emphasized the need for a multi-sectoral approach by local governments to support and sustain the program effectively.

Ratala et al. (2023) explored the reality of school nutrition programs as perceived by teachers. Focus group discussions with principals, nutrition focal persons, and teachers in a case study of primary schools in Khotang district, Nepal, revealed that each school adopted its nutrition approach based on suitability and effectiveness. The findings emphasized the potential and role of educators in the success of nutrition education; highlighting the need for sustainable school health and nutrition (SHN) programs that included parent participation, resource availability, and diverse activities to improve student diet quality, academic performance, and overall wellness.

Students and Guardians

Students' and parents' engagement has been crucial to the success of the MDM program such as ensuring regular attendance at midday meal programs in schools, providing feedback on food quality, promoting nutrition education at home, and promoting community support for sustainable program implementation and effectiveness. Their active involvement strengthens the program's impact on student health, education, and overall well-being.

In this regard, Tripathi (2023) found that more than half of the institutional school students in Pokhara of Kaski district, Nepal, carried home-cooked lunches, while community school students relied on canteen meals. Inadequate seating and lack of soap in wash basins affected students' hygiene and health, highlighting the need to improve mid-day meal facilities in line with child-friendly school guidelines. Similarly, Ghimire (2024) studied the mid-day meal policy regarding retention in school education and found that mid-day meals were often inadequate and more local contributions were needed. However, the allocated funds were fully spent on student nutrition and support. Community members noted that the program positively impacted the quality of education and reduced dropout rates, stressing the need for more financial support to improve and sustain educational outcomes, especially for disadvantaged students.

Unhealthy and processed food consumption among school and higher education students is a growing concern affecting their health and well-being. Pokhrel (2023) highlighted high junk food consumption influenced by factors such as taste preference and availability in university canteens, suggesting interventions to promote healthier eating habits.

Community Members and Academic Researchers

A study on the Ghana School Feeding Program (GSFP), similar to Nepal's MDM program explores its impact on school enrollment, attendance, and retention, showing significant improvements despite limited empirical evidence (Acheampong, 2022). Using qualitative methods and interviews with 20 informants, the study revealed systemic problems such as excluding communities and stakeholders from program implementation, lack of transparency in food and school selection criteria, community ownership, and insufficient formal monitoring that undermines program sustainability. Delays in reimbursement and inadequate budget allocation further compromise the quality and quantity of food. Acheampong's findings underscore the importance of community and stakeholder engagement to ensure the long-term success of school meal programs.

A study on school-based nutrition education interventions in Nepal outlined effective strategies within the PAR framework. The study emphasized bottom-up intervention development, multilevel approaches, and interdisciplinary collaboration to foster sustainability and ownership of the school meals program (Upreti et al., 2023). MOHP (2023) Nepal faces nutritional challenges, especially for children from economically disadvantaged backgrounds. The MDM program has proven crucial in ensuring access to essential nutrients and promoting a learning-friendly environment for school students.

NGOs and International Organizations

The Global Child Nutrition Foundation (GCNF) (2021) highlights research gaps, such as understanding the trade-offs of local food sourcing for school meal programs, and its impacts, emphasizing the need for decentralized data collection and classification of household initiatives. Adopting Nepal's constitution in 2015 transformed the country into a federal democratic republic, a key moment in advancing the 2030 Agenda. The recently enacted Right to Food Act guarantees that food is a fundamental right of every citizen. These reforms provided an opportunity to integrate the SDGs into national policies, budgets, and sub-national plans under the new federal structure. Despite substantial progress, Nepal faces significant food insecurity and malnutrition challenges, as highlighted by the Zero Hunger Strategic Review (ZHSR) conducted in 2017-18. This review also proposed a set of recommendations to address these issues (WFP, 2022).

The mid-day meal scheme in India is a three-decade-old scheme and a vast initiative serving millions of children with the dual objective of improving school attendance and fighting nutritional deficiencies (Gopal & Singh, 2022). Despite its ambitious goals, the program faces challenges in diversifying meals to maximize nutritional impact (Prabhat & Chetana, 2018). The scheme remains crucial in promoting educational outcomes by ensuring regular access to nutritious meals for students nationwide.

Comparative Analysis of Stakeholder Perspectives: Impacts and Challenges

A comparative analysis across various stakeholders regarding the success and challenges of the MDM program reflects varied perspectives. The government and NGOs feel the program aligns with national and global nutrition goals. At the same time, schools and community members voice day-to-day operational challenges: infrastructure limitations and inconsistent food quality. Students and their families stress improving hygiene and adherence to better food safety standards.

General themes found across the various stakeholder groups are- inconsistent financial support, different ways of implementing the program in different regions, and infrastructural limitations. On the other hand, the increasing participation of local farmers and cooperatives in the homegrown models augurs well in addressing some of these challenges. Further involvement and ownership of stakeholders at the community level can help sustain these positive impacts on education and nutrition outcomes.

Based on the above literature review, the MDM program in Nepal represents a critical initiative to address the dual issues of malnutrition and educational achievement among school-age children. This program has made significant strides in improving the nutritional status of students and promoting better school attendance and performance. However, the success of the MDM program depends on multiple factors, including the quality of the food provided, the efficiency of program implementation, and the level of stakeholder engagement. Despite the positive impacts, numerous challenges persist, especially in maintaining consistent food quality, ensuring proper hygiene, and securing sustainable funding. These issues underline the need for a comprehensive approach that involves all relevant stakeholders in program planning and execution.

A critical review of the MDM program in Nepal reveals that while they have achieved significant progress, substantial gaps still need to be addressed. Infrastructural inadequacies and logistical obstacles often hamper the effectiveness of this program. For instance, many schools struggle with basic facilities required to prepare and serve meals safely, compromising the nutritional quality and hygiene of the food provided. Moreover, the reliance on inconsistent funding streams often leads to interruptions in meal provision, adversely affecting the students who depend on these meals for their daily nutritional intake. Therefore, enhancing the infrastructure, ensuring steady financial support, and incorporating local food sources into the meal plans are crucial steps towards making this program more resilient and effective.

The role of stakeholders in successfully implementing the MDM program cannot be overstated. Students, parents, teachers, government officials, NGOs, and community members all have vital roles to play. Effective stakeholder collaboration can lead to more tailored and culturally appropriate meal plans, better monitoring and evaluation mechanisms, and increased community ownership of the program. Through the active participation of these diverse groups, the program can be continuously improved and adapted to meet local needs. For future success, it is essential to foster a participatory approach where stakeholders are not passive recipients but active contributors to the program's development and sustainability. This collaborative model can transform the MDM program into a cornerstone for educational and nutritional advancement in Nepal.

Discussion

The discussion addresses key challenges such as infrastructural improvements, hygiene standards, and nutritional quality control in MDM programs. It explores successful strategies from global and local contexts, emphasizing the importance of adaptive management and stakeholder engagement in program enhancement.

Based on the literature reviewed, the MDM program in Nepal reveals its achievements and persistent challenges. The program has undoubtedly played a crucial role in improving nutritional outcomes and educational participation among economically disadvantaged students. It has successfully increased school attendance, improved concentration levels, and contributed to better academic performance, aligning with global educational and nutritional goals (MOHP, 2023). Inadequate infrastructure in many schools further exacerbates these challenges, with inadequate facilities for safe food preparation and storage compromising hygiene standards (Ghimire, 2024).

Funding limitations pose a significant threat to program sustainability. Delays in budget allocations and insufficient financial resources often lead to irregularities in meal provision, disrupting the program's continuity and reliability (Ghimire, 2024). This inconsistency affects nutritional outcomes and undermines the trust and support of stakeholders, including parents and community members (Acheampong, 2022).

Policy and implementation gaps also emerge as critical issues. The variability in program implementation across different regions reflects broader systemic challenges influenced by socioeconomic disparities and cultural norms (Shrestha et al., 2020). This inconsistency highlights the need for more robust policy frameworks and better coordination among governmental bodies to ensure fair access and uniform standards nationwide.

While the MDM program in Nepal has made significant strides in addressing nutritional deficiencies and improving educational outcomes, it faces significant challenges that require urgent

attention. Enhancing food quality standards, improving infrastructure, securing sustainable funding, addressing policy gaps, and strengthening stakeholder engagement are critical steps toward maximizing the program's impact and ensuring its long-term success in Nepal's educational landscape. This discussion critically underscores the importance of holistic approaches and collaborative efforts to overcome these challenges and achieve sustainable improvements in student well-being and academic results.

The mid-day meal programs in Nepalese schools have shown considerable benefits by addressing nutritional deficiencies and enhancing student well-being and academic performance. The review identifies persistent challenges, such as food quality, hygiene standards, funding inadequacies, and sustainability issues. Shrestha et al. (2019) emphasize the importance of stakeholders' perceptions in program implementation, as they provide insights into factors influencing the process and help identify gaps, we also proceed alike. Stakeholder involvement, including parents, teachers, community members, and government officials, is crucial for program success and longevity. Improving school infrastructure is also imperative, as many schools lack essential amenities that could undermine the program's effectiveness. Integrating local food sources promises to enhance nutritional quality and cultural relevance. Moving forward, securing sustainable funding and implementing robust monitoring and evaluation mechanisms are essential for maximizing these programs' impact. Future research and policy initiatives should prioritize these areas to strengthen mid-day meal programs' role in fostering Nepalese children's health and education.

Conclusion

The MDM programs in Nepalese schools have been essential in reducing malnutrition and enhancing students' overall well-being and academic performance. While these programs have successfully boosted school attendance, student concentration, and short-term learning outcomes, challenges remain, particularly concerning food quality, hygiene standards, funding, and sustainability challenges persist. Addressing these issues requires a strategic and coordinated approach to realize the potential of mid-day meals. Stakeholder involvement emerges as critical, with active participation from parents, teachers, community members, and government officials essential for program success and sustainability, community engagement and collaboration, combined with continuous monitoring and evaluation, and help ensure that the program remains adaptable to changing needs. Improving school infrastructure and integrating local food sources are pivotal to enhancing nutritional quality and cultural relevance, ensuring these programs continue benefiting Nepalese children. Securing sustainable funding, enhancing stakeholder collaboration, and implementing robust monitoring and evaluation mechanisms are imperative.

Future research and policy initiatives should prioritize these aspects to strengthen mid-day meal programs' role in promoting Nepalese students' health and education. Despite challenges, and focus on long-term impact, these programs represent a crucial intervention and offer significant opportunities for improvement through local engagement, policy support, and innovative approaches. Exploring regional disparities in MDM program outcomes and examining the influence of local food sourcing on nutritional quality, improved retention rates, and cognitive development of school-going children are necessary. Evaluating long-term impacts and scaling successful models will be essential for maximizing the enduring influences of mid-day meals on student nutrition and educational outcomes in Nepal. The MDM program addressing these challenges and focusing on sustainable funding, community involvement, and ongoing monitoring, the MDM program can continue to play a vital role in improving the student's health and educational outcomes in Nepal, with lasting positive effects on future generations.

Authors' Contribution

The manuscript was conceived and written by MP. BA, DRA, and TS assisted in the literature review and discussion part of the study. The final version of the article has the consent of all authors to publish.

Declaration of Conflicting Interests

The authors state that they have no possible conflicts of interest regarding the publishing of this manuscript.

Acknowledgments

We acknowledge Mr. Yadu Ram Upreti for reviewing the manuscript in the initial phase.

References

- Acheampong, J. O. (2022). Stakeholders perspective of the Ghana school feeding program: A case of the Denkyembour district. *Interchange*, 53(2), 313-333. <https://doi.org/10.1007/s10780-022-09461-9>
- Central Bureau of Statistics [CBS]. (2020). *Nepal multiple indicator cluster survey 2019, Survey findings report*. CBS and UNICEF Nepal. <https://shorturl.at/cEe67>
- Chhetri, R., Ghimire, S., Aryal, S. P., Dura, R., Lamichhane, P., & Chhetri, G. (2024). Transformative effects of mid-day school meal program in Nuwakot district through homegrown model: A case study of Nepal. *World Journal of Advanced Research and Reviews*, 21(2), 808-822. <https://doi.org/10.30574/wjarr.2024.21.2.0454>
- Cohen, J. F., Hecht, A. A., McLoughlin, G. M., Turner, L., & Schwartz, M. B. (2021). Universal school meals and associations with student participation, attendance, academic performance, diet quality, food security, and body mass index: A systematic review. *Nutrients*, 13(3), 911. <https://doi.org/10.3390/nu13030911>
- Ghimire, D. D. (2024). Explore the mid-day meal policy in the context of retention in school education: A teacher's perspective from Lalitpur District. *Praghyaratna*, 6(1), 1-10. <https://doi.org/10.3126/praghyaratna.v6i1.64534>
- Global Child Nutrition Foundation [GCNF]. (2022). *School meal programs around the world: Results from the 2021 global survey of school meal programs*. <https://gcnf.org/global-reports>
- Gopal, R., & Singh, R. (2022). Status of mid-day meal scheme in India. *Mathematical Statistician and Engineering Applications*, 71(4), 12771-12781. <https://doi.org/10.17762/msea.v71i4.2546>
- Ministry of Education, Science, and Technology [MOEST]. (2021). *Nepal education sector analysis*. Ministry of Education, Science and Technology. <https://moest.gov.np/download/738>
- Ministry of Health and Population [MoHP], Nepal, New ERA, & ICF. (2023). *Nepal demographic and health survey (NDHS) 2022*. Ministry of Health and Population. <https://shorturl.at/IXi7X>
- Ministry of Health and Population [MOHP]. (2023). *Progress of health and population sector 2022/2023; National joint annual review report*. Government of Nepal Ministry of Health and Population. <https://shorturl.at/8a5hO>
- Pal, A., Ananda, K. R., Kumar, S., Gupta, S. K., & Sharma, A. (2024). The Impact of Mid-Day Meal Scheme on the Nutritional and Educational Status among Rural School Children in Bihar, India. *European Journal of Nutrition & Food Safety*, 16(8), 149-155. <https://doi.org/10.9734/ejnf/s/2024/v16i81503>
- Paltasingh, T., & Bhue, P. (2022). Efficacy of mid-day meal scheme in India: challenges and policy concerns. *Indian Journal of Public Administration*, 68(4), 610-623. <https://doi.org/10.1177/00195561221103613>
- Pokhrel, M. (2023). *Junk food consumption practice among in-campus university students*. Unpublished Master thesis, Central Department of Education, Faculty of Education, Tribhuvan University, Kathmandu.
- Prabhat, A. & Chetana, A. P. (2018). Effect of mid day meal programme on the nutritional status of school children. *International Journal of Environment Ecology Family and Urban Studies*, 8, 37-46. <https://shorturl.at/mDusj>
- Ratala, D., Rai, S., Dahal, S., & Niraula, B. (2023). The reality of school nutrition programs as perceived by teachers: A case study of primary schools in Khotang, Nepal. *Asian Social Science*, 19, 55. <https://doi.org/10.5539/ass.v19n4p55>

- Rawat, B. S. (2023). *Monitoring and management of mid-day meal scheme of elementary school education in Dehradun*. Unpublished Bachelor Thesis, IMS Unison University, Dehradun. <https://feji.us/oyq2y0>
- Shrestha, R. M., Ghimire, M., Shakya, P., Ayer, R., Dhital, R., & Jimba, M. (2019). School health and nutrition program implementation, impact, and challenges in schools of Nepal: stakeholders' perceptions. *Tropical Medicine and Health*, 47, 1-11. <https://doi.org/10.1186/s41182-019-0159-4>
- Shrestha, R. M., Schreinemachers, P., Nyangmi, M. G., Sah, M., Phuong, J., Manandhar, S., & Yang, R.-Y. (2020). Home-grown school feeding: Assessment of a pilot program in Nepal. *BMC Public Health*, 20(28). <https://doi.org/10.1186/s12889-019-8143-9>
- Tripathi, K. (2023). Mid-day meals programs in the schools of Pokhara through child friendly school manual. *Janapriya Journal of Interdisciplinary Studies*, 12, 80-94. <https://doi.org/10.3126/jjis.v12i1.62243>
- Tripathi, K. P. (2024). Midday meal programs in institutional and community schools of Nepal: A comparative analysis of students' meal choices. *Prithvi Academic Journal*, 7(1), 1-15. <https://doi.org/10.3126/paj.v7i1.65766>
- Upreti, Y. R., Devkota, B., Bastien, S., & Luitel, B. C. (2024). Developing a school-based nutrition education programme to transform the nutritional behaviours of basic-level schoolchildren: a case from participatory action research in Nepal. *Educational Action Research*, 32(3), 528-547. <https://doi.org/10.1080/09650792.2023.2206580>
- Upreti, Y., Duwadi, K., Magar, D., Bikash, C., Devkota, B., Bastien, S., & Bjønness, B. (2023). Fostering ownership and sustainability of school-based nutrition education intervention: Challenges and lessons learned through par study in Nepal. *IGI Global*. <https://doi:10.4018/979-8-3693-0607-9.ch003>
- World Food Program (WFP). (2022). *The state of school feeding worldwide 2022*. World Food Program. <https://feji.us/llt8w3>
- World Health Organization. (2021). Action framework for developing and implementing public food procurement and service policies for a healthy diet. World Health Organization. <https://feji.us/wr7pun>