

Review Article

Epidemic of undernutrition during COVID-19 pandemic

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ABSTRACT

Undernutrition continues to be a major public health challenge for ages. Under-five age children are still at risk of undernutrition even though there exist many policies and programs at various levels. The lower-middle-income countries (LMIC) struggle hard to combat the undernutrition epidemic. The unprecedented advent of the COVID-19 pandemic has worsened the existing undernutrition scenario. This article reviews the burden and impact of the COVID-19 on undernutrition among children. Necessary measures have to be taken to mitigate the crisis and thereby reduce the risks due to morbidity and mortality related to undernutrition. A manual search of relevant data has been taken from the website of the World Health Organization (WHO), UNICEF, Ministry Health and Family Welfare (MOHFW), government of India. (GOI). A search of relevant publications was done through electronic databases such as PUBMED.

Keywords: Undernutrition, COVID-19, Food security

INTRODUCTION

Undernutrition is considered a global pandemic. Globally one in every nine people suffers from undernutrition.¹ In low and middle-income (LMIC) countries, about 45% of deaths among children under five years of age are linked to undernutrition.^{2,3} According to the report developed by the World Food Program, amount of people living in LMICs facing food insecurity would be double to 265 million by the end of 2020, and the situation will further worsen because of the COVID-19 pandemic.⁴ Around 217 countries have been affected to date, with 41 million cases and 1.1million deaths globally during this pandemic. Evidence from history reveals an increase in the undernourished population in earlier viral pandemics.^{5,6} The mitigation efforts were undertaken to contain COVID-19 pandemic indirectly adds to the burden of existing malnutrition by hampering labor participation for food production transportation, thereby

disrupting supply chains affecting millions of families. COVID-19 pandemic imposes other challenges such as falls in the economy, loss of employment, and disruption of routine health services, indirectly affecting the nutritional status of the vulnerable groups. Due to the nationwide lockdown, the small and medium enterprises incurred losses amounting to 35,000 crores daily.⁷

A study published in *The Lancet* revealed that without acute intervention, the global prevalence of child wasting could rise by 14.3%.⁸ Recent estimates, as per the UNICEF reports, showed an additional increase of 83 million people to the existing 690 million undernourished people in 2019.⁹ Also, essential nutrition services will have a 30% reduction in the coverage in LMICs, and the decline will continue to the extent of 75 to 100% under the lockdown context.¹⁰ Hence there is an impending need to implement key policies and program proposals for the integrated management of malnutrition globally.

Investments from the United Nations (UN) agencies, governmental, non-governmental organizations (NGOs), and various private sectors must be taken to tackle the downward spiral of the epidemic of malnutrition. Thus, the present narrative study focuses on possible measures to halt the undernutrition crisis.

METHODS

The information has been retrieved from the Government of India and State Government Portals. Statistical data were obtained from the official websites of WHO, UNICEF, and food and agriculture organization (FAO). A preliminary search has been done using electronic databases like PUBMED using the Medical Subject Headings (MeSH terms), and relevant keywords such as undernutrition, COVID-19, and food Security. A manual search in google regarding the impact of COVID on Undernutrition was done. Search in electronic and print media about various measures adopted to mitigate undernutrition during COVID 19 pandemic was done.

BURDEN OF UNDERNUTRITION

Globally, wasted children under five years of age are about forty-seven million, severely wasted are 14.3 million, and stunted are 144 million, while 38.3 million are overweight or obese.² Each year deaths occur among under-five children in developing countries are about 2.3 million; of these, 41% are due to undernutrition.¹¹ In India, malnutrition among under-five children imposes a public health problem of need. The prevalence of underweight children in India is among the highest in the world.¹² As per the Global Hunger Index 2019, India ranks 102 among 117 qualifying countries, which possess hindrance in the country's progress.¹³

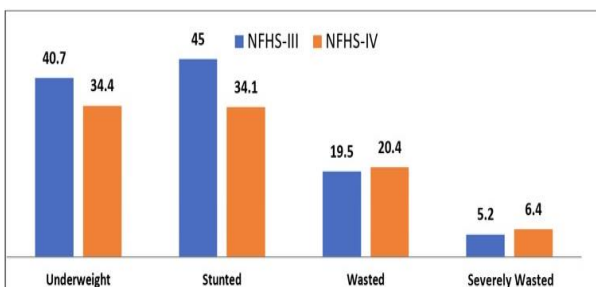


Figure 1: Undernutrition situation in Odisha.

In India, wasted children who are under five years of age account for about 18 million; of them, 0.8 million are from Odisha. Around 0.25 million children suffer from Severe Acute Malnutrition (SAM) with 9-10 times higher risk of death.¹⁴ Among these, 10% suffer from medical complications who need inpatient treatment at nutrition rehabilitation centres (NRC).

If we compare NFHS III and IV reports, there has been a reduction in the proportion of underweight and stunted

children in Odisha. On the other hand, the number of wasted and severely wasted children has increased during this period (Figure 1).^{14,15} These children have compromised immunity rendering them prone to different infections.

The current pandemic calls for immediate identification of undernourished children and the implementation of necessary measures to save their lives. In this regard, global advisories are released with immediate effect by the World Health Organisation, UNICEF, Global nutrition cluster, and GATM (global technical assistance mechanism for nutrition).¹⁶

IMPACT OF COVID-19 ON UNDERNUTRITION

A Nationwide lockdown was imposed on 24th March 2020 for containment of COVID-19.¹⁷ Lockdown measures such as restriction of travel both locally, nationally, and internationally caused a break in the chain of the food supply; it also affected the livelihoods of many. UNICEF, in its report, warned that about 1.2 million additional children under-five could die in just six months in LMIC owing to a reduction in the coverage of health services and an increase in child wasting.¹⁸

The reasons for incremental effects on the burden of undernutrition due to COVID-19 are multifactorial. However, major issues have been highlighted here.

Disruption of nutrition-related programs

1) Integrated child development scheme (ICDS) is a community-based program targeting children from six months to 6 years of age, pregnant & lactating mothers, and women of reproductive age (15-44) years of age. The program provides a package of nutrition services such as supplementary nutrition, iron and folic acid tablets (IFA) to pregnant and lactating mothers, and vitamin A syrup to children under six years. Owing to lockdown, ICDS services were hampered, affecting the vulnerable beneficiaries.¹⁹

2) Mid-day meal (MDM) program was launched to enhance school enrolment, attend, and simultaneously improve the nutritional status of school-going children. This scheme is operational through government & government-aided schools. For containment of COVID-19, all the schools were closed, hindering MDM services.¹⁹

Food security

According to the UN committee Food Security is defined as "all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food, meeting their food preferences and dietary needs for an active and healthy life."²⁰ As per UN reports, India shares a quarter of the Global Hunger Burden, and 4 out of 10 children in India are not meeting their full potential

because of chronic undernutrition or stunting.²¹ COVID-19 has caused disruptions in food supply chains, food production, food security and has a tremendous impact on the nation's economy.

Due to this, the food products which are vital for survival were sold at a higher retail price and therefore forcing people to cut down on the quantity and quality of their food, with a long-term impact on their nutrition and health. The UN food program has estimated that an additional 130 million people could face acute food insecurity by the end of 2020.²²

Disruption in health care services delivery

Malnutrition and infection form a vicious cycle. An undernourished child is more prone to infections leading to diarrhea and various respiratory diseases, and, in turn, because of these infections, the child succumbs to undernutrition, and a vicious cycle of the infection-malnutrition cycle continues. Due to the lockdown, access to primary health care services got disrupted. The immunization services provided in a fixed site, i.e., health facilities-based sessions, were stopped in containment zones, thus making this service provision inaccessible for the general public.²³ Immunization plays a vital role in protecting the child against various deadly infectious diseases. WHO stated that about 80 million children under the age of one year are at increased risk of diseases such as diphtheria, measles, and polio.²⁴

Others

1) issue of migration- children of migrant laborers are hardest hit during COVID lockdown. There is no proper registry maintained for migrant workers for which food distribution to them got affected. Most of them do not have access to public distribution systems (PDS) in the states where they have migrated in pursuit of work. They aren't even enrolled for entitlements such as supplementary nutrition under ICDS in the parent state.

Thus, their children are more severely affected than other peer groups.²⁵

2) violence: there has been increased violence against women during the lockdown period, mostly on pregnant mothers affecting their mental, physical, and emotional health. This further affects the nutritional intake of the pregnant mother, finally affecting the fetal outcome.²⁶

MEASURES TO TACKLE THE CRISIS OF UNDERNUTRITION DURING COVID 19 PANDEMIC

To combat the crisis of undernutrition during COVID -19 pandemic, measures have to be taken at all levels, including International, National, state, community, and household levels.

At the international level

WHO established global nutrition targets for six malnutrition indicators, and have to be achieved by 2025.²⁷ The United Nations (UN) Sustainable Development Goals (SDG) targets to eliminate undernutrition by 2030.²⁸ In the current COVID 19 scenario, achieving these targets has now become a matter of concern.

Several guidelines and advisories are developed by technical bodies like WHO and UNICEF based on new information and evidence in order to respond to the COVID-19 pandemic and its consequences.^{29,30} The advisories contain certain key messages and priority actions to be taken up to prevent the likelihood of emergencies coming up with regard to children and, in particular, for the severely malnourished children. UNICEF, in collaboration with the world food programme (WFP), has recommended the following key points in the prevention and treating child wasting in response to COVID-19 impact (Table 1).³⁰

Table 1: Interventions to prevent undernutrition among children.

Interventions during the COVID 19 mitigation phase
To intensify programs for protection, promotion and support optimal breastfeeding, age-appropriate complimentary food, infant young child feeding (IYCF), and related maternal nutrition.
Ensuring safety of the current nutrition related programs.
Intensify the efforts of strengthening the capacity of mothers and caregivers in detecting and monitoring nutritional status of their children by using tools such as Mid-upper arm circumference (MUAC).
To intensify the pre-positioning of commodities that are essential for prevention and treatment of child wasting.
Interventions post COVID-19 mitigation phase
Aligning and scaling up mitigation plans across food, health, and social protection systems to protect and promote safe, nutritious, affordable, and sustainable diets.
In case of food insecurity where access to adequate diets is limited among some communities, interventions such as flour fortification, lipid-based nutrient supplements, or cash can be given to households encompassing children under two years of age, pregnant women, and breastfeeding mothers.

At the national level

The GOI announced a 1.70 lakh crore package under Pradhan Mantri Garib Kalyan Yojana (PMGKAY) to ensure food security, and the Department of Women and Child Development (WCD) has taken steps towards the delivery of take-home ration (THR) under ICDS.³¹

NITI Aayog has advised certain measures in order to combat the ongoing COVID undernutrition crisis and has recommended the tracking of families of malnourished children. Assessment of acute malnutrition through MUAC tapes and take-home rations will be delivered by Anganwadi workers. There is a need for the establishment of community-based management of acute malnutrition among children. Essential preventive maternal care services will be delivered with norms of practicing social distancing and hand hygiene. The scope of telemedicine can be widened to provide Tele-nutrition services for vulnerable sections of society.³¹ The media can take an active part in telecasting a designated helpline number regarding nutrition services. Medical Colleges and tertiary hospitals, in partnership with media (both electronic, print, community radio), should disseminate appropriate information related to the availability of nutrition-related services, correct Infant Young Child feeding (IYCF) practices, nutrition, counseling, etc.³²

Effective decentralization, convergence between health programs, e.g., ICDS & National Health Mission, and intersectoral coordination at all levels, are the keys to achieve targets.

At the state level

The state of Rajasthan has employed the project “positive and optimum care of children through a social household

approach for nutrition (POSHAN)” for the management of acute malnutrition. The project involves detection of SAM at early, community treatment, referral to inpatient care at the time, and subsequent follow-up in the community. This project aimed at a society free from malnutrition. A life cycle approach is being followed with a focus on critical periods of nutritional vulnerability. This approach can be taken up by all the states in the country to combat malnutrition.³³

Odisha livelihood mission (OLM) has taken up initiatives towards the economic empowering women economically through self-help groups (SHG) with the objective of assuring food security at the level of household in rural areas of Odisha. Government of Odisha issued guideline (GO) dated 18th April 2020 to provide Take home ration (THR) services and ration in lieu of Hot Cooked Meals at the doorsteps of beneficiaries covered under the supplementary nutrition programme (SNP) despite lockdown. Similarly, ration for the MDM scheme was delivered at the household level by school teachers.³⁴

The state of Odisha is predominant with particularly vulnerable tribal groups (PVTG) where undernutrition is a constant issue. Therefore, a project by the name “Jiban Sampark” was launched by the Government of Odisha (GOI), which focuses on the increase of uptake of different health & nutrition programs through the involvement of community members and NGO’s. The project was rolled out in twelve tribal districts of Odisha in collaboration with UNICEF and AIIMS, Bhubaneswar playing an important role as a technical partner.³⁵

Domestic violence is a crime, and laws need to be strengthened to abolish all sorts of violence. Data from unpublished reports reveal a significant increase in the number of cases filed related to domestic violence during the lockdown.

Table 2: Measures at various levels to tackle Undernutrition during COVID-19.

International level	National Level
Fostering strengthened partnerships between International agencies such as UNICEF, FAO with National bodies	Decentralization and effective convergence of various national nutrition programs in the country
Development of standard policies and guidelines, and their effective implementation and monitoring in alignment with targets to be achieved	Intersectoral coordination with various industries such as agricultural sector, animal and husbandry, and various NGOs.
	To increase capacity building of stakeholders
At Community level	At Household level
Identification of SAM child at the earliest by frontline workers using simple tools, and their management at the community level	Educating mothers regarding the identification of signs of malnutrition and risk factors in their children.
Increased commitment by involving panchayati Raj Institute members in monitoring nutrition-related services	Monitoring of nutritional status of the child by measuring MUAC at the household level.
	Nutrition counseling on essential nutrients and prevention of malnutrition
Capacity building of ASHA, ANM’s regarding nutrition counseling of adolescents and mothers	Focusing on adolescent’s nutrition, education, delayed marriage, and income generation opportunities

At the community level

Service provision can be strengthened in rural areas on village health and nutrition day (VHND) sessions by capacity building and motivating front line workers such as auxiliary nurse midwives (ANMs), accredited social health activist (ASHA), and anganwadi worker (AWW). Strengthening the ownership of Panchayati Raj Institutions in promoting, monitoring, and sustaining nutrition services is absolutely essential for the success of any community-based initiatives.

Involvement of non-governmental organizations (NGO) as partners in providing nutritional services to the vulnerable section will go a long way in achieving a malnutrition free society.

At household level

Poor nutrition affects a person from 'womb to tomb,' the impact begins from fetal life in the womb continues well into adulthood, and cycle effects across generations. UNICEF recommends a lifecycle approach should be followed starting from pregnancy through infancy (also known as the first 1,000 days), which is the most crucial period of growth and development in a child's life.³⁶

Approach at the household level can play a vital role in preventing malnutrition. A household consists of vulnerable groups like adolescent girls, pregnant women and lactating mothers, and under-five children. Intervention should focus on adolescent girl's nutrition and education. She should be aware of Government services regarding nutrition, such as rashtriya kishore swasthya karyakram (RKSK), where she has been providing weekly Iron and Folic acid supplementation & deworming services.³⁷ The ICDS scheme provides nutritional services.

An adolescent girl next passes on to become a pregnant and lactating mother. If she is well-nourished and aware of health and nutrition services, she can have safe motherhood throughout her pregnancy, thus preventing low birth weight (LBW) babies and Small for gestational age (SGA) babies (Table 2)

CONCLUSION

With the advent of COVID-19, the already existing undernutrition status has worsened. The burden has increased manifold owing to strategies employed to control the spread of COVID-19. The vulnerable groups which are affected most include those under the age of 5 years, pregnant and lactating mothers. From a socio-demographic point of view, they represent a larger section, and they shape the future of society. Nutrition has a significant impact on the growth, development, morbidity, disability, mortality, academic performance of a child, and overall socioeconomic status of a country. The damage created during the developmental years due

to the undernourishment of mothers and children will affect the growth and economic prosperity of a country for generations. There is an immediate need to mitigate the impending malnutrition crisis and prevent millions of children from dying from malnutrition-related events. Intervention should be targeted at all levels through a collaborative approach between world health agencies such as WHO, UNICEF, UN food programme, and all countries. There should be strict implementation of the policies and thorough monitoring of the services at the national, state, and district levels to safeguard malnourished children. Acting at the earliest in war footing can save the lives of many from impeding the malnutrition crisis. Public Health experts have a major role in any country to constantly do the advocacy for the implementation of the policies and do the monitoring at different forums so the governments can take appropriate and timely measures to fight undernutrition during normal as well as disease pandemic times.

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REFERENCES

1. World hunger is still not going down after three years and obesity is still growing – UN report. Available at: <https://www.who.int/news/item/15-07-2019-world-hunger-is-still-not-going-down-after-three-years-and-obesity-is-still-growing-un-report>. Accessed on 22 October 2020.
2. Fact sheets - Malnutrition. Available at: <https://www.who.int/news-room/fact-sheets/detail/malnutrition>. Accessed on 15 October 2020.
3. Black RE, Victora CG, Walker SP, Bhutta ZA, Christian P, de Onis M, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. Vol. 382. Lancet. 2013;427–51.
4. COVID-19 will double number of people facing food crises unless swift action is taken | World Food Programme. Available at: <https://www.wfp.org/news/covid-19-will-double-number-people-facing-food-crises-unless-swift-action-taken>. Accessed on 19 October 2020.
5. Worldometer. Coronavirus Cases. Worldometer. 2020;164:1–22.
6. Global Technical Assistance Mechanism for Nutrition; CORONAVIRUS DISEASE (COVID-19) Summary of Guidance for Nutrition in Emergencies Practitioners, Version 1.1–13 March 2020.
7. Covid-19 lockdown estimated to cost India \$4.5 billion a day: Acuité Ratings - The Hindu Business Lin. Available at: <https://www.thehindubusinessline.com/economy/covid-19-lockdown-estimated-to-cost-india-45-billion>

- a-day-acuit-ratings/article31235264.ece. Accessed on 19 November 2020.
8. Fore HH, Dongyu Q, Beasley DM, Ghebreyesus TA. Child malnutrition and COVID-19: the time to act is now. *Lancet.* 2020;396(10250):517–8.
 9. As more go hungry and malnutrition persists, achieving Zero Hunger by 2030 in doubt, UN report warns. Available at: <https://www.unicef.org/press-releases/more-go-hungry-and-malnutrition-persists-achieving-zero-hunger-2030-doubt-un-report>. Accessed on 17 November 2020.
 10. Tracking the situation of children during COVID-19-UNICEF DATA. Available at: <https://data.unicef.org/resources/rapid-situation-tracking-covid-19-socioeconomic-impacts-data-viz/>. Accessed on 22 November 2020
 11. Schroeder DG, Brown KH. Nutritional status as a predictor of child survival: summarizing the association and quantifying its global impact. *Bulletin of the World Health Organization.* 1994;72(4):569.
 12. Sahu SK, Kumar SG, Bhat BV, Premarajan KC, Sarkar S, Roy G, et al. Malnutrition among under-five children in India and strategies for control. *J Nat Sci Biol Med.* 2015;6(1):18.
 13. About the global hunger index. Available at: www.globalhungerindex.org. Accessed on 24 October 2020.
 14. National Family Health Survey (Nfhs-4) 2015-16 India. 2017. Available at: <http://www.rchiips.org/nfhs>. Accessed on 25 November 2020.
 15. National Family Health Survey (Nfhs-3) India Volume I. Available at: <http://www.mohfw.nic.in>. Accessed on 12 November 2020.
 16. Unicef GNC and GTAM for N (gtam). Management of child wasting in the context of covid-19 Brief No. 1. 2020 Available at: <https://www.ncbi.nlm.nih.gov/pubmed/28404577>. Accessed on 20 November 2020.
 17. Guidelines on the measures to be taken by Ministries Departments of Government of India, State/Union Territory Governments and State Union Territory Authorities for containment of COVID-19 Epidemic in the Country. Available at: https://www.mohfw.gov.in/pdf/Annexure_MHA.pdf. Accessed on 22 November 2020.
 18. As COVID-19 devastates already fragile health systems, over 440,000 additional children under five could die in the next six months in South Asia, without urgent action. Available at: <https://www.unicef.org/rosa/press-releases/covid-19-devastates-already-fragile-health-systems-over-440000-additional-children>. Accessed on 15 November 2020.
 19. Addressing COVID-19 impacts on agriculture, food security, and livelihoods in India. International Food Policy Research Institute. Available at: <https://www.ifpri.org/blog/addressing-covid-19-impacts-agriculture-food-security-and-livelihoods-india>. Accessed on 12 November 2020.
 20. Food Security. IFPRI: International Food Policy Research Institute. Available at: <https://www.ifpri.org/topic/food-security>. Accessed on 24 October 2020.
 21. Nutrition and Food Security - UN India. Available from: <https://in.one.un.org/un-priority-areas-in-india/nutrition-and-food-security/>. Accessed on 24 October 2020.
 22. Food Security and COVID-19. Available at: <https://www.worldbank.org/en/topic/agriculture/brief/food-security-and-covid-19>. Accessed on 24 October 2020.
 23. Immunization Services during and post COVID-19 Outbreak. Available from: <https://www.mohfw.gov.in/pdf/EssentialservicesduringCOVID19updated0411201.pdf>. Accessed on 24 October 2020.
 24. At least 80 million children under one at risk of diseases such as diphtheria, measles and polio as COVID-19 disrupts routine vaccination efforts, warn Gavi, WHO and UNICEF. Available at: <https://www.who.int/news/item/22-05-2020-at-least-80-million-children-under-one-at-risk-of-diseases-such-as-diphtheria-measles-and-polio-as-covid-19-disrupts-routine-vaccination-efforts-warn-gavi-who-and-unicef>. Accessed on 24 October 2020.
 25. Understanding the Implications of the COVID-19 Lockdown on Migrant Workers' Children. Available at: <https://thewire.in/rights/covid-19-lockdown-migrant-workers-children-implications>. Accessed on 20 November 2020.
 26. India's coronavirus lockdown leads to more violence against women — Quartz India. Available at: <https://qz.com/india/1838351/indias-coronavirus-lockdown-leads-to-more-violence-against-women/>. Accessed on 09 November 2020.
 27. Comprehensive implementation plan on maternal, infant and young child nutrition1. Available at: https://www.who.int/nutrition/topics/WHA65.6_annex2_en.pdf?ua=1. Accessed on 15 October 2020.
 28. End hunger, achieve food security and improved nutrition and promote sustainable agriculture. Available at: <https://sdgs.un.org/goals/goal2>. Accessed on 15 October 2020.
 29. Nutrition and Food Safety and COVID-19. Available at: <https://www.who.int/teams/nutrition-and-food-safety/covid-19>. Accessed on 09 November 2020.
 30. Supporting children's nutrition during the COVID-19 Pandemic. Available at: <https://www.unicef.org/media/68521/file/Supporting-children's-nutrition-during-COVID-19-2020.pdf>. Accessed on 24 October 2020.
 31. A Wake-Up Call to Bolster Guard against the Invisible Crisis: Malnutrition | NITI Aayog. Available at: <https://niti.gov.in/wake-call-bolster-guard-against-invisible-crisis-malnutrition>. Accessed on 24 October 2020.

32. Parida SP, Bhatia V, Sinha S, Giri PP, Behera BK. Engaging Media with Medical Institutions: Experience from Tertiary Hospital in Eastern India. *Ind J Comm Heal.* 2020;32(3).
33. Management of Severe Acute Malnutrition In Rajasthan Through Project Poshan: An overview of POSHAN Phase 1 and plan for POSHAN Phase. Available at: [http://nrhmrajasthan.nic.in/CH11.04.2018/IMAM\(CMAM\) -poshan phase 2.pdf](http://nrhmrajasthan.nic.in/CH11.04.2018/IMAM(CMAM)-poshan%20phase%20.pdf). Accessed on 24 October 2020.
34. Welcome: Department of Women & Child Development and Mission Shakti. Available at: <http://wcdodisha.gov.in/>. Accessed on 09 November 2020.
35. Bhatia V. Breaking the chain of malnutrition: Opportunities, challenges and actions. *Ind J Pub Heal.* 2020;64(3):216.
36. Nutrition's lifelong impact. Nutrition. UNICEF. Available at: https://www.unicef.org/nutrition/index_lifelong-impact.html. Accessed on 24 October 2020.
37. Adolescent Health (RKSK): National Health Mission. Available at: <https://nhm.gov.in/index1.php?lang=1&level=2&sublinkid=818&lid=221>. Accessed on 29 June 2020.

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