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3.3.1 Number of research papers published per teacher in the Journals notified on UGC CARE list during the last five years

Year	Title of paper	Name of the author/s	Department of the teacher	Name of journal	Calendar Year of publication	ISSN	Link to website of the Journal	Link to article / paper / abstract of the article	Is it listed in UGC Care list
2018-19	Goods and Services Tax (GST) in India: Few Issues	Sudipta Ghosh; Dinabandhu Saha	Commerce	Uttaran	2018	2395-2415	Not Available	Not Available	UGC approved Journal No. 64037
	Dr. B. R. Ambedkar's View on Social Justice	Mandira Ghosh	Philosophy	International Research Fellows Association's Research Journey	April, 2019	2348 – 7143	Not Available	Not Available	Yes
2019-20	Nyāya Sūtra Bhaṣya Anusāre Anumāner Śreṇībhibhāg: Ekti Dārśanik Parjālochanā	Mandira Ghosh	Philosophy	Darśan Bikṣā, Jadavpur Journal of Philosophy	2019 – 2020	0975-6833	Not Available	Not Available	Yes
	Revisiting India's Nepal Policy (2014-2019)	Anindita Hore	Political Science	Rabindra Bharati Patrika	May, 2020	0975-0037	Not Available	Not Available	Yes, Serial No. 127
	Subliminal priming: Its impact on affective	Deepshikha Ray, Dr Reshmi Palit, Parama Gupta, Saheli Chatterjee	Psychology	IAHRW International Journal of Social Sciences.	2020	2347-3797	https://www.isscholar.in/index	Not Available	Yes

	judgement.						php/IJSS R		
	Organic farming in India : a vision towards a healthy nation.	Das, S., Chatterjee, A. and Pal, T. K.,	Food & Nutrition	Food Quality & Safety2020	2020	Online ISSN 2399- 1402Print ISSN 2399- 1399	https://academic.oup.com/fqs/article/4/2/69/5861338	https://academic.oup.com/fqs/pages/about	Yes
2020-21	Capturing Diversity and Cultural drivers of Food Choice in Eastern India	Arindam Sammadar,Rosa Paula Cuevas, Anindita Ray (Chakravarti) et al	Food & Nutrition	International Journal of Gastronomy & Food Science	Aug, 2020	1878-450X	https://www.sciencedirect.com/journal/international-journal-of-gastronomy-and-food-science	https://www.researchgate.net/publication/343419071_Capturing_diversity_and_cultural_drivers_of_food_choice_in_eastern_india?_sg%5B0%5D=B_lw_8mjkPXZarKJbL7zYnXR6D9fGAYehoxVKWbLuEkU0yQB1X-6JkpzrHO4HVIYQHiGE1519QutVWTBt7X0s8DtUCJl2Njta-4Ud703.YQkaLIZ67Hbznplpc-hH-QJ06qOtT2ufcC2stluHFR16nOrJ41zk2FbfsS0KwGb0jjiHAD98gRvj10PhlaCnCA	Yes
	Survey data on heterogeneity of consumers' food choicw in Eastern India	Jhoanne Ynion, Marie Claire Custodion, Arindam Samaddar, Matty Demont , Anindita Ray (Chakravarti) et al	Food & nutritrion	Data in Brief	May, 2021	2352-3409	https://www.sciencedirect.com/journal/data-in-brief	https://www.researchgate.net/publication/351597211_Survey_data_on_heterogeneity_in_consumers'_food_choice_in_eastern_india?_sg%5B0%5D=B_lw_8mjkPXZarKJbL7zYnXR6D9fGAYehoxVKWbLuEkU0yQB1X-6JkpzrHO4HVIYQHiGE1519QutVWTBt7X0s8DtUCJl2Njta-4Ud703.YQkaLIZ67Hbznplpc-hH-QJ06qOtT2ufcC2stluHFR16nOrJ41zk2FbfsS0KwGb0jjiHAD98gRvj10PhlaCnCA	Yes

<p>A Study on Students' Perception towards Online Learning in Higher Education in relation to their Gender and Localities</p>	<p>Chand, T.K., Nanda C., & Nanda, G. K.</p>	<p>Department of Education</p>	<p>Education India Journal: A Quarterly Refereed Journal of Dialogues on Education</p>	<p>2021</p>	<p>2278-2435</p>		<p>NA</p>	<p>Yes</p>
<p>Expert Elucidation database capturing diversity and cultural drivers of food choice and nutritional implications in eastern india</p>	<p>Matty Demont, Arindam Sammadar, Rosa Paula Cuevas, Anindita Ray (Chakravarti) et al</p>	<p>Food & nutrition</p>	<p>Data in Brief</p>	<p>Sept, 2020</p>	<p>2352-3409</p>	<p>https://www.sciencedirect.com/journal/data-in-brief</p>	<p>https://www.researchgate.net/publication/344454676_Expert_elicitation_database_capturing_diversity_and_cultural_drivers_of_food_choice_and_nutritional_implications_in_eastern_india?_sg%5B0%5D=kINM6qGUJUKiPzjXuGa95AzS1BAaYOcEFclgN63c7YkOVCFMRpNxPtOG89IHFo7AMcAtZZ_4wDBosrDUXMzJ-HlzXX85ou_wOg3wczjW.mQxu6zOxQnLvU35m3oJVG-HSj1VIEbH5RvgnZB5N11tyeN9o_OS0XUqWGU8TjzvRsV26XkcutSe2s8vBhMs8A</p>	<p>Yes</p>
<p>Unraveling heterogeneity of consumers' food choice : Implications for nutrition interventions in eastern India</p>	<p>Matty Demont, Arindam Sammadar, Rosa Paula Cuevas, Anindita Ray (Chakravarti) et al</p>	<p>Food & nutrition</p>	<p>Global food security</p>	<p>Mar-21</p>	<p>2211-9124</p>	<p>https://www.sciencedirect.com/journal/global-food-security</p>	<p>https://www.researchgate.net/publication/349119091_Unraveling_heterogeneity_of_consumers'_food_choice_Implications_for_nutrition_interventions_in_eastern_india?_sg%5B0%5D=kINM6qGUJUKiPzjXuGa95AzS1BAaYOcEFclgN63c7YkOVCFMRpNxPtOG89IHFo7AMcAtZZ_4wDBosrDUXMzJ-HlzXX85ou_wOg3wczjW.mQxu6zOxQnLvU35m3oJVG-HSj1VIEbH5RvgnZB5N11tyeN9o_OS0XUqWGU8TjzvRsV26XkcutSe2s8vBhMs8A</p>	<p>Yes</p>

2021-22	Ameliorative Activity of a Green Extract of Spinach (Spinacea oleracea) on Paracetamol induced Acute Liver Injury	Satarupa Bhattacharya, Soumom Datta, Goutam Das, Anindita Ray (Chakravarti)	Food & nutrition	International Journal of Food & Nutritional Sciences	June,2022	online: 2320-7876; print: 2319-1775	https://www.ijfans.org/	https://www.researchgate.net/publication/361515353_Ameliorative_Activity_of_a_Green_Extract_of_Spinach_Spinacia_oleracea_on_Paracetamol_Induced_Acute_Liver_Injury	Yes
	Infant Young Feeding Practices in an Indian Maternal-Child Birth Cohort in Belgavi, Karnataka	Shweta Khandelwal, Dimple Kondal, Anindita Ray (Chakravarti) et al	food & nutrition	International Journal of Environmental Research & Public Health	April, 2022	1660-4601	https://www.mdpi.com/journal/ijerph	https://www.researchgate.net/publication/360101572_Infant_Young_Child_Feeding_Practices_in_an_Indian_Maternal-Child_Birth_Cohort_in_Belagavi_Karnataka?_sg%5B0%5D=B_lw_8mjkPXZarKJbL7zYnXR6D9fGAYehoxVKWbLuEkU0yQB1X-6JkpzrHO4HVIYQHIGE1519QutVWTBt7X0s8DtUCJI2Njta-4Ud703.YQkaLIZ67Hbznplpc-hH-QJ06qOtT2ufcC2stluHFR16nOrJ41zk2FbfsS0KwGb0jjiHAD98gRvj10PhIaCnCA	Yes
	Comparative studies on physicochemical and nutritional values of organically and conventionally grown Cucumis sativus stored at different	Das, S., Chatterjee, A. and Pal, T. K.,	Food & Nutrition	Organic Agriculture (Springer Nature)	2022	Electronic ISSN 1879-4246, Print ISSN-1879-4238	https://www.springer.com/journal/13165	https://link.springer.com/article/10.1007/s13165-022-00409-y	Yes

	temperatures in different household packaging								
	Post-harvest processing of coffee: An overview	Das, S.	Food and Nutrition	Coffee Science	2022	ISSN 1984-3909	Scopus preview - Scopus - Coffee Science		Yes
2022-23	Role of ICT Diffusion in Bridging the Digital Divide in India	Ghosh, Sudipta and Majumdar, Sudipta	Department of Commerce	The Management Accountant	September, 2022	ISSN: 0972-3528	https://icmai-rnj.in/index.php/maj/article/view/172237	file:///C:/Users/User/Downloads/sandhya_dasegowda,+TMA_Sep_2022-60-64.pdf	Yes

Dr. B. R. Ambedkar's View on Social Justice

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Justice is a process, complex and shifting balance between many factors. The tasks of justice are "the just allocation of advantages and disadvantages, preventing the abuse of power, preventing the abuse of liberty, the just decision of disputes and adapting to change." Social justice is basically a term which provides sustenance to the rule of law. Its aim is removing all kinds of inequalities and affording equal opportunities to all citizens in social as well as economic affairs. Social justice being a multi-dimensional concept has been viewed by scholars of Law, Philosophy and Political Science differently. It is a great social value in providing a stable society and in securing the unity of the country. In general, Social Justice may be defined as the right of the weak, aged, destitute, poor, women, children and other under-privileged persons.

According to Utilitarian, social justice is being one of the dimensions of justice which stands for fraternity; with a view to create such human social conditions which ensure free and fair development of all human beings. In fact the term may require a preferential treatment for certain sections of the population, who has been deprived of certain values for ages, with a view to bring them on equal footing with other section of the population.

According to John Rawls, the concept of social justice is "all social primary goods - liberty and opportunity, income and wealth, and the basis of self-respect are to be distributed equally unless an unequal distribution of any or all of these goods is to the advantage of the least favored". The contents of the "Social Primary Goods" specified by Rawls are of particular importance, for the fair distribution of them, namely, liberty and opportunity, income and wealth and basis of self-respect in a society will undoubtedly help to achieve the much needed social justice. John Rawls has displayed a great sense of pragmatism, he rightly felt that equal distribution of the "social primary goods" in an unequal or hierarchical society would result in perpetuating the already existing inequality and the social justice would become cry in wilderness.

Ambedkar is also one of the proponents of social justice in modern India. According to Ambedkar, the term "social justice" is based upon equality, liberty and fraternity of all human beings. The social justice brings equal distribution of the social, political and economic resources of the community.

French Philosopher Rousseau, the Naturalist, has written that, "Man is born free but everywhere he is in chains". To free this Man Rousseau stated three words, those are - Equality, Liberty and Fraternity, which revolutionized France in 1789 and inspired nearly every freedom movement (Revolution) on words. Bhabu Sahib was very much influenced by these three words of Rousseau. Once he said, "My social philosophy may be said enshrined in three words - liberty, equality and fraternity". But in one sense

Bhabu Sahib was ahead of Rousseau by bringing justice based on equality. His name, "Dr. B. R. Ambedkar" will be written in golden letters in the history of India as a creator of social justice.

Dr. Ambedkar spent his whole life for upliftment of Depressed Class. Ambedkar's fight for social justice is of two levels simultaneously, i. e. individual and social. He told the people from his experiences, "Three factors are required for the upliftment of an individual. They are: Sympathy, equality and liberty". His focus was on 'an individual' and his aim of life is to provide a social, political and economic system for the betterment of an individual. He thought, "Unlike a drop of water which loses its identity when it joins the ocean, man does not lose his being in the society in which he lives. Man's life is independent. He is born not for the development of the society alone, but for the development of his self."

He also said, "The aim of human society must be to enable every person to lead a life of culture, which means the cultivation of mind as distinguished from the satisfaction of mere physical wants". When we read our Indian constitution we realize that in Fundamental Rights we get these six rights as an individual, from political society. These Fundamental Rights are influenced by Dr. B. R. Ambedkar's thought as the chairman of the Constitution Drafting Committee.

He also fought for lower class on the question of inequality and injustice. He writes, Where the Social Order denies opportunity to rise, denies right to education and denies right to use arms it is in a position to prevent rebellion against the Social Order. Where on the other hand a Social Order allows opportunity to rise allows right to education and permits the use of arms it cannot prevent rebellion by those who suffer wrongs. Its only remedy to preserve the Social Order has adopted the first method. It has fixed the social status of the lower orders for all generations to come. Their economic status is also fixed. There being no disparity between the two, there is no possibility of a grievance. If there is any consciousness it is that no one is responsible for

Goods and Services Tax (GST) in India: Few Issues

Sudipta Ghosh
Dinabandhu Saha

Abstract:

GST came into effect in India on 1st July 2017. Introduction of GST is a significant and remarkable step towards indirect tax reform in India. It is one indirect tax for the whole nation. GST subsumed a dozen of Central and State indirect taxes. It is an indirect tax levied on the supply of goods and services. This study makes a modest attempt to discuss few important issues pertaining and relevant to GST in Indian perspective. Various tax rates were initially prescribed and then revised for different items. Few changes regarding GST have already been incorporated after its implementation and more changes are expected to come in future.

Key Words: GST, CGST, SGST, UTGST, IGST, GSTN

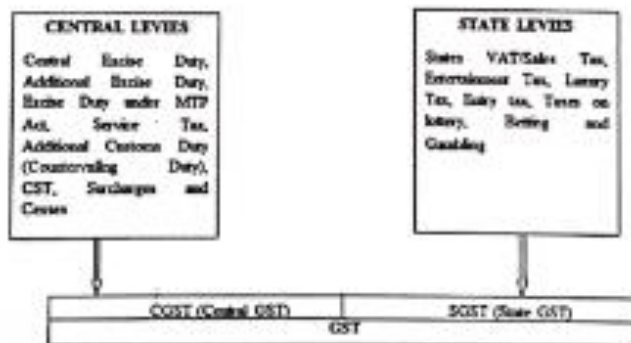
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Background and meaning of Goods and Services Tax (GST)

Goods and Services Tax i.e. GST is an indirect tax levied on the supply of goods and services. Introduction of GST is a significant and remarkable step towards indirect tax reform in India. Under GST, supply of goods or services is the only taxable event. GST is a dual indirect tax structure in which both Central Government and State Governments have the power to levy tax. It is payable on the price actually paid or payable for the supply of goods and/or services. GST was first introduced in France in 1954 and near about 160 countries across the globe have already implemented the GST. In India, the Goods and Services Tax Act was passed in the Parliament on 29th March 2017 and the Act came into effect on 1st July 2017. GST is one indirect tax for the whole nation, which will make India one unified common market. GST is a tax on value addition at each stage. The Central GST (CGST) and the State GST (SGST) would be levied simultaneously on every transaction of supply of goods and services except on exempted goods and services. For the implementation of GST in the country, the Central and State Governments have jointly formed Goods and Services Tax Network (GSTN).

Truly speaking GST is not a new tax; rather it is a new tax administration. GST subsumed a dozen of central and state indirect taxes. Following figure depicts it.

Figure 1



Sudipta Ghosh, Assistant Professor, Department of Commerce, Maharani Kasiwari College, Kolkata
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ন্যায়সূত্র ও ন্যায়সূত্র-ভাষ্য অনুসারে অনুমানের
শ্রেণীবিভাগ: একটি দার্শনিক পর্যালোচনা
মন্দিরা ঘোষ

ন্যায়সূত্রে অনুমানের লক্ষণ দিতে গিয়ে বলা হয়েছে, “অথ তৎপূর্বকম্ ত্রিবিধমনুমানম্ পূর্বকচ্ছেদ্যবৎ সামান্যতোদৃষ্টঞ্চ ॥১/১/৫ ॥”^১ ভাষ্যকার বাৎস্যায়ন এই সূত্রের অন্তর্গত ‘তৎপূর্বকম্’ শব্দটিকেই অনুমান প্রমাণের লক্ষণঘটক বলে উল্লেখ করেছেন। প্রত্যক্ষ লক্ষণসূত্রে (১/১/৪) উক্ত প্রত্যক্ষরূপ জ্ঞানকেই ন্যায়সূত্রকার মহর্ষি পৌত্তমোক্ত ‘তৎপূর্বকম্’ শব্দের অন্তর্গত ‘তৎ’ শব্দের দ্বারা বুঝিয়েছেন বলে বাৎস্যায়ন মনে করেছেন। তবে যে কোনো প্রত্যক্ষপূর্বক জ্ঞানকে অনুমান প্রমাণ বললে শব্দশ্রবণরূপ প্রত্যক্ষপূর্বক শাব্দবোধও উক্ত লক্ষণাত্মক হয়। এমনকি উপমিতি জ্ঞানও প্রত্যক্ষভিত্তিক জ্ঞান হওয়ায় সেটিও ‘তৎপূর্বকম্’ শব্দের দ্বারা নির্দেশিত হবে, ফলে সেটিকেও অনুমান লক্ষণাত্মক বলে মনে করতে হয়। অর্থাৎ ‘তৎ’ শব্দের দ্বারা যে কোনো প্রকার প্রত্যক্ষকে বুঝলে অনুমানের লক্ষণটি আগম, উপমান ইত্যাদি প্রমাণের ক্ষেত্রে অতিব্যাপ্ত হবে। তাই ‘তৎ’ শব্দের দ্বারা প্রত্যক্ষবিশেষই যে মহর্ষির বিবক্ষিত, এটিই ভাষ্যকার যোগ্যেতে চেয়েছেন। এই বিশেষ প্রকার প্রত্যক্ষের স্বরূপ প্রকাশ করতে গিয়ে ভাষ্যকার বলেছেন, ‘তৎপূর্বক’ মিত্যানেন লিঙ্গলিঙ্গিনোঃ সম্বন্ধদর্শনঃ লিঙ্গদর্শনজ্ঞাতিসম্বন্ধ্যতে লিঙ্গ-লিঙ্গীনোঃ সম্বন্ধয়োর্দর্শনেন লিঙ্গস্থতিরভিসম্বন্ধ্যতে স্মৃত্যা লিঙ্গদর্শনেন চাপ্রত্যক্ষোহর্থহিনুশীলতে”^২। অর্থাৎ যে স্থলে অনুমানের যা প্রকৃত হেতু তাকে বলে লিঙ্গ, এবং তা যে পদার্থের লিঙ্গ বা অনুমাপক সেই অনুমেয় পদার্থকে বলে লিঙ্গী। যে সকল স্থানে সেই লিঙ্গ পদার্থ থাকে, সেই সমস্ত স্থানেই লিঙ্গী পদার্থ অবশ্যই বিদ্যমান থাকে। সুতরাং লিঙ্গ পদার্থটি হল ব্যাপ্ত; আর লিঙ্গী পদার্থ হল তার ব্যাপক। অর্থাৎ লিঙ্গ পদার্থ এবং লিঙ্গী পদার্থের মধ্যে ব্যাপ্তব্যাপক ভাব থাকে। পূর্বে কোনো স্থানে সেই সম্বন্ধের যে প্রত্যক্ষ তাই হল লিঙ্গ ও লিঙ্গীর সম্বন্ধ দর্শন। এরপর কোনো স্থলে লিঙ্গের দর্শন অর্থাৎ হেতুর প্রত্যক্ষ হলে পূর্বদৃষ্ট লিঙ্গ ও লিঙ্গীর (ব্যাপ্তব্যাপকভাবরূপ) সম্বন্ধের ‘স্মরণপূর্বক ঐ লিঙ্গের সাথে সম্বন্ধবিশিষ্ট লিঙ্গী অনুমিত হয়ে থাকে। তবে প্রথমোক্ত লিঙ্গ ও লিঙ্গীর সম্বন্ধের নিশ্চয় ব্যতীত কোনো স্থলে লিঙ্গ দর্শন করলেও তার দ্বারা সেই স্থলে লিঙ্গীর অনুমিতি হতে পারে না। তাই ভাষ্যকার প্রথমে লিঙ্গ ও লিঙ্গীর সম্বন্ধ দর্শনের কথা বলে, অতঃপর সেই সম্বন্ধের স্মরণকেই মহর্ষি কথিত ‘তৎ’ শব্দের বিবক্ষিত অর্থ বলে মনে করেছেন। যতদূর সম্ভব

Revisiting India's Nepal Policy (2014-2019) Anindita Hore

Abstract: When Prime Minister Narendra Modi ascended to power in New Delhi in 2014, he led the first government in the country that had the majority of the Bharatiya Janata Party (BJP). Even before taking charge of the government formally, the top leaders of the countries of India's immediate neighbourhood were all invited to the swearing-in ceremony of the new Prime Minister of India. After becoming Prime Minister, when Modi decided to visit Bhutan and Nepal, two smallest, yet strategically important neighbours of India at the very outset, it definitely sent signals to India's neighbourhood that, henceforth New Delhi was likely to attach special importance to its neighbourhood, and was unlikely to ignore even her smaller neighbours. Many of India's neighbours showed enthusiasm at Modi government's special interests in them. This is perhaps a paradigmatic shift in India's foreign policy. Since then, five years have passed and Modi government has completed its term to go for a second stint. This article, in this context, intends to revisit Modi government's policy vis-à-vis Nepal in its first term in order to understand whether the preliminary interests in the new government's foreign policy could be matched by its achievements.]

Keywords: Nepal, Narendra Modi, BJP, India's soft power, Modi doctrine, China's Belt and Road Initiative, India's neighbourhood policy.

So far as the performance in the field of foreign policy is concerned, Prime Minister Narendra Modi made a jump-start from the word go through his swearing-in ceremony in 2014. All the leaders of India's immediate neighbours, belonging to the SAARC (South Asian Association for Regional Cooperation), were invited to New Delhi to attend the ceremony of swearing in of the new Prime Minister of India. By inviting the topmost leaders of the South Asian region, Bharatiya Janata Party (BJP) under Modi perhaps intended to send a message to India's neighbourhood, and also to the wider world about possible changes in India's neighbourhood policy. New Delhi also tried to indicate that for the government, the topmost priority would be friendship and cooperation with its neighbours. In fact, it is believed that, a country's neighbourhood must enjoy unquestioned primacy in its foreign-policy making. This became distinctly evident in Prime Minister Narendra Modi's foreign policy mantra - "neighbourhood first".

Capturing diversity and cultural drivers of food choice in eastern India

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Data Article

Survey data on heterogeneity in consumers' food choice in eastern India



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ABSTRACT

A consumer survey was conducted in eastern India in 2017 to understand the heterogeneity of consumers' food choice. Face-to-face interviews were conducted among urban and rural consumers from low- and middle-income households in Odisha and West Bengal, eastern India, using a structured questionnaire. A multi-stage sampling procedure was implemented with stratified random sampling as the first stage and systematic sampling as the second stage. The survey data comprise responses from 501 respondents who have active involvement in grocery purchase decision-making and/or in meal planning or cooking for the household. The survey generated a dataset that was used to unravel five sources of heterogeneity (5Ws) in gastronomic systems that affect consumers' diets: (i) socioeconomic characteristics of the target population (*who*); (ii) food environments (*where*); (iii) eating occasions (*when*); (iv) consumed dishes (*what*); and (v) ingredient attributes and consumer attitudes towards food (*why*). The approach and analyses are elaborated in the article "Unraveling heterogeneity of consumers' food choice: Implications for nutrition interventions in eastern India". Data from the survey can be further used to design behavioral

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Data Article

Expert elicitation database capturing diversity and cultural drivers of food choice and nutritional implications in eastern India



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ABSTRACT

Two expert elicitation workshops were conducted in 2017 to capture the diversity and cultural drivers of food choice of low- and middle- income households in the states of West Bengal and Odisha in eastern India. Experts representing the fields of nutrition, home science, food technology, and food service industry were invited to participate. Following the "gastronomic systems research" framework, the food experts determined the eating occasions, dishes and ingredients that would culturally define the target population in their respective states. To zoom in further on the nutritional implications, one of the two states was selected for further in-depth study by expanding the list of dishes and conducting nutritional analysis. The approach is elaborated in the article "Capturing diversity and cultural drivers of food choice in eastern India" [1]. The workshop generated two databases: (i) "List of dishes and ingredients from expert elicitation workshop" and (ii) "Database of eastern Indian dishes". The former was used to differentiate the eating occasions based on

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Capturing diversity and cultural drivers of food choice in eastern India

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Marie Claire Custodio, Jhoanne Ynion, Rosa Paula Cuevas, Arindam Samaddar, Anindita Ray



Unraveling heterogeneity of consumers' food choice: Implications for nutrition interventions in eastern India

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ABSTRACT

Understanding heterogeneity of consumers' food choice is critical in formulating tailored nutrition interventions. To illustrate this, we survey urban and rural consumers from low- and middle-income households in eastern India to unravel five sources of heterogeneity (5 Ws) in gastronomic systems that affect diets: (i) socioeconomic characteristics of the target population (*who*); (ii) food environments (*where*); (iii) eating occasions (*when*); (iv) consumed dishes (*what*); and (v) ingredient attributes and consumer attitudes towards food (*why*). Diets in eastern India are predominantly starch-based featuring infrequent intake of fruits and vegetables. Accounting for heterogeneity in gastronomic systems can help policy makers and nutritionists develop more targeted nutrition interventions, which can aid in the development of planetary health diets in various contexts around the world.

1. Introduction

The EAT-Lancet Commission, a highly influential multi-disciplinary think tank of leading scientists from 16 countries, recently published an urgent call for food system transformation to catalyze a dietary shift towards "planetary health diets"; i.e., diets that are mainly composed of plant-based instead of animal-based food sources and that aim at improving both human health and environmental sustainability (Willett et al., 2019). It emphasizes the need to integrate nutrition and sustainability into a global agenda for food system transformation. The role of nutrition in the food systems paradigm is crucial because it is not only one of the Sustainable Development Goal (SDG) outcomes (i.e. good health and well-being) but also a means to achieve several outcomes (Development Initiatives, 2017). However, the success of nutrition interventions ultimately hinges on people—consumers' behavior as influenced by their physiological and nutritional needs, their socio-demographic contexts, their hedonic motivations, and their attitude and beliefs towards food (Cuevas et al., 2021; Haddad, 2020; Jain et al., 2014; Samaddar et al., 2020; Shetkh and Mohan, 2015; Shephard, 1999). Instead of developing a blanket approach to nutrition intervention, policy makers and nutritionists need to be informed about the

heterogeneity of the food choices the target population faces and makes such that targeted and segmented nutrition interventions can be planned, designed and implemented.

Consumers' food choice features five sources of heterogeneity, which can be captured through 5 Ws in the "gastronomic system" (Fig. 1; Cuevas et al., 2017; 2021; Samaddar et al., 2020). First, the gastronomic system is shaped by (i) the culture and socioeconomic context of a heterogeneous population of consumers (*who*); and (ii) a heterogeneous set of food environments where consumers access and consume food (*where*). The gastronomic system on its turn shapes consumers' eating patterns and diets at three hierarchical levels: it gives rise to (iii) a heterogeneous set of eating occasions during which food is typically consumed (*when*); these occasions in their turn determine (iv) a heterogeneous set of dishes that are purchased, prepared and consumed (*what*), which command (v) a heterogeneous set of ingredients and ingredient pairings that carry sensory, hedonic, cooking, convenience, and nutritional attributes and are subject to heterogeneous consumer attitudes and motivations (*why*). The three levels of the gastronomic system—occasions, dishes and ingredients—provide entry points for nutrition interventions in food environments and the 5 Ws can help better articulating and targeting those interventions to nudge the target

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Dr Anindita Ray Chakravarti, Dept of Food and Nutrition

ORIGINAL ARTICLE

Ameliorative Activity of a Green Extract of Spinach (*Spinacia oleracea*) on Paracetamol Induced Acute Liver Injury

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ABSTRACT

Context: Paracetamol overdose or toxicity often leads to acute liver injury. Spinach is a popular and traditionally revered green leafy vegetable. Functional properties of spinach (*Spinacia oleracea*) may be beneficial for treating this condition. **Aims:** To find out the effect of an aqueous extract of spinach in paracetamol induced liver injury. **Methods and Material:** Sixteen Swiss albino mice were randomly divided into four groups. Group-I served as control. Acute liver injury was induced in Group-II, III and IV with paracetamol. Group-III and IV were then treated with a green extract of spinach and silymarin respectively. **Statistical Analysis Used:** Analysis of Variance (ANOVA) and Post-hoc analysis was performed. **Results:** Upon induction with paracetamol the serum levels of bilirubin, hepatic transaminases, total protein and lipid peroxidation in the liver were elevated. Superoxide dismutase and reduced glutathione levels were decreased in the liver. All these parameters were reversed significantly ($p < 0.05$) in Group-III comparable to Group-I and IV. **Conclusions:** This indicates that the green extract of spinach may be useful in the treatment of paracetamol induced acute liver injury.

Keywords: Acetaminophen, Bilirubin, Lipid peroxidation, Glutathione, Superoxide dismutase

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INTRODUCTION

Drug induced liver injury (DILI) is an adverse event observed in clinical practice. Since liver metabolizes a wide range of compounds including herbs and alternative medicines, the toxic by-products or end-products can cause liver damage. Paracetamol is one of the most frequently used drugs in the clinical setting. Paracetamol or acetaminophen overdose is the commonest cause of acute hepatic injury and failure resulting in death or need for emergency hepatic transplant. It is more prevalent in USA, Europe, Australia and comparatively less in Asia. It is a preventable public health concern and requires attention by both clinicians and patients.^{1,2,3} Reactive Oxygen

Species (ROS) play important role in the pathophysiology of DILI. Drugs and their metabolites can bind to mitochondria covalently and cause hepatotoxicity by mitochondrial dysfunction, accumulation of ROS, oxidative stress, endoplasmic reticulum stress resulting in cell death.⁴ Targeting such factors is the need of the contemporary biology and medicine.

Medicinal plants are used as antidote in human diseases from ancient time period. Among the wide range of plants and

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Article

Infant Young Child Feeding Practices in an Indian Maternal–Child Birth Cohort in Belagavi, Karnataka

Shweta Khandelwal ^{1,2,*}, Dimple Kondal ^{1,2}, Anindita Ray Chakravarti ³, Soumam Dutta ⁴, Bipsa Banerjee ⁴, Monica Chaudhry ¹, Kamal Patil ⁵, Mallaiah Kenchaveeraiah Swamy ⁵, Usha Ramakrishnan ⁶, Dorairaj Prabhakaran ^{1,2}, Nikhil Tandon ⁷ and Aryeh D. Stein ⁶

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Abstract: Poor infant young child feeding (IYCF) practices result in malnutrition, poor psychosocial development, poor school performance and less productivity in later life, thereby perpetuating a vicious cycle. The current study aims to characterize the IYCF practices during the first year of life in a maternal–child birth cohort (DHANI) in Belagavi, Karnataka, India. We collected data from the dyad at birth, 6 and 12 months postpartum. We examined dietary diversity among these infants at 12 months using WHO criteria. A total of 902 live births were recorded, and 878 mother–child pairs completed the 12-month follow up. The overall prevalence of early (within 1 h of delivery) initiation of breastfeeding (EIBF) was 77.9%, and that of exclusive breastfeeding (EBF) at 6 months was 52.4%. At 12 months, most (90%) infants were breastfed, while 39% also received formula. The large majority (94.4%) of infants met minimum meal frequency (MMF), but only 53% of infants were receiving a minimum acceptable diet (MAD). The mean dietary diversity (DD) score was 4.7 ± 1.1 . Only 21.9% of infants consumed egg and/or flesh food. A large proportion (33.8%) of infants received no vegetables and/or fruits till 12 months of age. Consumption of sweet beverage was 4.8%, but consumption of ultra-processed foods high in trans-fats, sugars and salt was high (85.8%). High-quality, sustainable and scalable interventions to enhance knowledge and support positive behaviour change for adopting and implementing better IYCF practices may be urgently needed in low- and middle-income group settings to improve diet diversity and overall nutritional intake amongst young children.

Keywords: infant young child feeding practices; diet diversity; anthropometry; complementary foods; South India; breastfeeding

1. Introduction

Undernutrition is responsible for about 45% of deaths among children under 5 y worldwide, being an important etiological factor that increases vulnerability to diarrhea, malaria and pneumonia [1]. Poor infant and young child feeding (IYCF) practices, especially during the first thousand days (birth to 2 years old), result in malnutrition, poor psychosocial development, poor school performance and less productivity in later life, thereby setting up a vicious cycle [2]. An analysis showed that appropriate breastfeeding

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Review

Post-harvest processing of coffee: An overview

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ABSTRACT

Coffee is known as one of the most popular beverages around the world. Coffee belongs to the Rubiaceae family. The two most economically important species are *C. arabica* (arabica coffee) and *C. canephora* (robusta coffee). The health benefits of coffee are due to presence of many biologically active compounds such as caffeine, chlorogenic acid, hydroxy cinnamic acid, lignans, ferulic acid, and p-coumaric acid. The post-harvest processing of coffee starts involves dry and wet processing, grading, sorting, marketing, blending, and roasting. A series of physical and chemical changes occur during coffee roasting that are responsible for the development of aromaticity and flavour of coffee.

Key words: Arabica; Coffee cherry; Roasting; Robusta; Rubiaceae.

1 INTRODUCTION

Coffee is one of the most popular beverages consumed widely around the world. Nearly 25 million farmers in 50 countries around the world depend on coffee as a significant part of their lives (Cagur et al., 2009). The coffee belongs to botanical family Rubiaceae having about 500 genera and over 6000 species (Ueno, 1922). Coffee belongs to genus Coffea, which is the most economically important member of the Rubiaceae family (Munby, Naidu, 2012). Coffee is grown in tropical and subtropical regions of Central and South America, South East Asia, and Africa (Schenker, 2000). When harvested, the coffee fruits are called coffee cherries. Coffee cherries are harvested every year when they are bright-red, glossy and firm. After removal of the outer hull, the seeds inside the cherries are commonly called "green coffee beans" (Ghosh, Venkateshalapath, 2014). Coffee plants are naturally grown in the shade of African forests, including the islands of Madagascar and Mauritius (the latter formerly known as one of the Mascarene Islands), and cultivated in tropical areas such as equatorial Africa, Java, Sumatra, and other islands of the Dutch East Indies, West Indies, India, Arabia, the islands of the Pacific, Mexico, and Central and South America (Davis et al., 2007; Ueno, 1922). The leading coffee producing countries in the world include Brazil, Vietnam, Colombia, Indonesia, Ethiopia, and India (Davis et al., 2006).

2 COFFEE FRUIT AND STRUCTURE OF COFFEE BEAN

Over 50 species of coffee genus were described of which 25 species are extensively studied (Davis et al.,

2007; Charrier, Berthaud, 1987). Of these 25 species, only two are of major economic importance: *Coffea arabica* and *coffee canephora*. The Arabica plant is a tetraploid species (2n = 4x = 64) originated from natural hybridization between *Coffea canephora* and *Coffea eugenioides*, or ecotypes related to these two diploids (2n = 2x = 32) species (Anthony, 2002; Charrier, Berthaud, 1987; Lashomes et al., 1999). Triploid hybrids originated from crosses between *C. arabica*, and diploid species have been reported. They tend to be robust plants but almost completely sterile (Charrier, Berthaud, 1987). *Coffea arabica* trees are generally up to 6 m in height, grow well at high elevations and mild temperatures, and account for over 60% of the world's total coffee production.

Coffea canephora trees reach up to 10 m in height, grow at low elevations and warmer climates, and have higher resistance to diseases, inferior cup quality, and lower market value compared to Arabica trees. Their seeds account for less than 40% of the world's coffee production (Farah, Santos, 2015).

The most economical relevant varieties are *C. arabica* and *C. canephora* (Farah, Santos, 2015). The popular variety of canephora is as described *C. robusta*. It is a robust shrub or small tree growing up to 10 meters in height, but with a shallow root system. The fruits are rounded and matured in 11 months. The seeds are oval in shape and smaller than those of *C. arabica*. Robusta coffee grown in West and Central Africa, throughout South-East Asia and to some extent in Brazil, where it known as Conillon.

The coffee fruit comprises (i) the skin (epicarp or exocarp), which is a moncellular layer covered with a waxy substance that protects the fruit, it is usually red, dark pink,

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Comparative studies on physicochemical and nutritional values of organically and conventionally grown *Cucumis sativus* stored at different temperatures in different household packaging

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Abstract The popularity of organically grown foods has grown rapidly around the globe. As organically grown foods have 20% lesser yield and they typically cost premium range (10–40% more) than conventionally grown foods, proper postharvest domestic storage of organically grown vegetable is important. Cucumber (*Cucumis sativus* L.) is a widely consumed vegetable among others, and it is highly perishable in nature; hence, it cannot be stored for extended period even at low temperature. With the application of the principles of modified atmosphere packaging, the present study aimed at comparing the changes in physicochemical and nutritional values between organic and conventional *Cucumis* when stored in different packaging at ambient and low temperatures for specific periods. The moisture content was not significantly

affected by storage of both organic and conventional *Cucumis* in all experimental conditions. There were significant differences in dry weight, carbohydrate, total dietary fibre and protein content of both organic and conventional *Cucumis* in all packaging. The TA reduced during storage in this study indicating better storability. The study that storing *Cucumis* packaged in PP container, LDPE zipper bags and cling film wrap and storing at ambient (25°C) and low (4°C) temperatures can create a modified atmosphere which can influence the shelf life of *Cucumis*.

Keywords Organic · Conventional · *Cucumis sativus* · PP airtight container · LDPE zipper bags

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s13165-022-00409-y>.

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Introduction

The consumption and popularity of organic foods are fast growing around the globe. Consumer prefers organic foods in the concept that organic foods have more nutritional values, have lesser or no additive contaminants and grown sustainably (Das et al. 2020; Greene et al. 2009). According to Magnusson et al. (2003), Brandt and Mølgaard (2001) and Funk and Kennedy (2016), the growing demand for organically farmed fresh products has created an interest in both consumer and producer regarding the nutritional value of organically grown foods. As organically grown foods have low yield (on average 20% lower), they typically cost premium range, 10–40% more than

Suryatapa Das

ROLE OF ICT DIFFUSION IN BRIDGING THE DIGITAL DIVIDE IN INDIA

Abstract

"Information and Communication Technology" (ICT) is a key driver of growth in almost all sectors. But due to uneven presence of digital infrastructure, an imbalance is witnessed in digital access in the country in terms of teledensity, internet penetration, electrification, education and poverty level. In this backdrop, the current article seeks to assess the determinants of digital divide, analyse the role of ICT diffusion in bridging digital divide and also describe a few Government initiatives in bridging digital divide in India.



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INTRODUCTION

"Information and Communication Technology" (ICT) is a game changer in modern Indian society that can be witnessed through the growth of sectors like education, healthcare, BPO, financial services and so on. ICT has two main classifications, namely Information Technology (computer software and hardware) and Communication Technology (telecommunication devices). ICT diffusion refers to IT enabled environment that leads to increasing productivity, competitiveness, knowledge capital, economic growth, human resource, etc. from the use of ICT application. "The effective use

"Information and Communication Technology" (ICT) is a game changer in modern Indian society

of ICT is significant for economic development, social well-being and effective governance" (Jamil, 2021). On the other hand, digital divide means "the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access ICTs and to their use of the internet for a wide variety of activities" (OECD, 2001). Therefore, this

is the imbalance in accessing the technology through internet and other ICT enabled devices due to difference in geography, race, economic background, and other factors concerned. In India, 43 per cent of the total population was found to use internet¹ of which 58 per cent was male and 42 per cent female in 2020². As per National Family Health Survey 2019-21, 72.5 per cent males and 51.8 per cent of females in urban India use internet while it is 48.7 per cent and 24.6 per cent in rural area respectively. This is an indicator of gap in digital divide position in India. Going through the data of various indicators, it is seen that the rural

¹ ITU's World Telecommunication Database
² statista.com

12. A Study on Students' Perception towards Online Learning in Higher Education in relation to their Gender and Localities

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Abstract

Very recently the Covid-19 pandemic situation has shocked the world and our country too. The pressure on students and higher education institutions is realized high. Schools and universities have been closed and exams postponed. Classrooms are going virtual and admissions for the upcoming academic year are fraught with confusion. According to UNESCO, over 320 million students in Indian schools and colleges are currently affected. The pandemic has pushed the world to drastically reinvent ways of coping with the 'new normal'. Can India emerge from this crisis with a refreshed perspective and boost to higher education? An immediate and effective response to the crisis was to go digital. Developing strong online platforms has become necessary to offer continuity in learning. Yet in a developing country like India with vast disparity in socio-economic backgrounds of students and the quality of educational institutions, the shift has not been easy. The digital divide has been further widening the gap, and needs urgent attention from both public and private sector stakeholders as the crisis continues. Good teachers, refreshed curricula and effective tools will ensure students stay involved and active in the learning process. Besides all other factor perception of students towards online learning plays an important role in the way of materializing the different strategies to cope up with the coming digitalized teaching-learning or virtual learning. The Gender and Locality are two major factors which have a greater impact on persons' attitudes and perceptions in other societal variables. In the present article the investigators have selected two variables to study i.e., Gender and Locality as factor in students' perception towards online learning in higher education in west Bengal.

Key word: Students' Perception, Online Learning, Gender, Localities, Higher Education

1. Introduction

The Information and Communication Technology (ICT) and globalization are both enhanced the growth of online education and made a drastic change in the educational sector

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