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3.3.2 Number of papers published per teacher in the Journals Not notified on UGC website during the last five years (10)

S.no	Id. No	Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication	ISSN number	Link to the recognition in UGC enlistment of the Journal/ Digital Object Identifier (doi) number		
								Link to website of the Journal	Link to article/paper/abstract of the article	Is it listed in UGC Care list/Scopus/Web of Science/other, mention
1	34	Manav Swasthaya evam Ayurveda	Dr. Poonam Lakhanpal	Sanskrit	Shodhmanthan: A Peer Reviewed & Refereed International Journal Vol.XII (1) pp:78-84	2021	0976-5255(P) 2454-339X	www.anubooks.com	https://anubooks.com/wp-content/uploads/2021/04/SM-Vol.XII-No.1-Mar2021-11-Corrected.pdf	
2	36	Purano mien Ganga Mahatmay (Narist Gansama Nadi)	Dr. Upasana Singh	Sanskrit	Shodhmanthan: A Peer Reviewed & Refereed International Journal Vol.XII (2) pp:198-203	2021	0976-5255(P) 2454-339X	www.anubooks.com	https://anubooks.com/wp-content/uploads/2021/07/Shodh-Vol.12No2-June-21-30.pdf	

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3	33	Diwedi Yugin Hindi Sahitiya mien Rashtriya Chetna	Dr. Nisha Goel	Hindi	Bohal Shodh Manjusha: An International Peer Reviewed & Refereed Mutlidisciplinary & Multiple Languages Research Journal. Vol.13, Issue 6(1). pp.98-102	2021	2395-7115	www.bohalsm.blogspot.com		
4	5	Analysis of the Conditions of Dalit Women as Protrayed in Contemporary Literature Study on "The Weave of My Life" and The Prison We Broke"	Dr. Mamta Upadhyay	English	International Journal of Linguistics and Literature (IJLL). Vol.10(2). pp.1-6	2021	2319-3956	www.iaset.us		
5	6	Feminism in Indian Writing in English	Mrs. Preeti	English	Bohal Shodh Manjusha: An International Peer Reviewed & Refereed Mutlidisciplinary & Multiple Languages Research Journal. Vol.12, Issue 6(1). pp.119-122	2021	2395-7115	www.bohalsm.blogspot.com	Principal Raghunath Girls' Post Graduate College Meerut	
6	15	Bharat China Sambandh G7 Vistaar ke Sandarbh mein	Mrs. Anjali Gupta	English	Shodhmanthan: A Peer Reviewed & Refereed International Journal Vol.XII (2) pp:269	2021	0976-5255(P) 2454-339X	www.anubooks.com		
7	25	BRICS Towards the Multipolar World	Dr. Babita Maji	Political Science	RJPSSs.Vol.XLVII(1).pp.24-31	2021	0048-7325(P) 2454-7026(e)	http://rjpsss.anubooks.com	https://anubooks.com/wp-content/uploads/2021/06/RJPSSS-Vol.47-N0.1-June-2021-4.pdf	

8	37	Dharamnirpeksh Bhartiya Sanskriti mein Isai Dharam evam Kala ka Savardan	Dr. Archana Rani	Drawing and Painting	Recent Researches in Social Science and Humanities: Internatinal Refereed & Blind Peer-Reviewd Multidisciplinary Research Journal. Vol.8(1)52-58	2021	2348-3318	www.recentjournal.in		
9	37/a	Lalit Kalaien: Kalaon ka Samanjay	Dr. Archana Rani	Drawing and Painting	Art Fragrance: A Research Journal of Fine Arts &Fashion. Vol.V(1). pp.6-9	2021	2395-2148			
10	43	Bhakti aur Sangeet	Dr. Kiran Sharma	Music	Art Fragrance: A Research Journal of Fine Arts &Fashion. Vol.V(1). pp.10-11	2021	2395-2148		Principal Raghunath Girls' Post Graduate College Meerut	
11	43/a	Kala aur Sangeet	Dr. Kiran Sharma	Music	Shodhmanthan: A Peer Reviewed & Refereed International Journal Vol.XII (1) pp:90-95	2021	0976-5255(P) 2454-339X	www.anubooks.com	https://anubooks.com/wp-content/uploads/2021/03/SM-Vol XII-No.1-Mar2021-13.pdf	
12	44	Dhrupad Ek Gayika	Dr. Swati Sharma	Music	Shodhmanthan: A Peer Reviewed & Refereed International Journal Vol.XII (1) pp:12-16	2021	0976-5255(P) 2454-339X	www.anubooks.com	https://anubooks.com/wp-content/uploads/2021/03/SM-Vol.XII-No.1-Mar2021-2.pdf	
13	53	Synthesis and Spectral Studies of 2-(-4 Hydroxyphenyl)-1,2-Dihydro-4H-Bemzo(D)(1,3) Oxazin-4-One	Mrs. Manisha Singhal and Vinay Prabha Sharma	Chemistry		2021	2231-0045(P) 2349-9435(E)	http://sjifactor.com/passport.php?id=1537	http://www.socialresearchfoundation.com/researchtimesview.php?id=399	

14	50	Floral Morphology and Reproductive Biology of Medicinal Plants Costus (Costaceae)	Dr. Amita Sharma and Ms. Stuti Sharma	Botany	Journal of Medicinal Plants studies Vol 9(1) pp 33-36	2021	2394-0530(P) 2320-3862(E)	www.plantsjournal.com	https://www.plantsjournal.com/archives/?year=2021&vol=9&issue=1&part=A&ArticleId=1246	
15	50/a	Immunity Booster Plants from Traditional Knowledge in North Indian Plains to Mitigate Covid 19 Infestation	Dr. Amita Sharma and Ms. Soniya Rani	Botany	The Journal of the Indian Botanical Society. Vol.101(1&2) pp16-30	2021	0019-4468(P) 2455-7218(E)	www.indianbotsoc.org	https://www.indianbotsoc.org/admin/uploaded/2.%20MS 943.pdf	

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1	5	Joyce Carol Oates :The Violent Vision in Bellefleur	Dr Mamta Upadhyay Pooja Mittal	English	International J. English Literature Language & Skills Vol. 8(4) pp 63-68	2020	2278-0742	www.ijells.com	https://anubooks.com/wp-content/uploads/2020/05/Notions-Vol-X-No.-2-Dec-19-6.pdf	Principal Raghunath Girls' Post Graduate Coll Meerut
2	5/a	Understanding the social struggle through the pains and resistance of Om Prakash Valmiki in Joothan	Dr. Mamta Upadhyey Chabi Tomar	English	Notions Vol XI (II) Article 26 pp 137-144	2020	0976-5247 (p) 2395-7239 E	http://anubook.com/notions-vol-XI-no-2-july-dec-2021/	https://anubooks.com/wp-content/uploads/2021/02/Notions-Vol-XI-No.2-Dec-2020-26.pdf	SJIF 6.449
3	81	Identity versus Role Confusion- The complicated Truth	Ms. Himani Vishnoi	Home Science	Naveen Shodh Sansar Vol. I (XXIX) pp. 173-175	2020	2394-3793	https://nssresearchjournal.com/	https://nssresearchjournal.com/admin/Documents/Current%20Edition/NSS_Jan_20210708T223117PM.pdf	-

4	82	Traditional or Curse on one part of the society	Dr. Shweta Sharma	Home Science	Naveen Shodh Sansar Vol. I (XXIX) pp. 173-175	2020	2320-8767	https://nssresearchjournal.com/	https://nssresearchjournal.com/admin/Documents/Current%20Edition/NSS_Jan_2021072810712235AM.pdf	
5	61	The Effect of Suryanamaskar training on muscle flexibility of senior citizens	Dr. Bhawna mittal	Physical Education & sports	International Journal Of Physical Education, Health & Sports sciences Vol 9(1) pp 39-42	2020	2279-0306	www.pefindia.org	http://pefjournal.org/index.php/ijpehss/article/view/6	Peer-reviewed Impact factor 1.845
6	57	Histopathological alteration in gill of teleost, Clarias batrachus against Cadmium toxicity	Dr. Garima Pundir	Zoology	World journal of pharmaceutical research Vol. 9 Issue 5 pp 2574.2586	2020	2277-7105	http://whpr.net	10.20959/wjpr 20205-17530	IF 8.084
7	57/a	Impact of Arsenic Trioxide on toxic pathological profile of teleost, Clarias batrachus	Dr. Garima Pundir	Zoology	World journal of pharmaceutical research Vol 9 Issue 5 pp 954-965	2020	2277-7105	http://whpr.net	10.20959/wjpr 20205-17191	IF 8.084
8	37/a	पारम्परिक कला- संस्कृती से प्रयोगधर्मी कलाकार	Dr. Archana Rani	Drawing and Painting	International Journal of Research-Granthaalayah First Issue pp 123-127	2020	2394-3629(p)	http://granthaalayah.com		
9	37/b	सृजनात्मक प्रवति की द्योतक जापानी श्याम और मयंक की कृतियाँ	Dr. Archana Rani	Drawing & Painting	Printing Area Issue 62 (2) Pp-161-166	2020	2394-5303	http://www.vidyawarta.com		IF-5.011

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1	1	Regional Variation of Natural Hazards and its Effect on Tourism : A case study of Uttarakhand	Dr. Deepshikha Sharma	Geography	The Geographical observer Vol. 49 PP 64-70	2019	0072-10925	https://www.thegeographicalobserver.com		UG Lib. Cong. No. SA68004330
2	5/b	"Because it is Bitter, and Because It is My Heart"- A Tale of Bitter truths	Dr Mamta Upadhyay Pooja Mittal	English	Notions Vol.X(2) pp. 42-48	2019	0976-5247 (p) 2395-7239 E	https://doi.org/10.31995/notions	https://anubooks.com/wp-content/uploads/2020/05/Notions-Vol-X-No.-2-Dec-2019-6.pdf	
3	54	Oil spills: Threat to marine life	Dr. Deeksha Yajurvedi	Chemistry	Indian journal of applied research, Volume 9 Issue-7 pp.32-36	2019	ISSN 2249-555X	https://www.worldwidejournals.com/indian-journal-of-applied-research-(IJAR)/	DOI : https://www.doi.org/10.36106/ijar	Peer reviewed,refreed indexed journal Hi Index IF 5.397
4	50	Air Purifying Plants: A Boon of Nature	Dr. Amita Sharma	Botany	International Journal of Trend in Scientific Research ans Development (IJTSRD) Vol.3 Issue 4 pp 1807-1811	2019	2456-6470	www.ijtsrd.com	https://wwwwijtsrd.com/biological-science/botany/25321/air-purifying-plants-a-boon-of-nature/dr-amita-sharma	

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5	34	Karpsormanjaryam Bimbavidhanam	Dr. Poonam Lakhanpal	Sanskrit	PrachiSudha Puri, Orissa Vol. 11 02 pp	2019	ISSN 22492313		Offline	
6	29	Gender Inequality in Higher Education	Dr. Manju Lata	Sociology	Research Journal of Philosophy and Social Sciences Vol 44 (2) pp 39-45	2019	0048-7325(p) 2454-7026(e	https://rjpss.anubooks.com/	http://anubooks.com/?page_id=2012 http://doi.org/10/31995/rjpsss	SJIF 6.080
7	25	India and Multipolar World	Babita Maji	Political Science	The Indian Journal of Political Science Vol.-LXXIX (4) pp 1003-1008	2019	0019-5510	https://www.ijps.net.in	https://www.ijps.net.in/wp-content/uploads/2020/07/TOC-7.pdf	Induced Proquest Refereed
8	GF	Bijnor Janpad Ke Krishi Kshetra Vinyas ka bhaugolik Adhyayan	Dr. Sushma Gaur	Geography	Pragya Shikshan shodh Rachna Vol II (6) pp 142	2019	2319-8079			
9	GF/a	Janan Kikiya Adhyayan ke antergat, Bijnor Janpad Saakshrta ka visleshan	Dr. Sushma Gaur	Geography	Pragya Shikshan shodh Rachna vol I (Pt- III) No. XL III pp 222	2019	973 -626			
10	37	Tribes Indian : Their Socio-Economies Development Through Art	Dr. Archana Rani Dr. Himanshu Agarwal	Drawing & Painting	Journal of Commerce & Trade Vol XIV (1) pp 83-87	2019	0973-4503(P) 2454-1702(E)	www.jctindia.org	http://jetindia.org/april2019/v/4i1-12	ICU 66.46
11	82	Ajark:-a Fabric from Cattle Herders to Model	Dr. Shweta Sharma	Home science	Naveen Shodh Sansar Vol -I, Issue XXVI, Page no 30-33	2019	2320-8767	https://nssresearchjournal.com/files.aspx?id=1	https://nssresearchjournal.com/admin/Documents/Current%20Edition/NSS_April_To_June_2019_Volume_1_20210718T080146AM.pdf	

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12	61	The Effect of Pranayama on Respiratory Efficiency variables	Dr. Bhawna Mittal	Physical Education & Sports	International Journal of Physical Education, Health & Sports sciences Vol 8 pp 37-41	2019	2279-0306	https://pefjournal.org/index.php/ijpehss		Google Scholar Peer-reviewed Impact factor 1.845

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1	56	Analysis Of DNA Content Of Wild And Cultured Labeo calbasu (Hamilton, 1822) Using Nanophotometer	Dr. Seema Jain Nisha Rana	Zoology	International Journal Of Trends In Scientific Research And Development, Vol- 3 (I) pp-906-909	2018	ISSN No: 2456- 6470.	www.ijtsrd.com	http://doi.org/ 10.31142/ijtsrd19105	BJIF-4.101
2	56/a	DNA Quantification Of Wild And Cultured Cirrhinus mrigala (Hamilton, 1822) Collected From Different Sites Of Western Uttar Pradesh, India,	Dr. Seema Jain Nisha Rana	Zoology	International Journal Of Zoological Investigations Vol. 4, (2) Pp- 181-185	2018	ISSN: 2454-3055	www.ijzi.net		Index Copernicus 75.30 IIJIF- 2.41 ISIIF- 21984

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3	56/b	OtolithMorphometry And Fish Length Relation Of Ambly pharyngodon mola (Ham.) From Middle Ganga Region (India).	Dr. Seema Jain Neeta Nimesh	Zoology	International Journal Of Fisheries And Aquaculture Vol.10(10): Pp -122-128	2018	2006- 9839	https://academicjournals.org/journal/IJFA		
4	57	Protective role of Spirulina platensis on hematological profile of cadmium sulphate exposed teleost, Clarias batrachus	Dr. Garima Pundir	Zoology	World Journal of Pharmaceutical Research Vol.8(6) pp.1131-1140	2018	2277-7105	www.wjpr.net	https://www.wjpr.net/abstract_show/12323	SJIF IF: 8.074
5	50	A study of Ethnobotany with Reference to Traditional Knowledge of India	Dr. Amita Sharma	Botany	International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET) Vol1, Issue 1 pp.51-56	2018	2583-7219	www.ijmrset.com	http://www.ijmrset.com/upload/2018/november/8_ethno_NC_NEW.pdf	IF 5.92
6	46	Trends of Fast Food Consumption among Adolescent Girls	Vinita Tomar Dr Sonika Choudhary	Home Science	International Journal of Southern Economic Light Vol.VII. pp: 65-67	2018	2277-5692(e)	http://www.eprajournals.org	https://eprapublishing.com/admin/admin/public/uploads/852pm11.Vinita%20Tomer%20&%20Dr.%20Sonika%20Choudhary.pdf	
7	50	Environmental Issue: A review on Acid Rain	Amita Sharma	Botany	International journal of Innovative Research in Science, Engineering and Technology Vol. 7(6) pp. 7552-7555	2018	2347-6710	http://iomcworld.org		

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1	50	Study of Phenological Events Of Some Members Of Ericaceae	Dr. Amita Sharma	Botany	Journal of Plant Development Sciences Vol. 8 (3) pp. 117-121	2016	0974-6382	http://jpds.co.in/	http://jpds.co.in/wp-content/uploads/2014/03/Abstract-of-Vol.-83.pdf	
2	27	Social Media : The Inevitable and pertinent influences in the lives of India youth	Dr. Anjula Rajvanshi	Sociology	International Journal of Applied Research Vol.2(04) pp17-21	2016	Online 2394-5869 Offline 2394-7500 Impact Factor 5.2	www.allresearchjournal.com		
3	12	Rise of Swadeshi and Khadi Movement in Meerut	Dr. Reenu Jain	History	International Journal in Commerce, IT & Social Science Vol 3, Issue 02	2016	2394-5702	https://ijmr.net.in/past-ijciss.php		Impact factor :3.455
4	12/a	Rowlatt Agitation in Meerut	Dr. Reenu Jain	History	International Journal in Commerce, IT & Social Sciences Vol.3 Issue 03	2016	2394-5702	https://ijmr.net.in/past-ijciss.php		Impact factor : 3.455
5	24	China Growing Interest in	Dr. Bina Rai	Political Science	International Journal of Social Science	2016	2250-0812	Offline		

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		Pakistan: An Analysis			Vol. IV& VI					
6	24 /a	Human Rights in India: A Post-Facto Assessment of Post Independent Era	Dr. Bina Rai	Political Science	International Journal of Applied Research, Vol.-2, Issue-2, pp.628-633	2016	2394-5869	www.allresearchjournal.com	https://www.allresearchjournal.com/archives/2016/vol2issue2/Part1/2.2.39.pdf	5.2
7	24 /b	Women's Human Rights and Indian Constitution	Dr. Bina Rai	Political Science	International Journal of Advanced Research, Vol. 4, Issue 2, pp.469-475	2016	2320-5407	www.journalijar.com	https://www.journalijar.com/article/8119/womens-human-rights-and-indian-constitution/	4.588
8	84	Phytoestrogens as Pharma foods	Gupta, C., Prakash, D., and Gupta S	Zoology	Advances in Food Technology & Nutritional Sciences Open Journal Vol. 2(1) pp 19-31	2016	ISSN: 2377-8350	https://openventio.org/category/journal-index/advances-in-food-technology-and-nutritional-sciences-open-journal-aftnsoj/	http://medcraveonline.com/JNHFE/JNHFE-03-00108.pdf	
9	84 /a	Nutraceuticals for athletes.	Gupta C, Prakash D, Gupta S.,	Zoology	Advances in Food Technology & Nutritional Sciences Vol. 2(2) pp. 73-82	2016	ISSN: 2377-8350	https://openventio.org/category/journal-index/advances-in-food-technology-and-nutritional-sciences-open-journal-aftnsoj/	https://openventio.org/nutraceuticals-for-athletes/	
10	56	Effect Of	Dr. Seema	Zoology	Voyager –A Journal	2016	P- ISSN	https://w	http://anubooks/wp-	ICRJIFR 3.8919

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		Dissolved Oxygen On Physiology And Behaviour Of Fresh Water Fishes	Jain Neetu Nimesh		Of Life Sciences, 2016,Vol VII, pp. 1-7		0976- 7436, E ISSN- 2455-054x.	w w.anubo k.com	content/http //anubooks.com/wp-content/uploads/2017/01/V-2016-Sp Issue-5.pdf uploads/2017/01/v-2016-Sp -Issue-5.pdf	SJIF - 5.498
11	57	Effect of Cadmium Sulphate on certain biochemical parameters of Teleost Clarias batrachus	Dr. Garima Pundir	Zoology	World journal of pharmaceutical research Vol 5(2) 1004-1011	2016	2277-7105	http //www.wjpr.net	https://www.wjpr.net/abstract_show/4592	6.99
12	54	Bio-Medical Application of Fullerenes : An Overview	Dr.Deeksha Yajurvedi	Chemistry	IJSR - International journal of Scientific Research, Volume 5,Issue 5May 2016	2016	ISSN 2277-8179	http://ijsr.net/	https://ijsr.net/?gclid=CjwKCAjwru5HBhAtEiwA_qCppqbd8dUowQ_59CjSPL5J31gkf2daMoWGqDYbKLcCmZ3pv87LSqEBRoCIZ8QAvD	Refereed IF 3.508
13	49	Andrographics paniculata : A review on ethnomedicinal potential and biological activities	Smt.Nirlep Kour	Botany	Journal of Plant Development Sciences Vol 8(1) pp-1-06	2016	0974-6382	http://jpds.co.in/	http://jpds.co.in/wp-content/uploads/2014/03/Vol.-81.	

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1	34	Vishnupurane Kaal Swaroopah	Dr. Poonam Lakhanpal	Sanskrit	PrachiSudha , PURI ORISSA Vol 10/02. pp 15-16	2017	ISSN 22492313		Offline	
2	29	Child Labour Problem : National Plan & Policies in Different Sectors	Dr. Manju Lata	Sociology	Journal of Geo Vision CCS University Vol II (II) pp 01-14	2017	2457-0915		Principal Raghunath Girls' Post Graduate College Meerut	
3	75	A Study on the Relationship between Menstruation & Alcohol Consumption	Dr. Shweta Tyagi	Home science	Research Link Vol-XV (11), 154.pp-145-149.	2017	ISSN-0973-1628	www.researchlink.co.	Offline	
4	20	Role of ability to delay gratification and regulate emotion in adolescents' psychological	Sachin Kumar and Dr.Kumkum Pareek	Psychology	Indian Journal Of Positive Psychology9(2), pp215- 218	2017	Online 2321-368X Print 2229- 4937	DOI:10:15614/ijpp/2018/v9i2/176627	http://www.i-scholar.in/index.php/ijpp/articl	ICV- 74.12 SJIF 6.998

		well being								
5	24	Countering Naval Threats in the 21st Century	Dr. Bina Rai	Political Science	International Journal of Social Science ARIDSS Vol. 12-13.pp. No. 215-226	2017	2250-0812			
6	30	Study of Pattern of Senescence in leaflets of Tecoma stans (Linn.) H.B.&K	Amita Sharma	Botany	Journal of Plant Development Sciences Vol. 9(6) pp. 611-614	2017	0974-6382	http://jpds.co.in/	http://jpds.co.in/wp-content/uploads/2019/07/16.-Revised-Amita-Sharma-1174.pdf	NO
7	27	Women Entrepreneurs in India : Challenges & Opportunities	Dr. Anjula Rajvanshi	Sociology	IOSR- JHSS (Journal of Humanities and Social Sciences) Vol 22 Issue 4, Vol 1 pp 01-09	2017	2279-0837 PISSN 2279-0845	www.iosrjournals.org	https://www.iosrjournals.org/iosr-jhss/papers/Vol%2022%20Issue4/Version-5/A2204050109.pdf	
8	28	Rural Women's Health An Analysis	Dr Rajani Srivstava	Sociology	International Journal of Research in Economics & Social Sciences Vol VII pp 235-238	2017	2249-7382	http://euroasiapub.org	https://euroasiapub.org/wp-content/uploads/2017/07/25ESSFeb17-Rmsh-1.pdf	IF. 6.939 Thomson Reuter
9	28/a	Terrorism: Media & Society A Brief Observation	Dr Rajani Srivstava	Sociology	International Journal in Commerce IT & Social Science Vol IV pp 30-36	2017	2394-5702	http://www.ijmr.net.in		IF. 4.218
10	24	Demonetization Drive in India and Its Socio-Cultural Implications	Dr. Bina Rai	Political Science	International Journal of Advanced Research, Vol. 5(3)pp.1195-1203	2017	2320-5407	http://www.journalijar.com/	https://www.journalijar.com/article/16119/demonetization-drive-in-india-and-its-socio-cultural-implications/	Peer reviewed Thomson Routes 6.118
11	24/a	Identity Conflict among Dalit in the Political System of India	Dr. Bina Rai	Political Science	International Journal of Advanced Research, Vol. 4(19) pp.1046-1051	2017	2320-5407	http://www.journalijar.com/	http://dx.doi.org/10.21474/IJAR01/1580	Peer reviewed Thomson Routes 5.336
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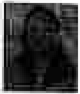

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BRICS Towards The Multipolar World

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Introduction

With the decline of the U.S. dominance in global world order BRICS Nations as the emerging economies and developing power have emerged global assistance especially their consumption likewise patterns and post American world becoming more popular. BRICS might be considered as one of the rising blocks showing the non-sensitive of international relations in the 21st century. With the BRICS grouping emerging as the new centre of power factor in global politics they have been seen indeed to have consistent and beneficial relations and interest in various global multilateral forum and financial institutions.[1] The expansion multilateralism and multilateralism multi-polarism bring new insights to the concept of the rise of BRICS.[2]

BRICS as leading emerging economies and political interests in the regional and international level was first introduced by economist of Goldman Sachs as part of an economic modelling exercise to find out global economic trends over the next half century. The word BRIC was coined in 2001 to highlight the role of emerging economies including Brazil Russia India and China. Due to high economic growth rates and rapidly developed BRICS further in total positions and it was proposed that their economic performance should also be reflected in their incorporation of G7. These four countries met and group in 2009 and in 2010 South Africa joined the policy this group which was then referred as BRICS. Many believe that the rise of BRICS forum will contribute to provide an economic order in the future. The main aims of the BRICS are to enhance the voice of emerging and developing countries in international arena.

BRICS economic power and size (75% of population and 27% GDP) make them important on global stage and they must now present as a unitary against the mechanisms of the western countries and some international organisations such as the IMF and United nations. The performance in global conferences of G20, UN Security Council, and World Trade Organisation BRICS play pronounced role in multilateral consultation and assistance for the developing world challenging Western dominance in international politics.

It is worth attending in this manner in which China has sought to address political factors. The world based system to be disturbing, the world presently including issues and is one on Russia that provides trade and other exchanges. While China has used this approach towards several countries, it has been particularly dramatic in the future years. 4000 mph China had made attempts to improve relations with India, it was not until after the Tiananmen incident of 1989 that Beijing intensified efforts to reshape its international relationship with developing countries like India. The rapid economic potential, first of all, distinguishes the Sino-Indian from Sino-Russian relationship. India

gained a small victory in the 1990s when China refused to back Pakistan in internationalizing the Kashmir problem by encouraging the UN declaration of Kashmir [illegible] as the starting point of negotiations. The Himalayan border issue never [illegible] from other matters, and China and India have [illegible] International Tribunal such as the Delhi talks of July 2008, at the [illegible] conference in December 2009 etc.[illegible]

However, the relations of Sino-India are complex with competition and cooperation in BRICS issues and international issues. In BRICS forum, China and India will greatly improve their cooperation reducing their conflicts and competition. Security dialogue will consider the China as the most important partner in Asia-Pacific area. There believe that the rise of BRICS forum will contribute to promote the new multipolar world and step by prompt to a "non-western order" in the future. As so far, BRICS forum has held many times meetings, and we conclusively from these opinion that they are committed to the multipolarism world order and global governance.

China and India have different strength along their [illegible] the economy. For example, China overtaken India in 1978, but India has other its strength in the Know, green economy, China's economy, Net labor cost, Sub-low, Social [illegible] being followed, but by the country's [illegible] with [illegible] and [illegible] compared to [illegible] the big multinationals. Therefore, we can conclude that China and India have their different strength in the development of their economy. India and China play an important role in the future economy, however the two countries do not really [illegible] each other, and greater [illegible] is not underminded the security of the other, as that Indian official mentioned.

China and India dominate the trading environment in the BRICS system and there are very strong trading relationships which make their economic relations [illegible] competitive and complementary relationship. As the two major powers, China and India have carried out a [illegible] relation. China and India are committed to have their political influence at regional and international levels such as the UN, IMF, international climate change, [illegible] legal and [illegible] cooperation organizations.[illegible] The political cooperation of Sino-India has been strengthened and [illegible] specially [illegible] it is important for to reduce the conflicts of promote the world's two largest developing economic organizations, and impact on the international political order which need the people and policymakers foresee the consensus that the new international development pattern under the BRICS system. Today under the BRICS system, the strategic cooperation of Sino-India mainly reflects in the climate [illegible] and energy cooperation. Climate change will have a significant impact

for the BRIC'S because of the size and rate of economic growth of the BRIC's countries. BRIC'S cannot pay attention to short-term commodity development and agree the establish "open working group on the sustainable development goals" about issue of the climate change governance, the BRIC'S countries agree that the developed countries and the developing countries should take different responsibilities. Facing the practical challenges and threats, the BRIC'S advises that the wealthy industrial nations should not only provide the technological & financial assistance but also take moral responsibilities abiding by the UN framework convention on climate change challenge and make efforts to solve the issue through sustainable and balanced growth and not by stopping development." The common interests have promoted China and India's concerns about global warming and energy security, pushing development of the renewable energy technology in BRIC'S system.

The point has been mentioned that the Sino-Indian relationship is essentially 'bilateral' in nature, but the interaction has also been shaped and conditioned by the evolving global major organization like BRIC'S which influenced the India-China interaction. Therefore, the evolving global setting and international realities assume importance in the comprehensive study of India-China interaction. China and India are emerging as pivotal components of the evolving balance of power in Asia. The conventional assessment is that if these two Asian powers [illegible] the next few decades will redress economic imbalances of global wealth and power towards the eastern hemisphere.

The United States is only superpower in today's world that could change in coming years. Both China and India have the potential to transform the structure and system into a multipolar [illegible] historical claim. And though Beijing and New Delhi have set the emergence of a multipolar world as their primary objectives with the tacit belief that their respective capitals will be among these poles— they accept that such might not be easily attained. Similarly, though both share a common outlook on the discriminatory nature of the non-proliferation regime, they differ on how it should be applied, particularly to the other. For instance, China's white paper on national defence in 2006 recognises that relations "among big powers are complicated. Still many [illegible] and frictions. However, drawing on each other's strengths, cooperating with and checking and counterbalancing each other remain a basic feature of [illegible] relationship". The white paper also notes that "there is a serious disequilibrium in the relative strengths of countries, no fundamental change has been made [illegible] order" and that "hegemony and power politics still persist and are developing further in the international political, economic and security spheres". Thus, the white paper argues that the

"[illegible] of China will constitute no threat to anyone, but will rather promote ... world peace, stability and development".[illegible] Although Beijing supports the principle of non-proliferation, it also maintains that peaceful use of technology should be promoted, and it continues to have serious reservations about the existing [illegible] regimes.[illegible] Similarly, the annual report of India's ministry of external affairs for 2000-2001 notes in one of its paragraphs [illegible] "Strengthen further India's role as a factor for peace, stability and security and balance in Asia and in the world" and lists one of its objectives as to "work with the P-5 [illegible] members of the UN security council and other major powers to promote bilateral relations and to work towards strengthening peace, stability and multipolarity in the world". Implicit in this is the desire to attain a permanent seat in an expanded UN security council. In addition, the annual report of the defence ministry for 2000-2001 reveals that "India has adopted a more comprehensive approach to security encompassing economic strength, internal cohesion and technological progress" and asserts that "India will need to maintain a desired level of military strength and preparedness .... to contribute positively to the promotion of peace and stability in the region". On the issue of the non-proliferation regime, "India continues to maintain its opposition to the NPT as a discriminatory and flawed treaty" and argues that "lasting non-proliferation can only be achieved through disarmament".[illegible] Thus, even though both China and India share similar concerns and common interests at the global level, they cannot [illegible] to combine their efforts. For instance, while paying lip service to the principle of supporting the candidacy of developing countries for permanent membership of a reformed UN security council, Beijing has publicly offered its support to Germany but has shied away from giving similar support to India, with which it purportedly shares a similar global outlook. This is primarily because, despite the improvement in their relations, they still remain wary of the other's intentions. This is particularly true in the relations that Beijing and New Delhi are developing with other key global actors, particularly the United States. Today in a rapidly changing world order, an entirely new architecture is being formed in the global economy, politics and security.[illegible] And the [illegible] relations develop between the two leading [illegible] of Asia not only determines the stability of the region, but also the direction of global politics [illegible]. [illegible] the [illegible] of the world cannot be [illegible]. It is hardly surprising that the BRICS countries decided to put forward the idea of forming their own [illegible] bank, [illegible] the United States [illegible] forming the backbone of the BRICS. The creation of such a bank, and the transition to using national currencies in settlements between BRICS countries [illegible]

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Although [illegible] For example, China might [illegible] Indo-Pakistani [illegible] New Delhi [illegible] to the exclusion of other elements of the bilateral relationship. [illegible]

However, the current global financial crisis will have a significant effect on India-China relationship [illegible]

BRICS and covid-19

In the global war against the [illegible] India as a largest producer of [illegible] Russia, Brazil, Israel and U.S. [illegible] BRICS [illegible] explore the production of vaccine.

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BRICS countries now need to pull and coordinate their efforts in partnership with the US and Europe and South America both badly affected by the pandemic as part of a global assist on the crisis. The Shanghai based new development Bank of the BRICS countries has already demonstrated the way forward in unlock a financial resources to combat covid-19. New development Bank has the financial help to provide 15 billion dollar increases related pressures BRICS member country.[illegible]

BRICS made some remarkable joint efforts to contain the pandemic on 26 April 2020 BRICS minister of foreign affairs held a video conference after the meeting all BRICS countries agreed to allocate 10 million dollar as the new development Bank mechanism development bank established by the BRICS nations to [illegible] and accurate both help medical emergency expenses for the members and support the subsequent economic revival. Hence the Bank Planned to support towards the world crucial help during the crisis the emphasis the necessity of enhancing and 24 emergency facility to handle the pandemic this allow affected BRICS States willingness to contribute to saving the global crisis.

Conclusion

The world is experiencing a changing economic tools with the development world becoming a driver of the global economy and will impact demand from the developing countries led by BRICS nations leading the global economy from the shipments. There is also an emergence of multilateral world order where developing countries like China and India play a dominant role and their population picking the world economy as well as the effect of global interdependency. During the pandemic lockdown and recession new development bank can take place of the traditional economic institutions like IMF and World Bank.

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शोध मंथन

हिन्दी शोध पत्रिका

Dr. Geeta Sharma
Deptt. of Music

202

शोध मंथन

हिन्दी शोध पत्रिका

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Dr Anita Bhatia
Dept of Botany
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Journal of Medicinal Plants Studies

Floral morphology and reproductive biology of medicinal plants: *Coccinia* (Cucurbitaceae)

Anita Bhatia and Sunil Sharma

Abstract

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Keywords: [illegible]

Introduction

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IMMUNITY BOOSTER PLANTS FROM TRADITIONAL KNOWLEDGE IN NORTH INDIAN PLAINS TO MITIGATE COVID-19 INFESTATION

ASHA SHADDIL AND SONIYA RANI

[illegible]

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Coronavirus disease 2019 (COVID-19) is a [illegible] disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that is recognized as a global public health concern (Mehrotra et al. 2020). The SARS-CoV-2 belongs to the subgenus Sarbecovirus and mainly resembles a bat coronavirus, with which it shares 96.2% genomic homology (Chen et al. 2020). Like other coronaviruses, SARS-CoV-2 particles are spherical and have protein called spikes protruding from their surface. These spikes bind with human cells, then undergo a structural change that allows the viral membrane to fuse with the cell membrane. Coronaviruses cause a lot of disorders, including respiratory, enteric, hepatic, and neurologic diseases (Singhal 2020). Although the WHO said, "There is no specific medicine recommended to prevent or treat the novel coronavirus yet now" (Thomas et al. 2020). Natural plant products and their derivatives have potential activities in the treatment of viral infections (Ulrich et al. 2020). Indian, Chinese, and Iranian traditional medicine regularly seek herbs for prevention, treatment, and rehabilitation of the disease including

COVID-19 (Chang et al. 2020). Evaluation of viral replication is considered as a general mechanism of herbal extracts. The search for new compounds with antiviral activity has arisen from coronaviruses due to viral resistance along with viral latency and recurrent infection in immune compromised patients (Sanchez et al. 2017). The Ministry of Ayush, India has already released the well-[illegible] guidelines for preventive health measures and boosting immunity with natural substances, [illegible] traditional knowledge and [illegible] and herbal formulations. The medicinal effects of traditional plants have played a prominent role in different stages of viral growth (Mazzini et al. 2020). The World Health Organization (WHO) reported that 4 billion people (70% of the world's population) use herbal medicines for some aspect of primary health care (Ghorbani et al. 2017). Indian traditional herbs are a promising field for the treatment of various illnesses (Gomathi et al. 2020). Medicinal plants have been recognized to immunostimulating constituents because they promote drug-like properties (Shankar 2020). Indian traditional medicine is one of the oldest treatments in Ayurveda, Unani, Siddha and Ayurveda,

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Joyce Carol Oates: The Violent Victim in Reflection

[illegible]

Abstract

Joyce Carol Oates is one of the most varied and formidable contemporary authors in America, who is gifted with the ability of focusing her imaginative exploration and creative individuality on the inner [illegible] people and surroundings. All around the world her works have been commented in the light of various literatures and has also been [illegible] an account of her outstanding place. This research primarily focuses that the novel [illegible] is influenced by a sense of [illegible] in Midst, society [illegible] positive view towards violence and its positive effects in the lives of oppressed characters are prominent in her plots, her attitude has been drive to provide a clear and precise [illegible] of violence and highlights a broad [illegible] of violence in Middle Ages, Rich Now, Modern or Other provides human capability of adapting to new situations or [illegible] Directly to cope with difficulties.

Key words: Violence, Revolution, [illegible], [illegible]

The Individual novelist, poet, dramatist and short story writer Joyce Carol Oates has been praised by both critics and readers. Joyce Carol Oates is one of the most prolific and [illegible] contemporary American writers. She also writes under the pseudonym Rosamond Smith. She has received a number of prestigious prizes and awards for her works including National Book Award in 1970, Bram Stoker Lifetime Achievement Award in 1996, National Institute of Arts and Letters gold Medal Award in 1998 and the Bernard [illegible] Prize in 1999, Pen Faulkner Award in 2007, and Chicago Tribune Literary Prize in 2008.

Oates has additionally used various styles and genres to explore her major concerns. The [illegible] violence, hospitality, terror and anxiety, portrayed in Oates's novels are not just [illegible] of a world [illegible]. Periodically, [illegible] in her writing and life is her [illegible] connection in the [illegible] environment in the [illegible] of this writing.
Oates is a prolific of American literature in the 20th century whose [illegible] reveals "[illegible] the [illegible] social and moral conditions and the [illegible] approach that [illegible] contemporary American" (Kirk, [illegible]).

According to Cambridge Advanced Learner's Dictionary, the common meaning of violence is "behavior or actions are intended to hurt people", but this is not particularly true about the violence presented by Oates in her fiction. Joyce Carol Oates depicts in her works that the violence are very [illegible]. This paper focuses on Oates' different attitude towards violence and power. According to critics, they play a leading role in the lives of oppressed characters. Oates' fictional world is [illegible] that with [illegible] optimism and [illegible] with a lot of [illegible] in reality and in the [illegible] of [illegible]. Her understanding of Joyce Carol Oates is objective after an understanding of various [illegible] from critics. She [illegible] with the hard struggle for survival against the world and [illegible] one's [illegible] human feelings and [illegible] life can only be [illegible] through [illegible]. The [illegible] here has to take on [illegible] of [illegible] in the [illegible]

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Acknowledgment(s)

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Understanding the Social Struggle Through The Prism and Resistance of Oru Pedaish Vimukti in Zambia

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Submitted to the [illegible]
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Understanding the Social Struggle Through the Prism and Resistance of Oru Pedaish Vimukti in Zambia

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Figure 1 [illegible]

Figure [illegible] Field Structure [illegible]

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Tradition or curse on one part of the society

Dr. Sheela Sharma[*] Ms. Savita Sharma[**]

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International Journal of Physical Education Health & Sports Sciences

THE EFFECT OF SURYANAMASKAR TRAINING ON MUSCLE FLEXIBILITY OF SENIOR CITIZENS

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Abstract

The phase of senior citizens age begins at the age of sixty. During this stage most individuals became retire from their active services or business. They begin to fear about their physical and psychological health. Health is a strong predictator of well being in this age. The most observable physiological changes associated with this phase are a decline in maximal exercise capacity, decrease in muscle flexibility and an increase in body fat. Sit exercise is frequently recommended as a part of a fitness programme for senior citizens. The present study made an attempt to determine the effect of suryanamaskar training on flexibility of senior citizens.40 senior citizen women subjects were randomly selected from Meerut. Age of the subjects was between 60 to 65 years. The subjects were randomly assigned to an experimental group and a control group. Sit and Reach(cm) test was conducted to find out the flexibility of subjects. The suryanamaskar programme were employed for the 8 weeks, 6 days in a week of 60 minutes according to their age. Mean, standard deviation and 't' test were used for the analysis of data. The statistically analysis measured that there is a significant difference appear on flexibility of experimental group after the training programme and it is proved that suryanamaskar training programme is very effective for maintain the muscle flexibility of later old age.

Key words: Flexibility, Senior citizen, Suryanamaskar.

1. Introduction :

The last period of old age begins at the age of sixty. During this stage most individuals became retire from their active service or business. They begin to fear about their physical and psychological health. Many people at this age remain very healthy and active in life. Health is a strong predictor of well being in later adulthood.

Human aging provoke extensive multidimensional changes on physical, psychological, cultural and social levels. Health fitness are clearly identified as having a major influence on life expectancy and quality of life during old age. Aging is filled with visible and sometimes dramatic changes in the body. Some of the most observable physiological changes associated with aging are a decline in maximal exercise capacity, decrease in muscle flexibility and an increase in body fat.

Flexibility is the ability of an individual to move the body and its parts through as wide range of motion as possible without undue strain to the articulation and muscle structures. It is the ability to execute movements with

Method

greater amplitude or range. (A. J. Michael, 1998).

During old age, exercise is frequently recommended as a part of a fitness programme for senior citizens. One type of such activity could be Suryanamaskar in Yoga. Suryanamaskar is the bundle of 12 pranayamas which is associated with all parts of the body. Researches in India on suryanamaskar were limited. The present study made an an attempt to determine the effect of 8 weeks of suryanamaskar training on flexibility of senior citizens.

METHODOLOGY

40 senior citizens women were randomly selected as subjects for the study. The ages of subjects ranges were 60 to 65 years. Before the training programme, we ensure that the subjects were medically fit to undergo of training programme. The subjects were randomly assigned to an experimental group (N-20) and a control group (N-20) Prior to the pre-test, a meeting of all selected subjects were held and explained about the study. They were requested to cooperate and participate actively throughout the programme.

PROCEDURE AND TOOL USED

The experimental group has given the suryanamaskar training for a period of 8 weeks. The experimental group was given a brief introduction of the procedure. The researcher demonstrated and explained the 12 steps of the suryanamaskar in Jorsal. The subjects were asked to perform the suryanamaskar at the morning for six days in a week for a period of 8 weeks. The total time of training was 60 minutes per day. Pre and post test were administered on the subjects for assessed flexibility. The control group did not exposed in any similar form of training. Sit and reach (Sit and Reach) was used to determine the Pre and post data of flexibility. Training schedule was given weekly according to their age and fitness (table-1)

Table -1

Weeks	No. of Rounds of Suryanamaskar
1 to 2 weeks	3 rounds
3 to 4 weeks	5 rounds
5 to 6 weeks	7 rounds
7 to 8 weeks	9 rounds
9 to 10 weeks	10 rounds
11 to 12 weeks	12 rounds
13 to 16 weeks	14 rounds

Result

The data pertaining to selected variable such as flexibility were analysed by paired 't'-test and the level of significance was set up at 0.05 level of confidence. To find out the significant mean differences between preliminary and final scores for experimental group and control group, 'T'-test was administered.

The mean and standard deviation scores of the experimental and control groups in the selected variable under the corresponding 'T' values are given in table 2.

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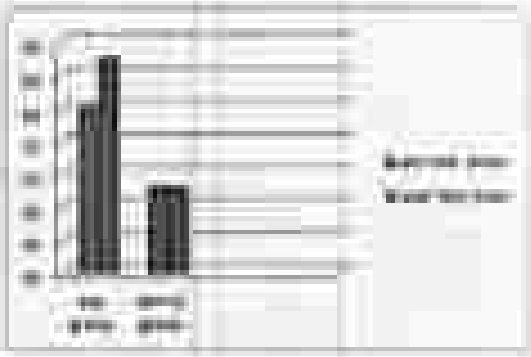
Table-3

Variable	Groups	N	Pre-test mean	Post-test mean	SD	Mean difference	S.E.	'T' value
Flexibility	Exp group	20	23.27	24.43	0.558	1.43	0.308	13.81*
	Control group	20	20.15	20.23	0.32	0.033	0.068	0.37

The pre and post mean scores of the experimental and control groups in the selected *reliable* shown in following chart.



Discussion

The result of the study disclosed that in case of the experimental group there is a significant improvement as a result of the 8 weeks surya namaskar training programme. In the case of control group, no change was found in the same period. Stretch ability and elasticity are the special qualities of the muscles and ligaments by which trunk can be stretched and can regain their normal length without any adverse effect on the contained tissue. The surya namaskar consist of 12 steps that move the spine in various ways and promote flexibility of the limbs and improved the strength of muscles.

Conclusion

It is concluded that the participation in 8 weeks of surya namaskar training programme resulted improvement in flexibility of the subjects under the study. The investigator achieved significant difference between experimental and control group data and it proved that surya namaskar training is beneficial for improvement and maintain flexibility in later adulthood age.

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WORLD JOURNAL OF PHARMACEUTICAL RESEARCH

IMPACT OF ARSENIC TRIOXIDE ON TOXICOPATHOLOGICAL PROFILE OF TELEOST, CLARIAS BATRACHUS

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ABSTRACT

The present investigation deals with the effect of arsenic trioxide on Clarias batrachus after 30, 45 and 60 days of exposure period. First group was treated as control group. Fishes of other 3 groups were treated with sublethal concentration 0.76mg/l of Arsenic trioxide for period of 30, 45 and 60 days. After exposure to experimental chemical, arsenic trioxide, the first cells of Clarias batrachus after 30 days showed Vacuolization, necrotic cell damage, nuclear hypertrophy, cellular hypertrophy. Hyperemia and cellular hypertrophy, cytoplasmic Vacuolization was seen after 45 days of arsenic exposure, while 60 days of exposure period showed necrotic cells, hemorrhage and hyperplasia, edema followed dissociated cells.

KEYWORDS: Hepatitis, Hyperplasia, Gadania.

1. INTRODUCTION

Human activities in industrial and agricultural sectors have inevitably increased the levels of heavy metals in natural habitats. Heavy metals play a major role among pollutants of anthropogenic origin.[1] They are serious pollutants of aquatic environment because of their environmental persistence and ability to be accumulated by aquatic organisms.[2] The name "Arsenic" is derived from the Greek word "Arsenikon", which means yellow orpiment. It ranks 20th in earth's crust, 14th in sea water and 12th in human body, exhibiting metallic as well as non-metallic characteristics and corresponding chemical properties. Arsenic is known as metalloid, a multifaceted chemical element that has the symbol "As" and atomic number 33. Its atomic mass is 74.92 and it prevalence in the environment, occurring both naturally and as a consequence of pollution. Arsenic is one of the oldest human poisons.

Arsenic is a metalloid. It has the specific characteristics[1]. It has been considered as a common poison or secret ingredient, and is commonly known as being quite expensive in very low concentrations, but it is [illegible] in water and food, having no taste and no smell. Arsenic is a pollutant round the analysis, occur when occurring in concentration range as high as 3000 parts/billion, found in various chemical forms and oxidation states and is released into the aquatic environment by various geogenic and industrial discharges. After releasing in aquatic environments, arsenic species undergo redox mediated biotic / abiotic cycles. While some are bound to the sediments or taken up by living whole, they could undergo metabolic conversion to other organo-arsenicals. Arsenic generally exists in the inorganic form in water samples. Under different redox conditions arsenic is stable in the +5, +3, -3, and 0 oxidation states. The predominant (?) arsenic or arsenic species include H_3AsO_4 and $H_2AsO_4^-$. The predominant (?) arsenic or arsenic species include $As(OH)_3$, $AsO(OH)(OH)_2$, and AsO_3^{3-}. The predominant arsenic species are predominant and stable in the oxygen-rich aquatic environments, whereas the reduced arsenic species are predominant in the moderately reducing anaerobic environments such as groundwater. The change in the biomorphical parameters of [illegible] and a helpful [illegible] for evaluating their health status[2]. Pure arsenic is usually found in the environment combined with other elements such as oxygen, chlorine called as inorganic arsenic. Arsenic combined with carbon and hydrogen is called arsenic organics. Two principal forms of arsenic in water are inorganic arsenic (As(III) arsenite(III)) and pentavalent arsenic (As(V)) arsenate (V). Arsenic as free element (uncombined form) is rarely encountered in natural waters. Inorganic arsenic predominates under neutral conditions since it is thermodynamically more stable in water than arsenic with oxidation state. The most important inorganic arsenic compounds are arsenic trioxide, sodium arsenite, arsenic trichloride, arsenic acid and arsenic sulfides known lead and calcium arsenates. Synthetic formal inorganic arsenic is more toxic than organic and the toxicity from arsenic varies from their permutations[3]. Common organic arsenic compounds are arsenic acid, methylarsonic acid (MSA), dimethylarsinic acid (DMA) and trimethylarsine[4]. In the waters, arsenic can also be found as a small amount in elemental form. Arsenic is one of the most environmental problems which has recently attracted attention because of its chronic and epidemic effects on human health. The biomorphisms of inorganic arsenic species $As(V)$ and $As(III)$ have low toxic organic species can occur through monomethylarsonic acid (MMAA), dimethylarsinic acid methylarsonous polymers involvement during reduction and methylation processes[5]. General inorganic arsenic species like $As(III)$ and $As(V)$ are more toxic than organic species, in spite of the differences due to the effects of organic

[illegible] and protein [illegible] [illegible] Among the inorganic anionic species phosphate is known, which compound to provide both anions in vivo and in vitro conditions. The energy of [illegible] is related to its high affinity to substrates [illegible] phosphate (G-6-P) and fructose-6-P and the synthesis/[illegible] of many enzymes which activate [illegible] with phosphorylation reactions.[illegible] Treatment of wound using phosphate-copper [illegible], burning oil used in thermal shock injury, reminiscence of gold-mining, an insufficient of food with practical production. Anemia occurs naturally and is due to possibly aggravated by the use of iron-containing supplies and by phosphorous from fertilizers, production of iron-free jaunters, applications of water herbicides and insecticides. It is present in effluent from [illegible],[illegible] an important for environmental [illegible] is present in the aquatic ecosystems to a result of geogenic and anthropogenic processes.[illegible] Liver is a major target organ of arsenic toxicity. As the principal metabolic organ, this from plays a major role in various accumulation, biotransformation and excretion of arsenic.[illegible] It has been reported that [illegible] concentration of arsenic induces stress proteins[illegible] mutations, [illegible] expression of different stress related genes[illegible] and helps in generation of oxidative stress in fish tissue.[illegible] In aquatic environment, fishes are usually regarded as organisms of choice for assessing the effects of environmental pollution on aquatic ecosystems.[illegible]

MATERIALS AND METHODS

Healthy living specimens of tilapia, *Oreochromis mossambicus* were collected from local fish market of Mysuru. Fish measuring 15 ± 2cm in length and 50 ± 8 gm in weight were selected for present study. They were brought to the laboratory as soon as to house the fish medically prior to the experimentation. Fishes were thoroughly washed for 5 minutes with 0.01% Kmno4 to avoid any dermal infection. Selected fishes were acclimatized to the laboratory used tanks for period of 15 days.

ANIMAL CARE AND MAINTENANCE

The fishes were maintained in glass aquarium under natural photo period. The water quality, dissolved oxygen content, pH were monitored regularly in each aquarium. Moribund fishes showing any abnormal behavior were removed immediately from the tanks. Fishes were fed at 10% with standard diet from a commercially available fish feed. Fishes were fed once a day. Water in the aquariums were renewed after every 24 hr to get rid of faecal matter.

CHEMICAL, TOPOGRAPHIC AND HAEMATOLOGICAL STUDIES

Fishes were divided into 4 equal groups each comprising of 20 fishes. Each group was kept in separate glass aquaria of 250 litre capacity. First group was treated as control group. Fishes of other 3 groups were treated with sublethal concentration 0.5mg/l of arsenic trioxide for period of 30, 45 and 60 days. Water in the aquarium was renewed after 24 hours and the activeness of the creatures was noted as being the concentration in the desired level.

PREPARATION OF STOCK SOLUTION AND DETERMINATION OF 96 HOUR LC50 VALUE OF ARSENIC TRIOXIDE: Lots of arsenic trioxide stock solutions were prepared by dissolving arsenic trioxide in DMSO under continuous heating. The pH was adjusted to 7.4 by adding 1% NaOH dropwise and the solution was filtered by passing through filter paper. For the determination of median tolerance limits or LC 50, different concentrations of arsenic trioxide (20, 25, 30, 35, 40, 50, 60 and 80) mg/l were prepared from the stock and added in separate glass aquaria containing 90 L of water. Five replicates of fishes were maintained for each concentration and 20 fishes of equal size and weight were introduced. The test water was renewed at the end of 24 h and freshly prepared arsenic trioxide was added to maintain the concentration of arsenic at a constant level. A control set of 20 fish in three different glass aquariums were maintained under identical conditions. The mortality rate of fish was recorded after 96 h. The dead fishes were removed from the tank immediately. The concentration at which 50% mortality of fish occurred after 96 h was taken as the median lethal concentration LC 50, which was 87 mg/l. Other values of the LC 50 value for 96 h (48.7 mg/l) were taken as the sublethal concentration.

HISTOPATHOLOGICAL STUDIES: After termination of experimentation period, the fishes were killed by damaging the head. Gills were immediately removed from alcohol and dissected fishes. For histopathological studies, after washing, dehydration in graded alcohols, xylene and clearing in xylene, the tissues were embedded in paraffin wax at 60°C. Additional little transparent wax found useful in ensuring the sticking point and in getting a continuous ribbon. Sections of 5 mm were cut and stained with hematoxylin-eosin for the light microscopic examination. Photomicrographs of the sections were taken. Most of the photomicrographs have been taken in 10x as well as high magnification to enlarge or magnify various histopathological changes.

HISTOPATHOLOGY

The liver of control Rat, Cytoplasmic hepatocytes consist of polygonal hepatocytes. Each hepatocyte cell contains of distinct hollow central nucleus with granular cytoplasm. Hepatocytes form a rather cord like pattern. These cords are arranged around sinusoids of the hepatic cord (Fig 1). A large number of blood sinusoids were observed which separates the hepatic cords one from another. Bile canaliculi between the two layers of cells form network of ducts eventually draining into canal of hering which eventual to portal canal and ultimately into branches of bile ducts. (Fig 2) After exposure to experimental chemical, severely damaged the liver cells of Cytosol hepatocyte were found to have their regular shape due to precipitation of basic cytoplasmic, cell necrotic material which resulted in shape deformation. Vacuolization, necrosis, cell damage, nuclear hypertrophy, cellular hypertrophy were the prominent alterations observed in this stage. This stage was well demonstrated with severe cellular changes characterized by dilation of sinusoids, formation of intracellular edema, megalocytosis, and vacuolation. Rats cells with dilated nuclei were observed 45 days of exposure period were marked by degenerative changes in nuclear and cytoplasm which was found to be form of nuclear hypertrophy and cellular hypertrophy, complete vacuolization was observed during this period. Pyknosis as well as karyolysis was also seen in this stage. (Fig 3) After 60 days of treatment severe degenerative changes were observed around the central vein, which were marked by dilation of central vein showing rupture in various places. Nuclear changes were observed around the central vein, which showed pyknosis as well as karyolysis. (Figure) Degenerative changes were observed all around the portal tract and central vein. Hepatocytes showed severe cytoplasmic and Nucleolysis, where fatty and necrotic cells was more pronounced.

DISCUSSION

Among chemicals examined Ethi exhibited considerable changes in liver sections and in the cellular components. The first sign of toxicity induced changes is evident in the liver sections obtained from 30 days exposed Ethi, with swollen hepatocytes and the sinusoids become hypercellular plates becoming slightly dilated with increases of vacuolation and glycogen deposition was also noted. The further degree of histological changes were observed in the animals from 45 day treated animals exposed from in which the hepatocytes were enlarged (megalocytosis) due to an increase in nuclear cytoplasmic ratio and appeared rather disorganized. It was further noted that the sinusoids had become more dilated leading to intercellular edema. Cells with distorted nuclear morphology were also observed in the 45

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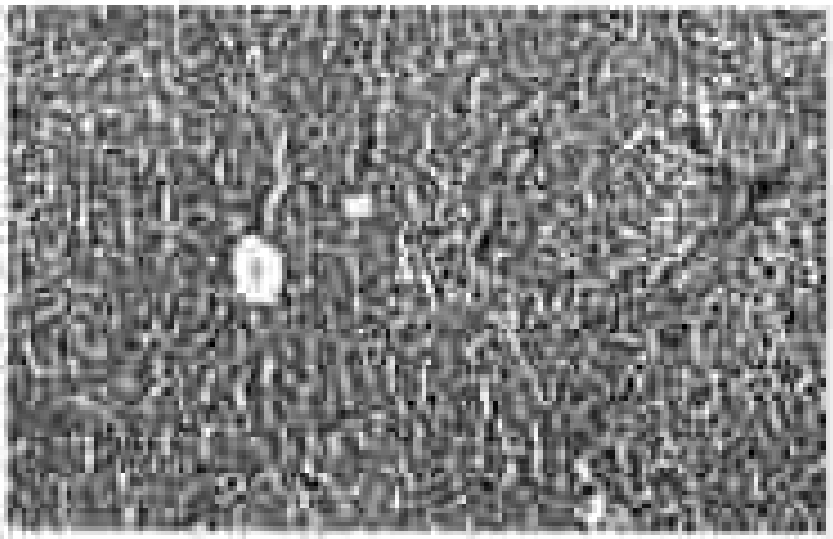

Fig 1: Histophotograph of T.S. of Liver of [illegible] Clarias batrachus (L.S. X 200)

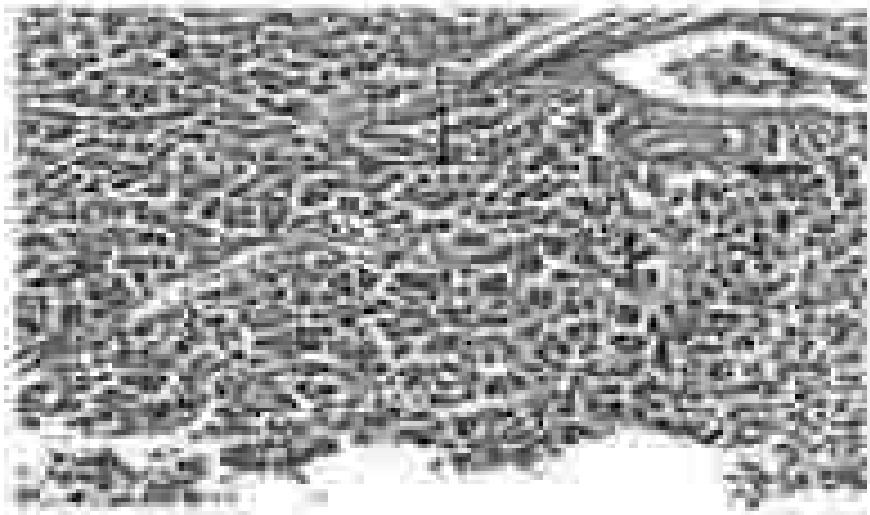

Fig 2: Histophotograph of T.S. of Liver of Clarias batrachus after 30 days of exposure in sewage effluent containing 1 megaliter (1 → 1 megaliter/liter sewage, (1) Karyorrhexis, (2 → (2) cytoplasmic vacuolization. Albino of Giemsa stain (L.S. X 200)

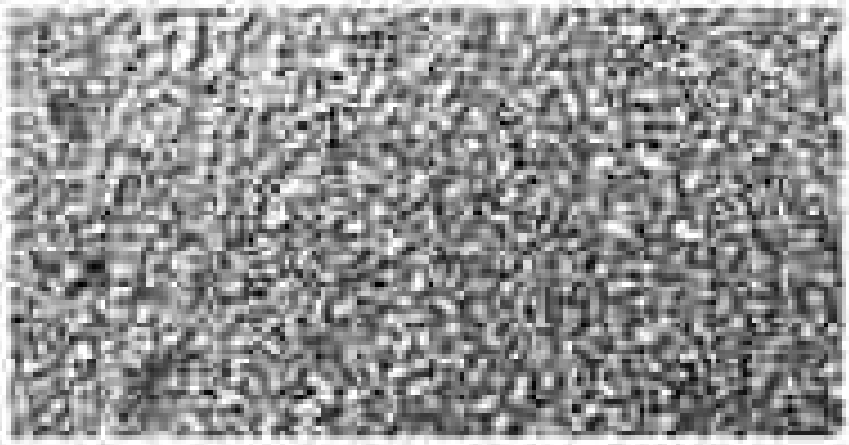

Fig. 5: Photomicrograph of H.E of Liver of Clarias batrachus after 60days of exposure to arsenic trioxide exhibiting (a) ++ pyknosis (-) necrosis of hepatocytes, (c) degenerative changes in nucleus, (d) cellular hypertrophy, infiltrations, coagulative necrosis H.E. X200.

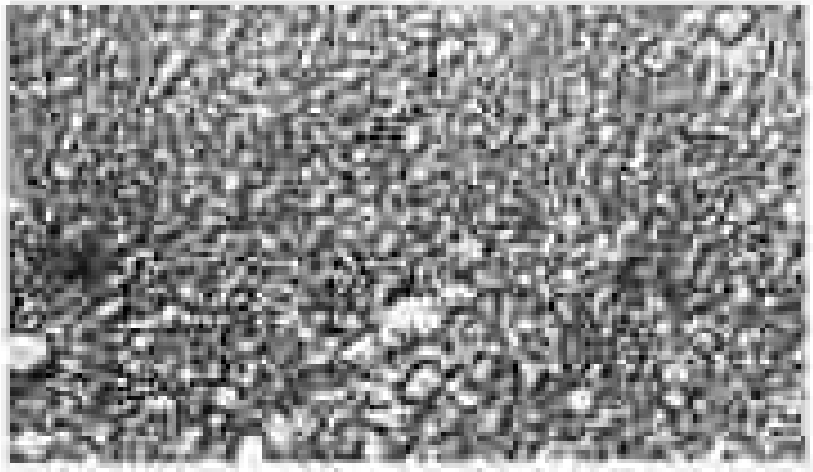

Fig. 6: Photomicrograph of H.E of Liver of Clarias batrachus after 60 days of exposure to arsenic trioxide exhibiting (a) ++ pyknosis (-) Karyolysis, (-) ++ coagulative necrosis, (c) hypertrophy and hyperemia of hepatocytes, dilation of sinusoids, redness H.E X 200.

CONCLUSION

60 days of exposure sodium metabisulfite, necrosis, cell damage, nuclear hypertrophy, cellular hypertrophy, histological studies on liver demonstrated arsenic induced changes characterized by dilation of sinusoids, formation of intracellular edema and coagulative necrosis. Nuclear hypertrophy and cellular hypertrophy, cytoplasmic vacuolization was-

observed during this period. Pyknosis, as well as shrinkage was also noted after 45 days of exposure. 60 days of exposure period showed depletion of central cells, showing nuclei at various phases. Nuclear changes are observed around the central cells, which showed pyknosis as well as karyolysis. More degenerative changes were observed after 90 days of exposure period. Hepatocytes showed necrotic cells, karyolysis and Karyorrhexis. Hydropic features associated with cells were also observed.

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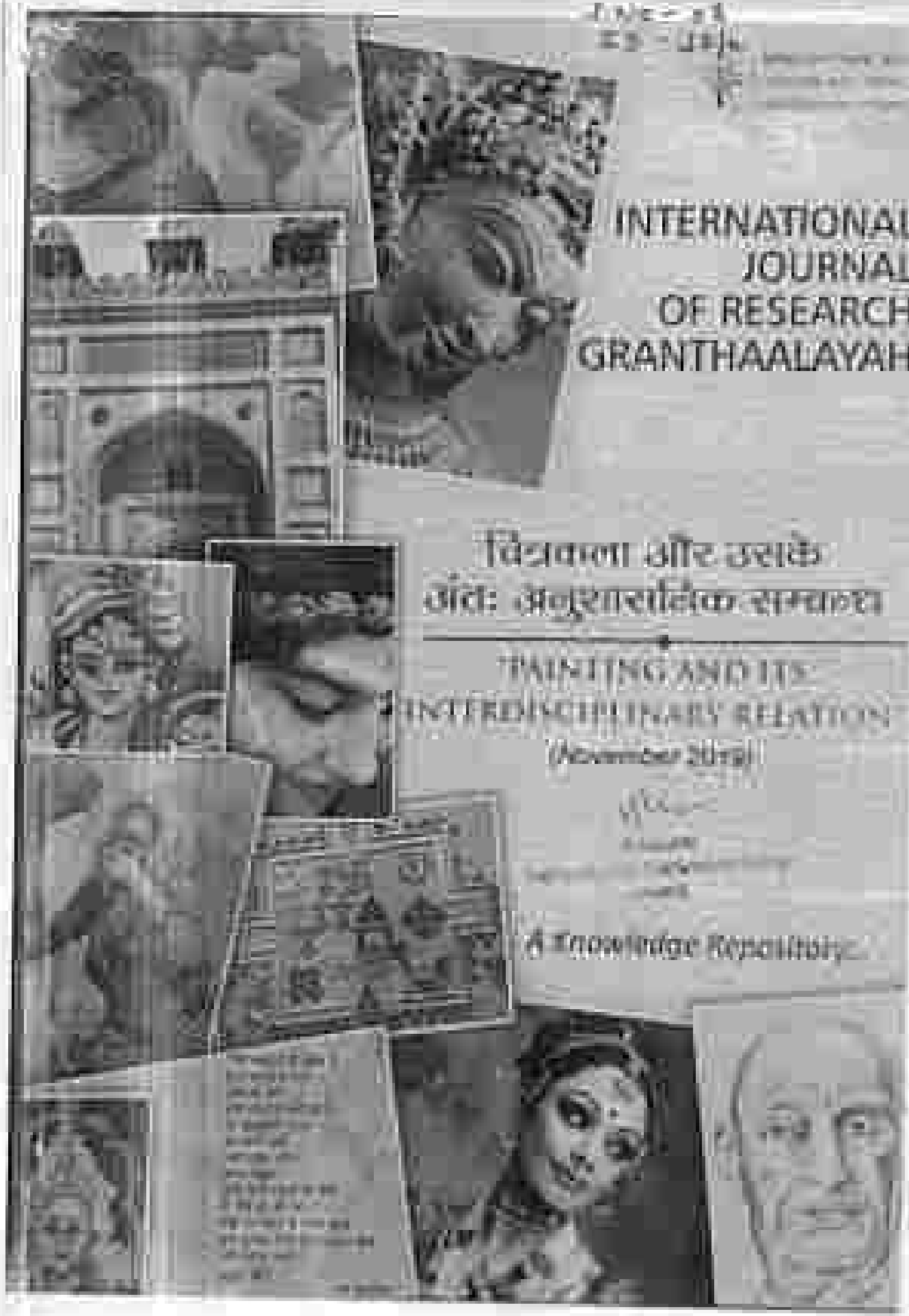

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पारम्परिक कला-संस्कृति से प्रेरित प्रयोगधर्मी कलाकार

डॉ० अर्चना गर्गी *
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सारांश

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मूल शब्द : पारम्परिक कला, अभिव्यक्ति, संस्कृति, [illegible], [illegible], [illegible]

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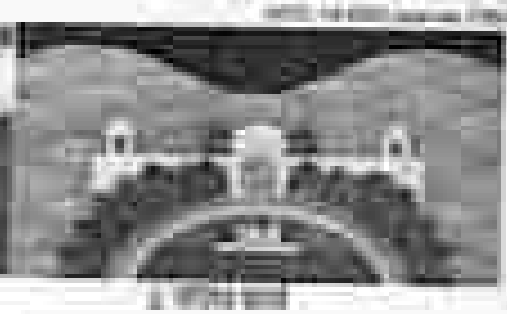

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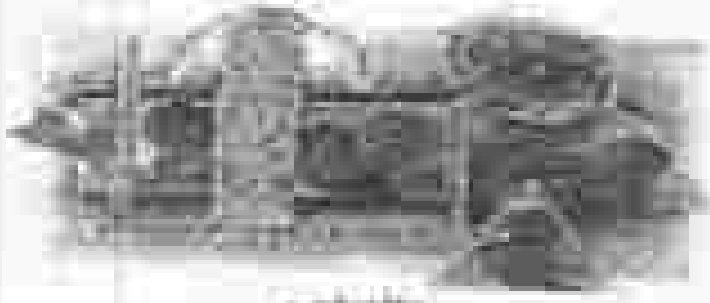

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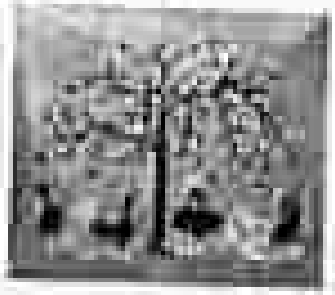

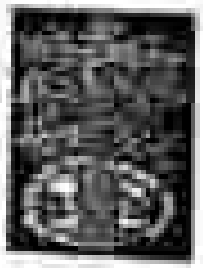

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जनजातीय अध्ययन के अन्तर्गत झिलमिल जनपद की साक्षरता का विश्लेषण

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Journal of Commerce and Trade

27

Tribes in India : Their Socio-Economic Development through Art

Dr. Archana Bajpai

[illegible]

Dr. Himanshu Agarwal

[illegible]

(Corresponding Author)

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Abstract

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Keywords – [illegible]

Classification-JEL – [illegible]

1. INTRODUCTION

The English word 'Tribe' has come from the Latin word 'tribus' which signifies a particular type of common organization which is in one form or another [illegible]. Tribal population is found in almost all parts of India. Indian Tribes are very much dependent on forest for their daily-to-day needs, including food, shelter and medicine. Tribes are the leaders of indians. About 80 percent of the tribal community of India lives in dry forested or hilly areas. They is mainly related on Agriculture and forest Forest Produce (MFP) for income their life. The central part of India, the north-eastern states are the most abode of tribal community in India (Agarwal, 2015).

The tribal people people living in far flung areas depended on [illegible] resources near which they survive in employing the plant resources of their immediate vicinity and in order no modern tribe traditional treatment (Singh et al., 2009). Tribe live in the unique art and traditional culture of indigenous people. Those who are often

[illegible] in religious to nature and [illegible] [illegible] medium of meditation in [illegible].

Tribe arts are not for the sake of art, but a very important part of tribe life. Tribal arts are the reflection of their cultural, religious environment. Those arts are also closely related to their other customs like music, dance and dress. Whatever the ceremony, they dress up the arts. At the same time, the interactions being fellow and everyone being happy there is dancing and singing, which is immediately reflected in the painting.

5 [illegible] AND SIGNIFICANCE OF [illegible]

The objectives of this research paper is to study the religious customs and traditions of the Indian tribes through their arts.

The significance of ancient paper arises from the fact that tribal cultures, traditions and paintings need to be preserved.

The present study was carried out by the study of tribal art of various states, such as [illegible] [illegible] and Madhya Pradesh.

6. [illegible] DEVELOPMENT THROUGH ART

Tribal economy is the best development model and needs to be deployed practically in the country. Thus, the traditional knowledge system has to be revived through supporting factors which include having workshop to share different traditional skills and crafts [illegible], [illegible] and community-based industries, and [illegible] economy. Traditional activities of the people concerned, such as fishing, collection of NTFP, must be recognized as important in the maintenance of their lifestyle and livelihoods. The government should ensure provisions for [illegible] to deal with environmental disasters caused due to environmental degradation like recurring drought of tribal problems, rural costing, floods and extreme rain affecting and [illegible] diseases, facilitate support price for minor [illegible] and [illegible] producing in the tribal [illegible] to encourage commercial of such crops in production. Promote [illegible] small scale [illegible] [illegible] initiatives which can provide improved prices for sustainable and affordable energy services, enhance livelihoods for rural people and minimize their contribute to the effects of climate change, without negative impact on food production and the environment. (Agarwal, 2009)

A. [illegible]

Tribal art has grown and [illegible] [illegible] [illegible] of the tribals [illegible] to be [illegible] and [illegible]. On the other hand, educated person has got entangled in [illegible], [illegible] and a [illegible] culture which [illegible] of the genuine human [illegible]. Tribal art has moved to their [illegible], and some people moved to the tribal [illegible] and [illegible]. Tribal art, therefore, portrays life in the pure and unadulterated form. Thus, art is being accorded a [illegible] position in the world of art.

a) [illegible] OF TRIBAL ART

Indian tribes live in forests, [illegible] poverty, a [illegible] [illegible], [illegible] [illegible] are common to all tribals residing in any part of the country. They live in huts and are half naked. Most [illegible] i.e. agriculture in the forest clearings, and they remain on the natural commodities which are easily available there. There however, simple and unsophisticated religious beliefs are always identified. Simple style, dance, [illegible] of [illegible], goals and preferences, [illegible] the fulfilment of desires, are the common beliefs and are expressed in different ways in different circumstances.

Indian Tribal [illegible] are for various [illegible] the wedding [illegible] [illegible] for the [illegible] of [illegible], [illegible] in a [illegible] [illegible] [illegible], they [illegible] [illegible] [illegible] [illegible] (2011)

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Principal

[illegible] Jog and Sarmal other deserving artistes and quite [illegible] from their own life [illegible]. Consequently, charming traditional images with the support of contemporary painting. (Sharma, 2003)

Along other contemporary artists who were tribal engaged in their paintings were Ashamed, Gulam Ali Baig, L. Swaminathan, Bhima Mohanan, and young artists also inspired by Indian tribal art and she can see the influence and glory of tribal arts in their art works. Thus, tribal's artists were quite brought to personal and global tribal art. Because India has been conserving the characteristic traditional folk art since ancient age. Some artists were are born and who have learnt their creative art from their ancestors, family members in the context of artistic art. (Tarabai, 2003) They never have been to some derived inspiration in various forms from the rhythm, colour combination, dance movements, [illegible] and paintings of the tribals. (Gaekwad, 2, 2008)

In India, tribalism are two brought [illegible], and community in painting. Consequently, incorporation of tribal arts adopted and governmental efforts which already revived in tribal art, were introducing the tribal [illegible] and many modern artists have derived their inspiration from tribal art. Whether there is the example of it. That is which [illegible] for the contemporary life [illegible] characteristics of tribal art is the most significant fact and the artists' preference to depict from the lands of tribalism art adopted the prohibited flow of thoughts and ideas. (Bhadra Research & Publication Centre, 2010)

(b) Preservation of Tribal Art

Tribal art is a heritage that needs to be preserved and protected from all all recognition of the artists may be endured. There are many artists who would never come up to the limelight due to lack of imagination and their efforts. Some does not see the thing with their as associated the arts, preservations and cultural exchanges. Cultural exhibitions may be approved through which the people will consider and realize their culture and they will also learn about other's culture.

Tribal art should be preserved in different documentations like photographs, audio-visual documentation, film, recorded video, short movies, Artists and artistic work should be exhibited in museums and art galleries.

The ministry of tribal affairs is the Government body that handles tribal affairs under various departments. They have not scientific techniques to preserve the ancient tribal heritage in India (Mahajan, 2003) in Madhya Pradesh, Tribal Museum of Art and Culture is established. In every state there should be tribal museums to model the tribal art of that state. Different tribal arts of India should be the part of syllabus in UG, PG Colleges. Innovative and introduction of Designs, Fashion and Home Textiles are the mostly feasible in tribal arts of India. Into more hands should be written about these beautiful traditional art galleries and museums should increase these arts and public appreciations. Cards, stamps for public and students. (Dubey, 2010) Therefore, these are the few steps that can be taken to ensure the preservation of heritage and culture of tribal people from various parts of India.

(c) Commercialisation of Tribal Art

Tribal art in India apparently has a great potential in the international market, because of its traditional aesthetic, peculiarity and authenticity. The tribal paintings have distinctive designs which are related with religious and mythical models. (Chakraborty, 2008) Tribal art is not restricted only to paintings, but also comes in forms like pottery, jewellery, home decoration items, dark coloring and many more. But, The Tribal art in India is underrated. The tribal artists are paid for their traditional and their uniquely only. Therefore, the low price for their arts just can support their family requirements and maintenance. Moreover, the low price also

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Ajrak - A Fabric From Cattle Herders To Model

Dr. Shweta Bhatia* Vaishali Sharma**

Abstract - [illegible]

Key Words - [illegible]

Introduction : Archaeological Textile - [illegible]

Natural Dyeing - [illegible]

Figure : 1 Black dye made of Turmeric leaves

* Head, Professor (Home Science) K.B.N.G. College, Morena (M.P.) India
** Scholar of Archaeology (Final Year) The Maharaja Sayajirao University of Baroda (Gujarat) India.

Materials

Setting – [illegible] in Kyoto village [illegible] Shiga Prefecture, Japan [illegible] September [illegible] 2010 Saturday. The main [illegible] of the visit was to learn the process of dyeing and printing the fabric with natural dyes. Guided by the [illegible] of Kiyoko Abiko, Professor emeritus [illegible] Textile Institute Eiko Kyoritsu is a village where [illegible] and craftsmen that produced the fabric, with natural materials such as indigo, Lawsonia inermis (henna), iron, [illegible] wood, [illegible] ABA 2001, other earthenware [illegible] of medicine was kept by government of the village to [illegible] the artisans. Others are [illegible] Quang.

About the Fabric – While during the Interview Abiko Sensei [illegible] have [illegible] to [illegible] generation. Others [illegible] the [illegible] was in Gifu region. Possibly [illegible] due to some climatic conditions and storage of water [illegible] Gifu to [illegible]. But as some of my members are still present in Gifu region there said they need [illegible] complete family [illegible] Sensei [illegible] to [illegible] various types of printing the block print, [illegible] print, [illegible] print. Textile prints are to be done both chemical and natural dye are used in [illegible], Rubiana, Anjo and Aquilonia. We finally worked with the [illegible], Sesame, Jujube, Rambut and Laugenaria. We had about twenty fabrics.

Process –

- [illegible] the fabric is going for further process like washing, dyeing and printing.
- Before boiling the fabric it is washed properly so that all the [illegible] are [illegible]. This is because if there are impurities on the surface of the fabric then printing and dyeing is not even on the surface and many times it also irritated to human skin.
- Traditional washing was done by [illegible] and [illegible]. The fabric was soaked overnight in a mixture of [illegible] and [illegible].
- Dyeing is done in [illegible] of water and [illegible] [illegible] the fabric soft. After dipping the fabric [illegible] night, it was washed and then the fabric was once again dipped in water overnight.
- After washing the fabric was boiled for [illegible] minutes in mixture. Decided in mixture there is no boiling and the fabric does not get any unwanted [illegible] [illegible]. After which it is dried on the sand as heat is good for the fabric and [illegible] drawing on the fabric (Figure 2).

Figure 2 Dipping [illegible] the fabric with fabric in boiling

Immediately they [illegible] and [illegible] (Figure 3).

Figure – 3 washing of fabric

- A traditional method there used be washed of [illegible] water and at the same time. It was time consuming which ultimately would increase the cost of the fabric.
- After washing they used to dry the fabric in [illegible] water [illegible] to develop the color on the fabric. The step is done before printing and is a very important part in the process.
- The fabric is dipped in [illegible] solution as a whitening agent and then water [illegible] is a method again. Producing a more [illegible] during the [illegible] (Figure 4).

Figure 4 printing the design by using block

- [illegible] Kanji [illegible] Gujarati [illegible] [illegible] a mixture of [illegible] on the fabric (Figure [illegible]).

Figure. 5 Alkanna gum , lime and clay is applied

Figure. 6 Plant paste on the fabric

Figure. 7 Alkanna gum and Clay applied on the paste

Figure. 8 Fabric is dipped in indigo

Figure. 9 Washed fabric

Figure 10 Fabric after [illegible] boiling

Figure. 11 Finished Product

(Figure 5 to 11 See in the next page)

- When the [illegible] was dye with [illegible] [illegible] the water temperature should be [illegible] [illegible] process [illegible] the fabric. Fabric is dipped in [illegible]

Prepared

[illegible]

[illegible]

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible] [illegible]

[illegible]

[illegible]

[illegible]

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]

[illegible]

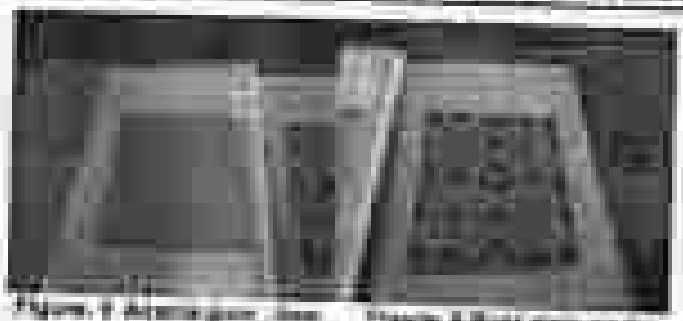

Figure. 7 [illegible] Figure. 8 [illegible]

Figure. 9 [illegible]

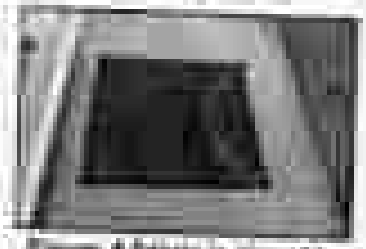

Figure. 10 [illegible]

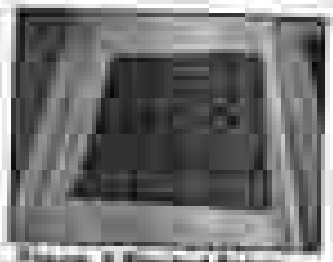

Figure. 11 [illegible]

Figure. 12 [illegible]

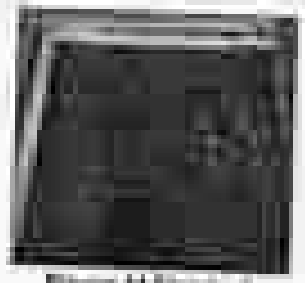

Figure. 13 [illegible]

Figure. 14 [illegible]

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Prof. [illegible]
[illegible]
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CONTENTS

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THE EFFECT OF PRANAYAMA ON RESPIRATORY EFFICIENCY VARIABLES

Dr. Dharam [illegible]*

ABSTRACT

Yoga is the science practiced in India since ancient times. It is derived from Sanskrit [illegible] word Yuj means to bind together. Pranayama, a stage of yoga practice, is an Indian ancient Yogic science of voluntary regulation of breathing and stress free mind. The [illegible] which deals with [illegible] of voluntary regulation of breathing and stress free mind. The present study was carried out in 50 physical education students of Jabalpur [illegible] physical education and yoga science in Kanpur University, Kanpur. These subjects were given Pranayama practice programme for one hour daily for morning – 6 days a week for 12 days. The subjects were evaluated for various respiratory efficiency variables like Respiratory Rate (RR) and breathing Holding time before and after Pranayama practice. Statistical analysis was done by single tailed t-test. There was significant increase in Respiratory Rate (RR) and Breathing Holding time were significantly increased in subjects after the practice of pranayama.

KEY WORDS : Pranayama, Respiratory efficiency

INTRODUCTION

Yoga is the science practiced in India since ancient times. Modern medicine [illegible] come to believe increased physical & mental health of the individual through preventive, [illegible] approach. Patanjali, the father of yoga, has suggested eight yogic [illegible] of yoga to achieve health of body, mind & soul which are known as "Ashtang Yog". These eight stages are Yama and Niyamas are moral [illegible] medium gates of work, rest of above eight stages. Asana and Pranayama are more [illegible].

Pranayama is a great and scientific method of voluntary regulation of breathing and stress free mind. The word Pranayama is derived by two words Prana and Ayama. Prana means vital force which provides energy for different organs & systems and Ayama means control. Pranayama is a method by which we can control & direct the flow. Nowadays people [illegible] of work for world have developed various ailments by practicing Pranayama regularly. But [illegible] to be adjusted in the light of [illegible] [illegible] physical study was undertaken on the effects of Pranayama on respiratory [illegible]

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[illegible]. This study was undertaken to study the effect of Pranayama on respiratory functions.

Objectives of the study

1. To decrease the Respiratory Rate.
2. To increase the maximum Breath Holding time after maximum inspiration.
3. To increase the maximum Breath Holding time after maximum expiration.

Hypothesis

1. There will be a significant fall in Respiratory Rate.
2. There will be a significant difference in the maximum breath holding time after maximum inspiration.
3. There will be a significant difference in the maximum breath holding time after maximum expiration.

MATERIAL & METHODS

The present study was conducted at [illegible] Medical College of [illegible] University, Nagpur. They underwent 15 days practice of Pranayama under expert's observation. They were studied for different Respiratory parameters before & after the Pranayama practice. The subjects did not participate any other physical exercise while the present study was being conducted. No subject had history of having any Pranayam practice before. Following Pranayama practice were performed daily for the subjects for 15 days.

1. Pranayam – 2 min
2. Nadhan sodhanam – 5 min
3. Kapalbhati – 10 X 3=4
4. Tripti Pranayam – 10 X 3=4
5. Bhastrika – 10 X 3=4
6. Nadi shodhan – 10 X 3=4
7. Bhramari – 10 X 3=4

Before 15 days we have taken pre-test on 15 respiratory parameters by volunteers. After 15 days all the following respiratory parameters (Respiratory rate, Breath holding time) were recorded again & results were compared using single sample group t- test.

OBSERVATIONS & RESULTS

The results are presented in Tables. Mean value & standard deviation of respiratory efficiency variables. There was highly significant increase in fall while higher significant increase in BHT.

[illegible]

[illegible]

Sl. No.	Variables	Before physiotherapy procedure, Mean+ SD.	After physiotherapy procedure, Mean+sd	t value
1.	Respiratory rate/ in per minute	18.24+2.76	[illegible]	5.70
2.	Breath holding time after mass inspiration in seconds.	19.49+[illegible]	[illegible]	9.12
3.	Breath holding time after mass expiration in seconds.	27.47+[illegible]	[illegible]	5.63

P value<0.05 Sig

DISCUSSION:

In the present study, there was a significant decrease in rate of respiration, breath holding time and a significant increase in respiratory efficiency by Huffington respiratory exercise complex, which is further modified by respiratory mechanics in the respiratory system. During daily practice of pranayama breathing the basic anatomy of huffington complex, is modified in such a way that it slows down the rhythm rationally prolonging the phase of inspiration & expiration to their max limits. Thus it reduces the larger to work in their maximum ability to take O2 & expire CO2 maximally leading to decrease in RR. That by practicing pranayama for 15 days, the huffington complex is adjusted to a new pattern of breathing which is slower than its basal rhythm.

There was a significant increase in breath control time. This increase can be explained on the following basis. Due to practice of pranayama there occurs

a) Strengthening of muscles of respiration, increased range of movement of diaphragm

b) Equalizing & Slowing of respiratory apparatus in more efficient & [illegible] pattern.

So further helps in increase of pressures from respiratory passage during inspiration of [illegible] in seconds. There was highly significant increase in breath holding time both after maximum inspiration & maximum expiration.

In addition, due to regular practice of pranayama, muscle endurance is increased & it delays the onset of fatigue. Thus allowing the breath holding for longer time.

CONCLUSION:

In the present study, it can be concluded that regular practice of pranayama results improved respiratory efficiency as seen by highly significant in respiratory efficiency parameters. This increase in respiratory efficiency is result of multiple factors. Regularly and in conjunction with pranayama practice, the respiratory efficiency can be improved to a

[illegible]

[illegible]

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greater cause. By consulting these results it can be suggested that pranayama practice may be applied as an adjunct to conventional therapy in chronic but beneficial medical conditions. (COPD)

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Analysis of DNA Content of Wild and Cultured Labeo Calbasu (Hamilton, 1822) Using Nanophotometer

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ABSTRACT

Labeo calbasu is an important food fish and commonly known as the "calbasu" or "Black Rohu". The present study was undertaken on DNA extraction and determination of DNA quantity of both wild and tissue of wild and cultured Labeo calbasu using Nanophotometer. DNA isolation was done and gel electrophoresis was carried out. Extracted DNA was analyzed using nanophotometer (Nanophotometer P330, Implen, Germany) to determine the concentration of DNA and its purity level. Several different methods have been developed in the quantification of nucleic DNA over the past 75 years. The ease of use of this technique not only makes it a feasible option for small volume analysis of DNA but also a practical alternative for spectrophotometric measurement. Significant progress was made in measuring micro volume digital samples (0.1-2.0 µl) in biotechnology & pharmaceutical applications. For the present study both male and female of wild Labeo calbasu (Raw weight Ganga Region) and cultured Labeo calbasu (Raw weight ponds and hatchery) were taken. The value of DNA concentration of muscle of wild Labeo calbasu was in between 28-40 ng/µl and of male was in between range of 30-38 ng/µl. The value of DNA concentration in muscle of cultured Labeo calbasu was 60-68 ng/µl and of male was 70-74 ng/µl.

KEY WORDS: DNA Quantity, wild, cultured, Nanophotometer, Labeo calbasu

INTRODUCTION

Kalbasu is a genus of large to the family Cyprinidae. Labeo calbasu locally called Kalbasu or Calbasu or Black Rohu, is a freshwater fish species and is the most important edible species. Also in Hindi Indian Major Carps, Labeo rohita, Catla catla and Cirrhinus mrigala. The common name for this species are Carpeau calbasu (Hamilton, 1822), Labeo calbasu (Day, 1878), Labeo calbasu (Thomas and Hutchinson, 1911). It is a popular food fish and also is selected as a sport fish. Recently this fish species has been stocked in many artificial fish markets of India and abroad. In last few years, the natural populations of this fish species has seriously declined due to over fishing and other anthropological reasons.

The dietary profile of Labeo is some extent than of detritivore that identifying features included lips on thick and fringed. Two pairs of barbels present, maxillary longer than mandibular pair (Hamilton, 1822). The pharynx is terminal and eye situated a bit anterior from the half of the head (Hamilton, 1822). Gender particular is dull as labeled like well marked, scales are moderate in size. There are 28 rows of scales before dorsal fin and 22 rows behind the dorsal protrusion (Hamilton, 1822). Mouth is moderately wide and also terminal. Gill openings of Kalbasu is wide and gill rakers are relatively short and barbs (Hamilton, 1822). Colour of body is dark-black but the ventral part light dark. The ventral surface of the opercular region is white in colour. This fish attains a length of nearly 70 cm (Talwar and Jhingran, 1991). Generally it is a bottom feeder. It feeds on vegetable matter, consumes mud, larvae etc. Labeo calbasu feeds on algae 10%, higher plants 40%, protozoan 12%, microbiota 10%, molluscs 2%, wood and sand 15% (Bhuiyan, 1968). It does inhabit rivers and tributaries. They are also seen in deep pools near sluggish streams, canals. It can be raised in ponds and also in tanks (Bhuiyan, 1968 and Rahman, 1989).

Its wide distribution in India. It is one of the major Indian carps. It is an important food fish and it serves

phase is referred to as the "black Robe". It is an important game fish in the world where it is [illegible] and is cultivated along with other species. It thrives best in ponds and lakes that by running rivers, can tolerate slightly brackish water also. It does not normally breed in ponds, induced breed by hormones. It is commercially a valuable fish. It attains a length of 90 cm. It can be taken on small fishing tackle and Dangerous (1991).

OBJECTIVE

To extract DNA of both male and female of wild and cultured Labeo calbasu.

To determine concentration of DNA of both male and female of wild and cultured Labeo calbasu using Nanophotometer.

MATERIALS AND METHODS

In the present study, Labeo calbasu (black rohu) was collected from different wild habitat of Western Uttar Pradesh (Upper Ganga, Ganga Yamuna and Ram Ganga rivers), morphologically identified (with the help of standard literature of Day's Fishes (1878-78) Jhingran (1991) and preserved for molecular studies. DNA isolation and quantification. Approx. 100mg in weight tissue and 10-20 tissue 2-3 individuals of each species were preserved in 95% ethanol (all) and will be kept in -20 °C for extended storage. Further specimens were preserved in 10% formalin solution. DNA isolation was done by following the method of Sambrook et al. (1989) with minor modifications. The DNA was diluted to a final concentration of 100ng/µL (in nanophotometer was carried out by 1.5-2% agarose gel. The extracted DNA was further confirmed using Nanodrop spectrophotometer (Thermofisher) PCR Tagline (Promega) to determine the concentration of DNA and its purity level. Total DNA quantification was carried by nanophotometer using absorbance of 260 and 280nm. A total of 20 samples of Labeo calbasu of wild and cultured fishes were analyzed.

RESULTS

The present study was conducted on the isolation of DNA and determination of DNA concentration of both male and female of wild and cultured Labeo calbasu using Nanophotometer DNA quantification was done by using nanophotometer and all data was noted (Table 1). The value of DNA concentration in female of wild Labeo calbasu was between 56.02 ng/µl and 67.[illegible] was between ranges of 58.49 ng/µl of DNA. The value of DNA concentration in female of cultured Labeo calbasu was 48.[illegible] ng/µl and 67.[illegible] ng/µl and in male 46.[illegible] ng/µl (Fig. 4).

Table 1. Quantity of DNA in 40 ZF samples of Labeo calbasu in Nanophotometer (Thermofisher)

Sample	Wild	Cultured	Wild	Cultured
1	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]

Nucleic acids play a major role in growth and development. The amount of deoxyribonucleic acid (DNA), the carrier of genetic information, is stable under changing environmental situations and has been used as an indicator of fitness (Dietz et al. 1993) and cell turnover (Hagedorn and Lapoint 1994). The study revealed that the highest content of DNA was found in female fishes of wild and also of cultured. However, slight change was seen in male fish. The comparative result revealed that the highest content was in cultured fishes, where all optimal conditions were maintained and also in female fishes of cultured fishes.

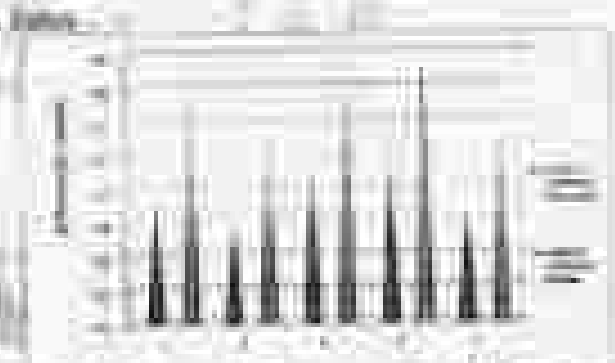

Fig. 3 Quantity of DNA content in Wild Labeo calbasu in Nanophotometer (Thermofisher)

Fig. 3 Quantity of DNA content in Cultured L. calbasu in Nanophotometer (Thermofisher)

Fig. 3 Comparative DNA concentration in nanograms per ml of 20 samples of both male and female *C. indicus*

DNA concentration can provide valuable tool for monitoring the health and condition of fish. The knowledge from such investigations can be used in optimizing and sustaining yield, stock management and conservation of genetic diversity.

DISCUSSION

Nucleic spectrophotometry is an accurate procedure including dual assay. Quantification of DNA, RNA (A260) and protein (A280) concentrations are simple, quick, [illegible] and a large concentration range (0.2 – 2,000 µg/ml) double stranded DNA (Desalvo et al. 2010). The value of DNA concentration in female of wild Labeo calbasu was between 79-92 ng/µl and of male was between range of 66 – 78 ng/µl. The value of DNA concentration in female of cultured Labeo calbasu was 68 – 86 ng/µl and of male 66-74 ng/µl. Desalvo et al. (2010) used nanodrop method for DNA quantification from different tissues based on regular target. Extraction techniques and were used by Ma et al. (2011) for DNA quantification at the position of molecular characterization of Conchiolepis gonzalezi. In the present report collected by Adhikari (2014) in the department of agriculture and fisheries management, University of agriculture, Nigeria, distribution of DNA concentration of Labeo gonzalezi was done by spectrophotometer. DNA quantification of Male and Female Labeo bata and Labeo gonzalezi mitochondrial hybrids were done by Dhanka (2013). Ma proposed the value of DNA concentration in female of C. fuscescens was in between 54 and 61 ng/µl and of male was in between range of 56 – 76 ng/µl. The value of DNA concentration in female of C. gonzalezi was 60 and 69 ng/µl and of male 75 – 78 ng/µl. Higher DNA concentration was seen in female individuals. In female the concentration was in between 79-92 ng/µl and in case of male was between 66-81 ng/µl. Second study by distribution level of RNA/DNA was in tissue of Labeo rohita by exposure to water pollution dumping contaminants was also done by Varma et al. 2014.

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International Journal of Zoological Investigations

DNA Quantification of Wild and Cultured *Cirrhinus mrigala* (Hamilton, 1822) Collected from Different Sites of Western Uttar Pradesh, India

[illegible]

[illegible]

[illegible]

Abstract. The mrigal *Cirrhinus mrigala* is an economically important food fish and also an important aquaculture (freshwater) species. DNA [illegible] are of considerable interest for their capability to contribute to the [illegible] of fish and producing [illegible] measurements of different parts of this fish [illegible] large variations in their biochemical contents from species to species. The present study was conducted on DNA extraction and determination of DNA quantity of both wild and farmed of wild and cultured *Cirrhinus mrigala* using Nanodrop. DNA extraction was done and extracted DNA was analysed using nanophotometer to determine the concentration of DNA. For the present study both male and female of wild *Cirrhinus mrigala* (from Ganga Region) and cultured *Cirrhinus mrigala* (from culture pond) were taken from different sites of Western Uttar Pradesh. The value of DNA was [illegible] of wild *Cirrhinus mrigala* was [illegible] the value of [illegible] were found [illegible]. The value of DNA concentration in female of cultured *Cirrhinus mrigala* was found [illegible] ng/µl. The value of DNA concentration in female of cultured *Cirrhinus mrigala* was found [illegible] ng/µl.

Keywords: [illegible]

Introduction

The *Cirrhinus mrigala* (also known as the mrigal and locally in Bara is known Uttar Pradesh, India) is a species of ray-finned fish in the genus *Cirrhinus*. Mrigal is the herbivorous and omnivorous planktonic feeder. It inhabits fast flowing streams and rivers, but can tolerate high levels of salinity. It reaches a maximum length of 1 m (3.3 ft) (Froese et al., 2014). Mrigal is popular as a food fish and an important aquaculture freshwater species throughout South Asia. This species is widely farmed as a component of polyculture system of three Indian major carps along with rohu and catla.

The introduction of aquaculture across India started in the early 1940s and between 1950s and 1960s (or other dates mentioned). The mrigal fish is found naturally in ponds, that reduced breeding in Asia. The Indian carps and transported on a dubious comparison to any

other fresh-only species cultured in Asia and sell for higher price (Rama et al., 2011). It is found in northern India, Pakistan and Bangladesh (Mahalanobis, 2010). Spawning occurs in marginal areas of the water bodies with a depth of 50 to 200 centimeters over a sand or clay substrate.

The cultured mrigal carp has been also in Cirrhinus mrigala and is an still reared by CIFE, whereas species such as Rohtas, IIFT, Rad Ad and Dabangan's Catalog of Fishes also consider C. cirrhosa and C. mrigala as distinct species (Dehadrai, 2011). Reported annual equivalent productive number of mrigal carp since the early 1990s varied between 250,000 and 500,000 tonnes, with the chief world India and Bangladesh are the largest producers (FAO, 2014). In Pakistan, this fish is known by the name of "Morakhi" or "Morai".

The present study was restricted on the DNA isolation and determination of DNA concentration of both male and female of Cirrhinus mrigala using Nanophotometer and also to find out variations in DNA contents of wild and cultured fish.

Materials and Methods

In the present study, the fish Cirrhinus mrigala (Hardin Range region, cultured fish from hatchery and ponds) were collected from different water bodies of Western Uttar Pradesh (Bijnor district, district Bijnor and from district Meerut), morphologically identified (with the help of Day's Book 2013-18.1999) and preserved for molecular studies (for DNA isolation and quantification). Approximately 100 mg of muscle tissue and fin clip from 2-3 individuals of each species were preserved in 95% ethanol with cool and kept at -20 C for molecular analysis. Transfer specimens were preserved in 10% formalin solution. DNA isolation was done by following the method of Bonnette et al. (1996) with some modifications. The DNA was diluted by a final concentration of 100ng/µL. Gel electrophoresis was carried out by 1.2-2% agarose gel. The extracted DNA was further analyzed using Nanodrop spectrophotometer (Nanophotometer N120, Implen, Germany) to determine the concentration of DNA. Total DNA quantification was carried by nanophotometer-N120 (absorbance 260 and 280 nm). A total of 20 samples of Cirrhinus mrigala of wild and cultured fishes were analyzed.

Results

For the present study both male and female of wild Cirrhinus mrigala (from Hardin Range Region) and cultured Cirrhinus mrigala (from culture ponds and hatchery) were taken from different sites of Western Uttar Pradesh. The concentrations of DNA in all samples of wild and cultured fish was represented as nanogram/µl (Table 1).

The value of DNA concentration in female of wild Cirrhinus mrigala was between 62 - 76 ng/µl and of male was between 64- 78 ng/µl (Fig. 1).The value of DNA concentration in female of cultured Cirrhinus mrigala was between 64 - 80 ng/µl and of male was between 70- 78 ng/µl (Fig. 2). A slight variation was seen in DNA contents of male and female fish samples.

Discussion

Nanodrop spectrophotometry is an extremely powerful technique that allows quantification of DNA, RNA, ssDNA and

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Table-1: Quantity of DNA (nanogram/micro-gel) in samples of C. [illegible]

Sample No.	Wild Female	Wild Male	Cultured Female	Cultured Male
1	62	65	66	74
2	64	69	63	76
3	54	66	69	74
4	62	68	65	72
5	64	76	67	78

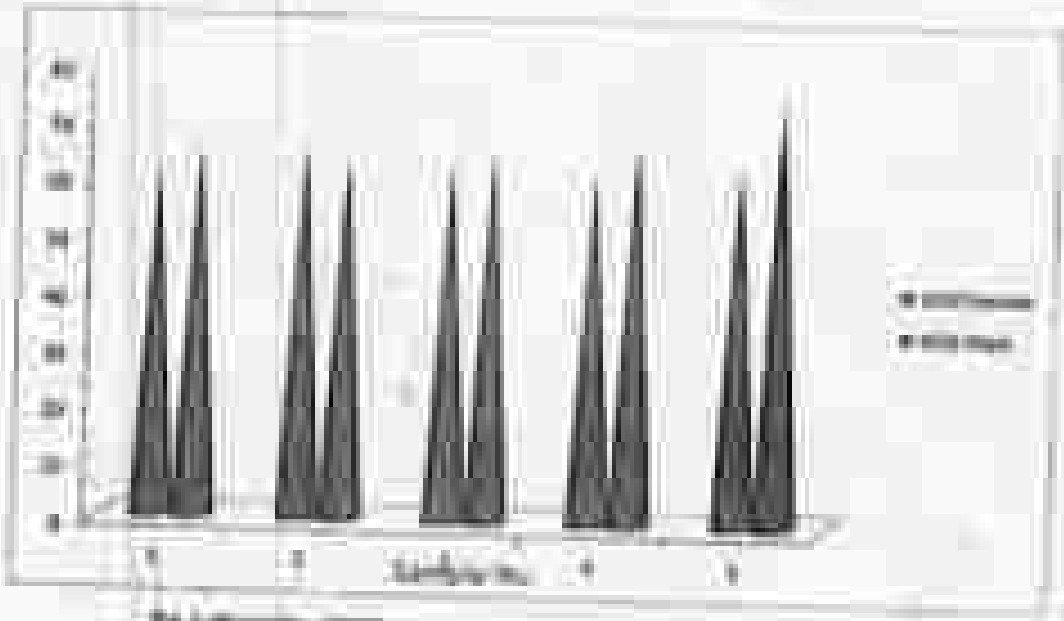

Fig-1: Quantity of DNA obtained (nanogram/micro-gel) in wild (1) & cultured samples

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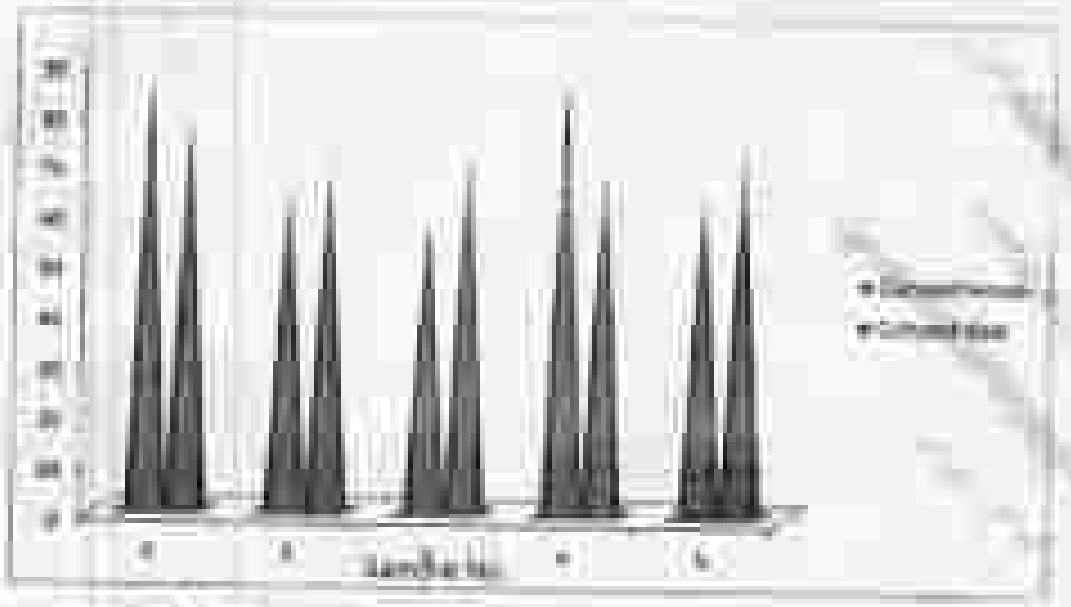

Fig. 2: Quantity of DNA content (nanograms) left in collected Clarias angularis

previous (4,000) concentrations and sample purity (260/280 ratio) were a large concentration range of 2 – 15,000 ng/µl double standards (DAE Oliveira et al., 2016). The present study revealed that the value of DNA concentration in female of wild Clarias angularis was between 62 – 66 ng/µl and of male was between 64– 78 ng/µl. The value of DNA concentration in female of cultured Clarias angularis was between 68 – 69 ng/µl and of male was between 70– 76 ng/µl.

Franks et al. (2012) used automated method for DNA quantification from different fishes based on nuclear fluorescence. Fluorometric technique was also used by Shi et al. (2013) for DNA quantification in the process of molecular characterization of Cirrhinus cirrhosa. Determination of DNA concentration of Clarias gariepinus was done by using spectrophotometer (Mahfuz, 2014). DNA quantification of male and female Clarias batrachus, Clarias gariepinus and Clarias hybrids was also done by Sindhu (2017). She observed the value of DNA concentration in female of Clarias batrachus was between 38 and 41 ng/µl and of male between 74– 76 ng/µl. The value of DNA concentration in female of Clarias gariepinus was 68 and 69 ng/µl and of male 75– 76 ng/µl. Highest DNA concentration was seen in hybrid individuals, in females the concentration was between 74-76 ng/µl and in males value was between 85-91 ng/µl. Similar study to determine level of RNA/DNA ratio in tissue of Labeo rohita by exposure to some endocrine disrupting compounds was also reported by Devos et al. (2016). Comparing data from DNA content of collected fish from the date of wild fish we conclude that DNA content is useful in monitoring the physiological condition of the fish. DNA content in wild fish is slightly low, but more acceptable as compared to the cultured fish which may be attributed to the capture of wild fish which were brought to the

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laboratory and may be that these fish had low levels of physiological activity/metabolic activity.

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International Journal of Fisheries and Aquaculture

Full Length Research Paper

Otolith morphometry and fish length relation of Amblypharyngodon mola (Ham.) from Middle Ganga region (India)

[illegible] and [illegible]

[illegible]

[illegible]

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Key words: [illegible]

INTRODUCTION

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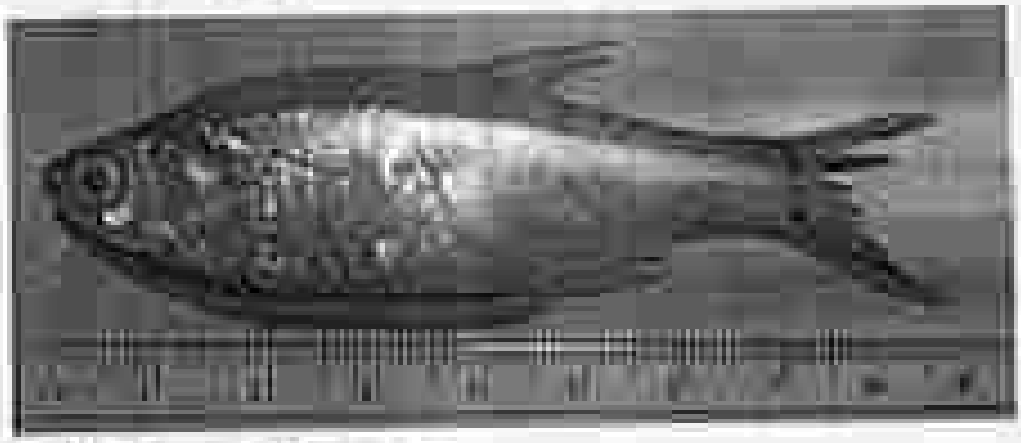

Figure 1. [illegible]

The reproductive cycle of [illegible] is from April to October with two peaks, one in May and other in September. Fish [illegible] in a pair in both coastal and [illegible] environment. The lifespan of [illegible] is 3-4 years. The maximum length of [illegible] is 33 cm. In a study conducted [illegible] group of fish length varied [illegible], a strong positive and significant length-weight relationship was observed (Kurita and Nishiyama, 1990; Gupta and Banerjee, 2016).

The ability of species that is [illegible] assessment of population variables. Each individual possesses [illegible] and the largest and most sensitive (Pitcher and Hippel, 1983). Otoliths serve as a [illegible] and help in ageing. They have been used to gather information about the region, age and sex of fishes, therefore age and growth determination, the study of otoliths is related to different fishery such as fish biology, [illegible] fish biology, fish stock identification, representation of relation between fish growth and [illegible] growth and environmental [illegible] (Tanabe et al., 2000; Tuset et al., 2008; [illegible] et al., 2008; [illegible] et al., 2009).

Therefore, otolith morphology is an additional characteristic among these species (Lombarte et al., 1993). It is used in studies concerning intra-specific and inter-specific variations (Jawad, 2014; Singh, 2016). The otolith morphometric studies for the population of the species for determining the stock are particularly significant (Tripathi and Sharma, 1977; Campana and Casselman, 1993). It may differ between population of the same species living in different habitats (Cardin et al., 2010).

Sagittal otolith was used for this study as it is the largest among the group of otoliths. The information about the morphometry of sagittal otoliths of the species is not available and only partial information is present for some fish-feeding fish species. The shapes of the otoliths of fishes are complex and highly species specific (Morales-Nin, 1992). Therefore, Sagittal otolith has been used as [illegible] but for identifying species and to their stock units.

The relationship between the fish size and otolith dimensions is of great importance (Hastings et al., 2010; Zhang et al., 2012; Gaughan et al., 2014; Zhang et al., 2017).

In the study relationship between otolith length (OL), otolith width (OW) and otolith maximal (MW) with fish length (TL) and fish weight (W) of [illegible] species inhabiting in Middle Ganga region of India has been studied. This exercise is undertaken and dependent on [illegible] Fish Fish Biology in [illegible] research project on the biology of fish species in wetlands (Chaudhry, 2016).

There is no published study on otolith morphometry and morphometry of [illegible] in India.

Materials and methods

The study material consisted of 20 fish samples of [illegible] species [illegible] Fish samples were weighed to the nearest [illegible] and total length (TL) was measured to the nearest mm using a measuring board. Sagittal otoliths were extracted from the fish samples and washed in distilled water and dried in an oven for [illegible] hours. Otoliths were photographed using the [illegible] camera. Otolith length (OL), otolith width (OW) and otolith maximal width (MW) were measured to the nearest [illegible] using [illegible] software. The morphometric [illegible] of the fish and otoliths were [illegible] (Sen, 1974; Jawad, 1987).

[illegible] of the [illegible] were [illegible] through a [illegible] to [illegible] fish [illegible].

Digital [illegible] were carried out with [illegible] to study the [illegible]. Then the otoliths were cleaned with [illegible] water and all the otoliths were [illegible] and stored in [illegible] with [illegible] to [illegible] use. The raw and transformed [illegible] were

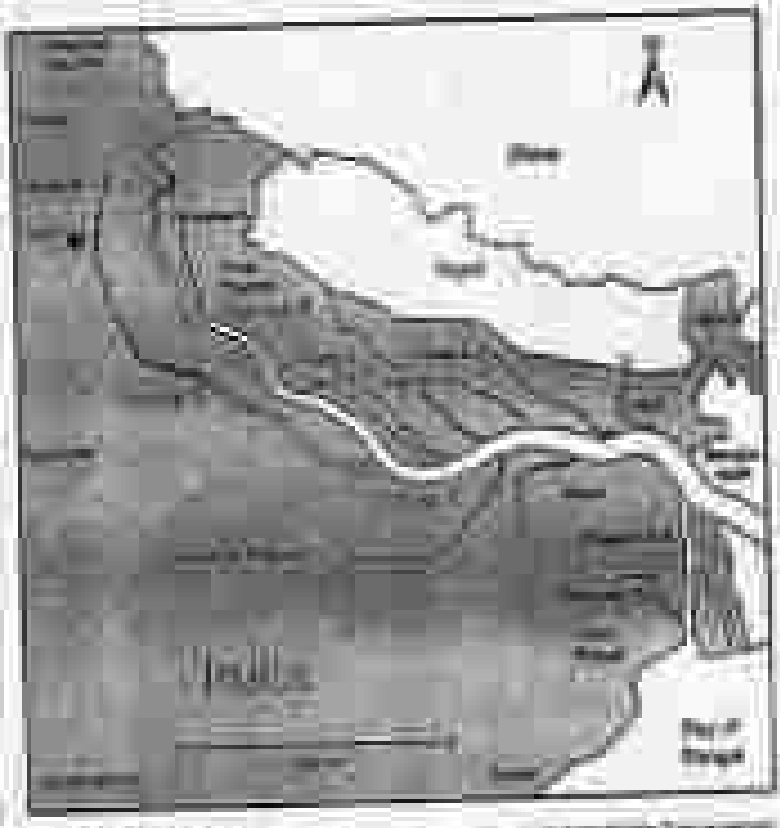

Figure 2. [illegible]

[illegible]

RESULTS

In the present study, 30 fishes and 30 crabs obtained and studied for allometry from Bangui region (India). The mean descriptive statistics for Fish weight (FW), Fish length (FL), Claws width (CW), Fish weight (FW) and Claws length (CW) are summarized in Table 1.

In the measurements of left and right claws were based on significant differences were observed from left and right claws (paired, P 0.05). Therefore only right claws were used for the study.

The t test was performed for correlation between fish weight (FW) and claws length (CW) and claws width (CW) similarly to the fish weight (FW) and claws length (CW) using linear regression model (Figure 2a-2c).

The study shows strong correlation between fish weight (FW) claws length (CW) and width (CW), and provides evidence the correlation between Fish weight (FW) with claws length (CW) [illegible].

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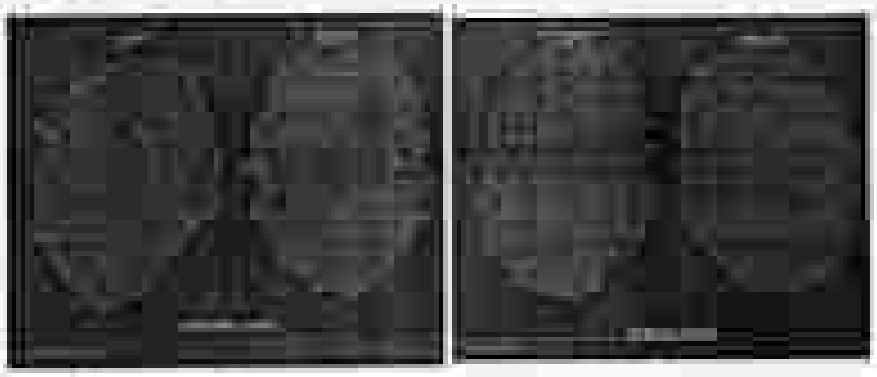

Figure 3. Photograph showing ventral view (a) and dorsal view (b) of left and right wrinkled shields of [illegible]

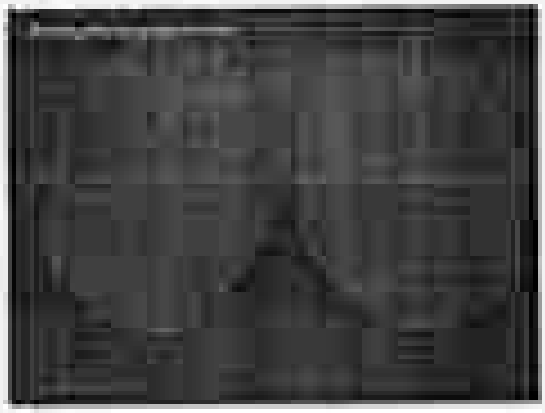

Figure 4. Discriminant measurements of fish and fish weight [illegible] of [illegible] using unfolded image [illegible]

Cross sub sections on the fish length and fish weight and the significant positionally between the relationship of fish length and fish weight with shield measurements was found to be the best indicator for estimating the shield of fish.

DISCUSSION

In the present study, relationship between fish length and shield length, width and weight was analyzed by linear regression model. Shield dimensions and weight were linearly correlated to total fish length and fish weight (Kuri, 1988; Jawad et al., 2013). The results of this study are in accordance with other studies. The first study to demonstrate a significant positive relationship between width, size and Tan size of Bangla Tan (Coilia ganganica) using and hatchet by (Dhas, 1991; Tandamani and Sharma, 1992; in the Parvez et al., 2003) found positive relationship between fish size and shield length for 83 species of fishes from the Eastern Tank Pacific Ocean. In the result of a study a medium positive linear correlation between the shield length and fish length in Chondrostoma nasus (Kaya et al., 2006). This relationship of size by using the shield scale was thought to be due to physiochemical factors of water or

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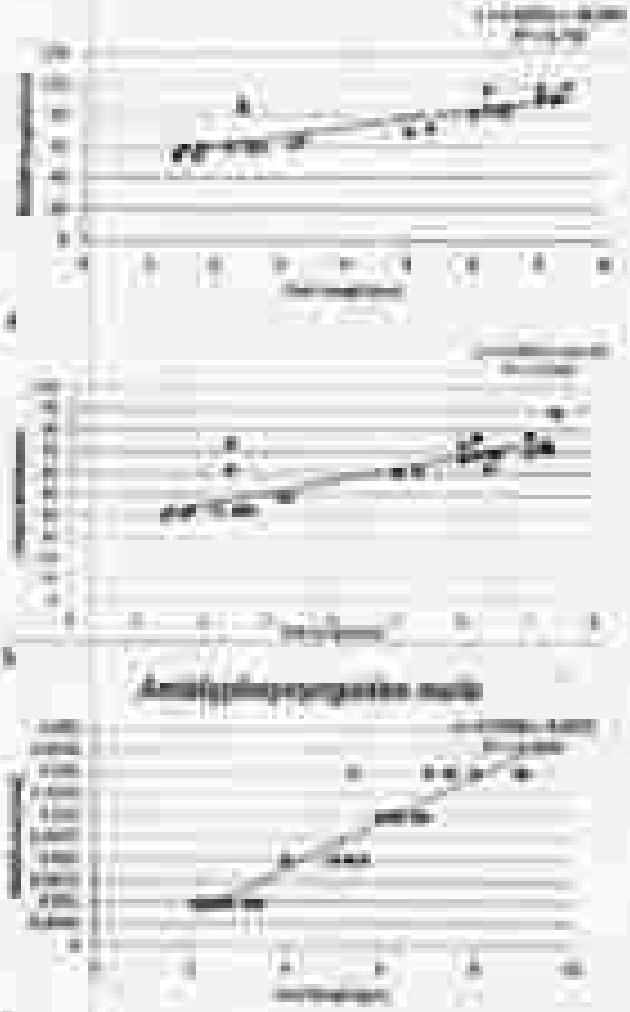
a
b
Amblypharyngodon mola
c

[illegible]

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CONFLICTS OF INTEREST

The authors have not declared any conflict of interest.

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PROTECTIVE ROLE OF *SPIRULINA PLATENSIS* ON HAEMATOLOGICAL PROFILE OF CADMIUM SULPHATE EXPOSED TEXTFISH, *CLARIAS BATRACHUS*

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ABSTRACT

In the present investigation protective role of *Spirulina platensis* was evaluated on heavy metal induced *Clarias batrachus* (Linn.) [illegible] 10 days for 3 Cadmium sulphate was calculated as [illegible]. Following parameters were evaluated viz. TLC, DLC, ESR, Hb and PCV for the period of 24, 48, 72, 96 and 120 hours. Fishes were divided in 4 groups group(I) control, group(II) treated with cadmium, group (I) treated with cadmium along with *Spirulina platensis* supplemental diet, group (I) supplemented with *Spirulina platensis* Experimental chemical Cadmium showed further in all the parameters. *Spirulina platensis* provides protective role and help in improvement in all parameters as *Spirulina platensis* contains Biomolecules which is potent antioxidant.

KEY WORDS: *Spirulina platensis*, cadmium sulphate, *Clarias batrachus*

INTRODUCTION

Cadmium, is one of the major contaminant of aquatic environment and is most towards aquatic organisms which is accumulative. Found in aquatic waters, referred as non-essential element with no known biological role. Which lead by Ohio Air Quality Community and is reported as major contaminant of aquatic ecosystem causing adverse effects in aquatic ecosystem[1]. Cadmium is reported to be associated with the effluents of battery, electroplating, fertilizers, mining, metallurgy, paints and dye industries. Fish have been the focus of many ecotoxicological studies since they are located at the top of the aquatic food chain. Blood is highly susceptible to internal and external environment. Haematological parameters

[illegible]

[illegible]

MATERIALS AND METHODS

Fish Bile: Healthy living specimen of Labeo rohita (Common Indian carp) were collected from local fish market of Mumbai. About 24 fishes measuring 15 ± 2cm in length and 60 ± 8 gm in weight were selected for the present study. Prior to the experimentation, fishes were thoroughly washed for 5 minutes with 70% Ethanol to avoid any chemical interference.

Preparation of basal and supplemented diet: The diet was prepared by modified procedure[illegible] The experimental diet was prepared with the ingredients shown in the table.

Diet composition (% of dry weight):

Ingredients	Basal diet	FP supplemented diet
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]		[illegible]
[illegible]		[illegible]
[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]

Determination of LC_{50} for Cadmium Sulphate: 96-hour median lethal dose (LC_{50}) for $CdSO_4$ was determined for a static condition by exposing the fishes to seven [illegible]

mg/l) according concentration of cadmium sulphate (cumulative mortality was determined after 96 hr, the dead fishes were removed once observed. For 96 hr LC50 (3.8 mg/l) For Cadmium Sulphate was determined by graphically plotting the percentage mortality versus concentration of chemicals.

Collection and preservation of Blood: The blood samples for hematological estimation were collected from the caudal vein of fish with by fully sterilized dry syringe to avoid other cells. Immediately of permanent salt of ethylene di amine tetra acetic acid (K3EDTA) was added to the vials before collecting the blood.

Following methods were used for calculation hematological profile: TEC was counted with the help of haemocytometer (Superior Marienfeld Germany) with improved Neubauer ruling and Gower solution. HBC was calculated by Sahli's method. Sahli's acid haematin method was used for estimation of haemoglobin content.

Statistical tests: For Statistical analysis Gen Stat Statistical analysis software was used to calculate analysis of variance and Duncan Multiple range test was used to test level of significance.

Preparation of supplemental diet: Basal diet was prepared using Proteins (35-40%), carbohydrates (20%) and lipid (10-15%) and minerals and vitamins (2%). Spirulina supplemented diet was prepared by supplementing 10% SP in to basal diet by replacing same quantity of carbohydrates as described by workers[7]. Fishes were divided in four groups (**group I**) – control group of fishes, (**group II**) fishes treated with cadmium, (**group III**) fishes exposed to cadmium+ food with Spirulina phycocyanin, (**group IV**) fishes fed with supplemented diet of Spirulina phycocyanin.

RESULTS

Total Erythrocyte Count decreased further in all the values after post treatment with Cadmium Sulphate. Following observations viz. 2.91, 2.86, 2.73, 2.72 and 2.89 $\times 10^{6}$ cells/mm^{3} were (Fig.) recorded. Further there was observed improvement in this parameter when both cadmium and Spirulina supplemented diet in administered together, shows progressive improvement after all exposure periods. The observed value are 2.96, 2.8, 2.87, 2.93 and 2.9 $\times 10^{6}$ cells/mm^{3}. The control value of THC were observed were 2.72, 2.75, 2.76, 2.8, 2.77 $\times 10^{6}$ cells/mm^{3}. Whereas variation in parameter was prominently observed after treatment with

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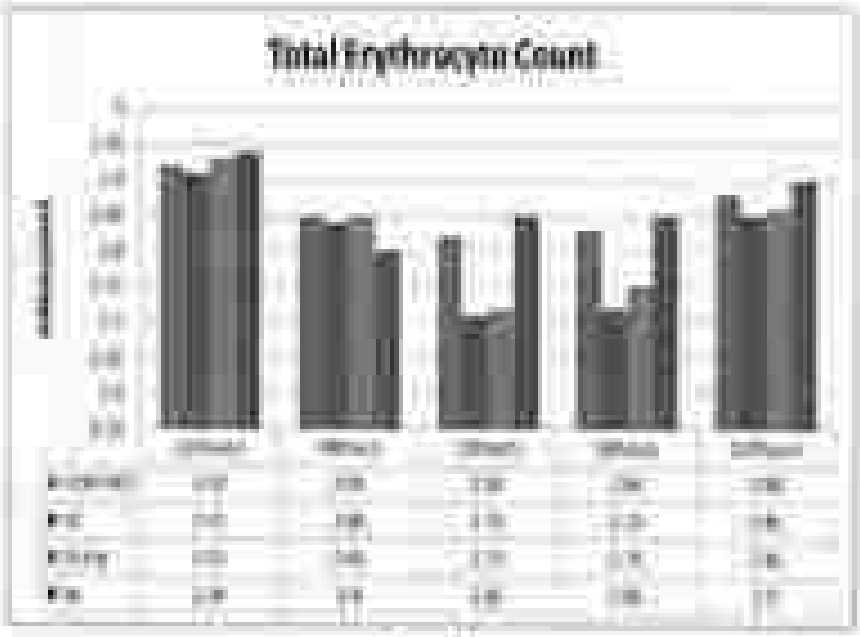
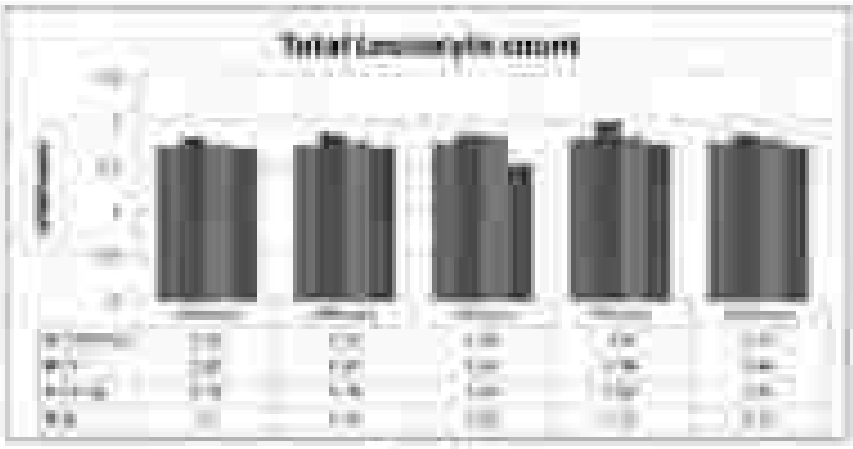


Figure: 6.



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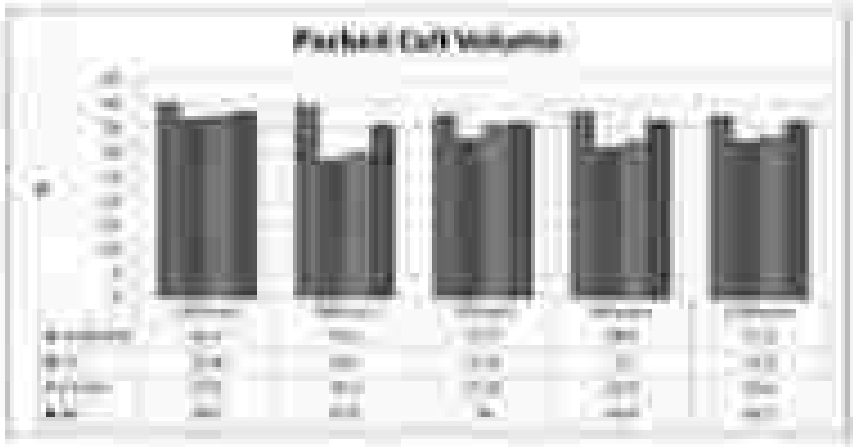

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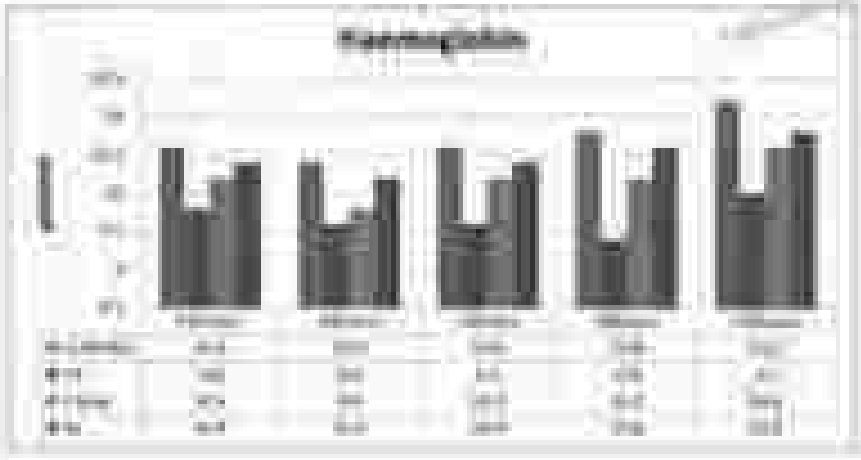

Figure: 4

DISCUSSION

Total Leukocyte Count in the present study showed decrease after [illegible] treatment which resulted in immunosuppression the reason being total leukocyte count indicates homeostasis of an organism were due to endotoxin injection and subsequently the organism develop state of anemia. This study is in accordance with the following studies[illegible] on Nimesulide, Rofecoxib and Diclofenac sodium treated rats and various studies resulted on different aspects.[illegible] The decreased value indicates poor immune. The reason could be due to destruction of RBC.[illegible] After administration of diet with Spirulina the obtained results proved that Spirulina remains non-toxic, which increases the ability to fight off infections through the induction of stress factor.[illegible] Total Leukocyte Count increased increase in value after treatment with radiation antidote when compared with control parameters. The major functions of WBC's are to fight infection and defend the body against foreign organisms and or invasive organisms. Injection in WBC's counts be caused fish other cyst damage cause. This observation also in agreement with studies conducted by workers[illegible] on Blood of Aquatic fish. The increase in WBC's counts recorded in the present investigation after radiation treatment when compared with control could be due to the action of this antidote fight against the antigen in fishes and also augmented the production of more WBC to improve the health status of the fishes which agreed with the reports of workers.[illegible] The increased in WBC counts can be correlated with an increased in antibody production which helps in survival and recovery of fish organisms against infection of pathogens[illegible] reported to increased in WBC in Chinese prawns exposed formalin.

When Chorus Pulverulentus is fed with radiation and supplemented diet there is improvement in parameters as the supplemented diet of Spirulina which helps positive influence in during off the radiation period. The investigation is supported by workers.[illegible] These results are in good agreement with earlier work also supported by various workers a significant decrease in WBC's, Hemoglobin and Packed Cell Volume mortality and hematologic activities of fish exposed to sub lethal concentration of pesticides.[illegible] Packed cell volume decline in radiation treated observations which are in agreement with earlier work which is supported by[illegible] on fresh water fish. Finding during Spirulina had a significant at [illegible] increase in the levels of haematocrit[illegible] revealed that haematocrit value in treated fish was lower than that of control fish. On other hand, the obtained results revealed that breeding density

Haematological clinical characteristics which are the accompanies with hypoxia of aquatics.[illegible] The decline in concentration of haemoglobin is same as earlier studies done on blood of salt and fresh water species exposed to cadmium sulphate by workers[illegible] observed a decline in haemoglobin in the blood of pigeon exposure to cadmium (Pyrene depending on the duration of exposure and the concentration of cadmium. Significant reduction in haemoglobin in experimental animals might be due to toxic cadmium in haemoglobin has been reported for various workers. Exposure to heavy metals or pesticides leads to reduced haemoglobin synthesis and haemolysis due disorders in haematopoietic and accelerated disintegration of erythrocyte cell membrane. These results are in good agreement with earlier work that reported by various workers a significant decrease in RBC's, Haemoglobin and Packed cell Volume of fresh water fish exposed to heavy metals observed by [illegible]. This increase could be due to the presence of Cephalosporin in the Spirulina algae, which can help in boosting immunity especially suppressed by toxic heavy metals.

CONCLUSION

The present study showed haematological profile for the 3 tested freshwater species and concludes that Spirulina feeding improved the haematological parameters in all exposed groups compared with treated and control groups. Thus using Spirulina as marine biomass and growth factor in food formulations supplemented to diet can be recommended. Chlorophyll of Spirulina acts as a chelating and detoxifying phytocomplex against the toxic cadmium and heavy metals. It can also be concluded that Spirulina's supplementation in diet is promising for improving the haematological parameters in Clarias Gariepinus which is exposed to heavy metal cadmium and genetic by immunomodulator and as a chelating agent in food ingredients for fish health. Spirulina contains phycocyanin (10% of chlorophyll (1% and carotenoid (0.25% of pigments. Chemicals of Spirulina modulate the immune disorders, toxicity and toxicity agent of toxic elements in as the body homeostasis.

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[Volume 1, Issue 1, November 2018]

A Study of Ethnobotany with Reference to Traditional Knowledge of India

[illegible]

[illegible]

ABSTRACT: [illegible]

KEYWORDS: [illegible]

I. INTRODUCTION

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(Volume 1, Issue 1, November 2019)

[4] Traditional medicinal [illegible] Publication. The leaves are crushed and applied on the body to protect against insects. [illegible]

[5] Dry leaves [illegible] Publication. Commonly called as [illegible] oil or mahua is used to treat cough, kidney stones, [illegible] inflammation, diarrhea and urinary disorders.

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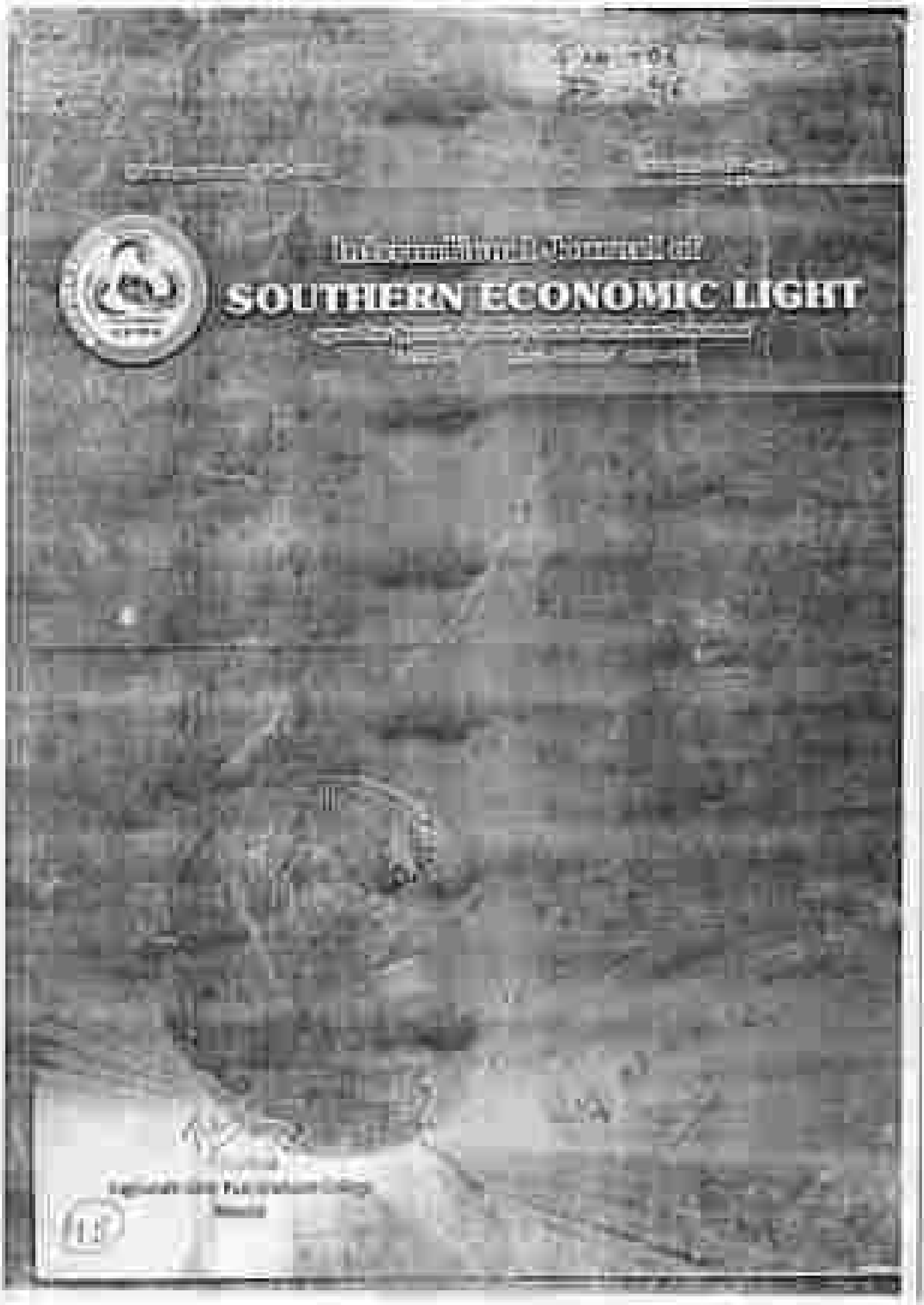

SPRC Publication

International Journal of Southern Scientific Light (JOSL)

TRENDS OF FAST FOOD CONSUMPTION AMONG ADOLESCENT GIRLS

Nidhi Tomar

Dr. Sudha Chowdhary

ABSTRACT

KEY WORDS:

OBJECTIVE OF REVIEW

INTRODUCTION

CONCLUSION

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International Journal of Innovative Research in Science, Engineering and Technology

Environmental Issue: A Review on Acid Rain

Mr. Amit Murarka

Assistant Professor, Dept. of Botany, Dr. Harisingh Gour University, Sagar, M.P., India

ABSTRACT: [illegible]

KEYWORDS: [illegible]

I. INTRODUCTION

[illegible]

Chemistry of Acid Rain

[illegible]

RESEARCH ARTICLE

STUDY OF PHENOLOGICAL EVENTS OF SOME MEMBERS OF ERICACEAE

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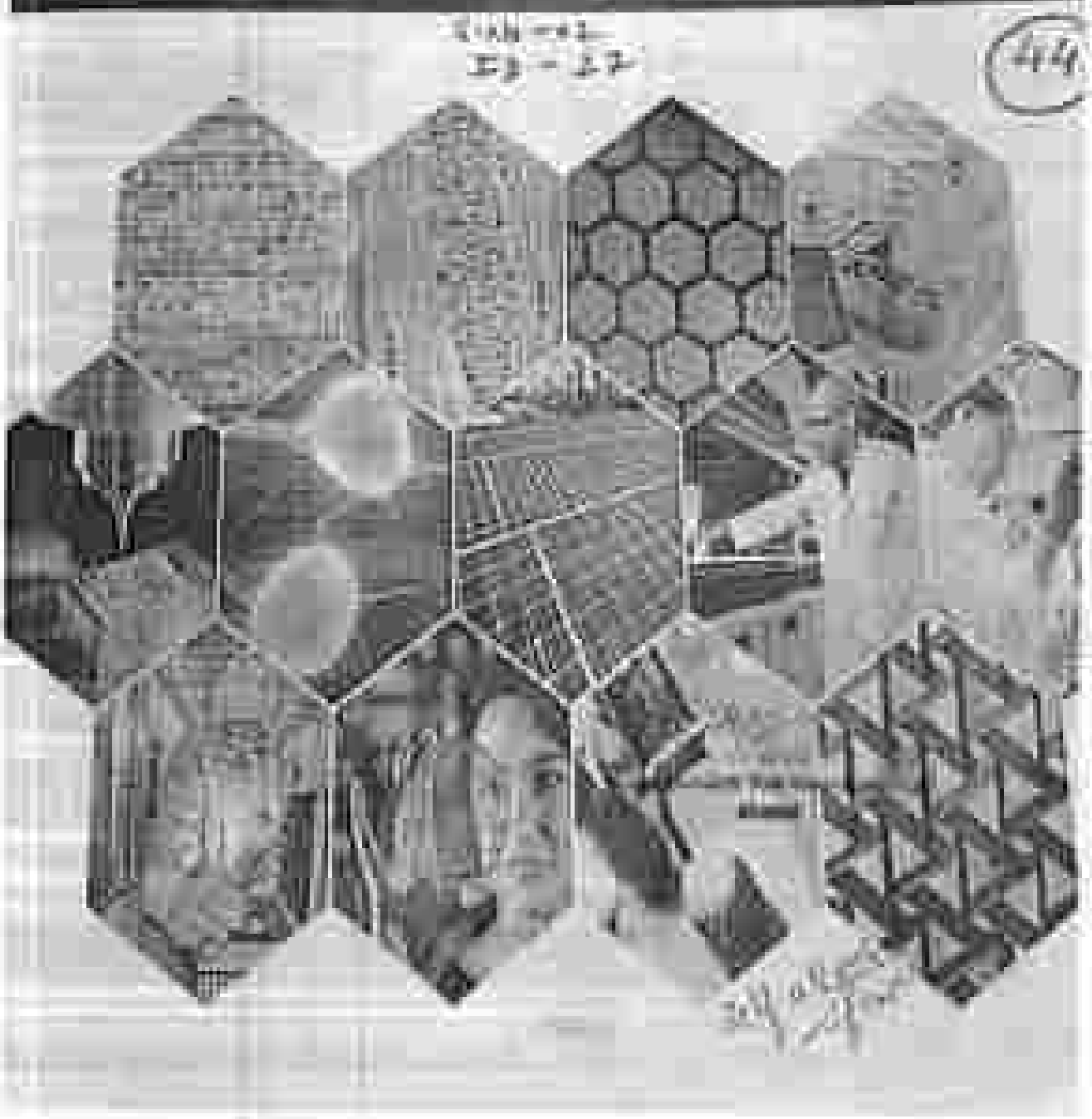

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Index for 2018 (Volume 3, Issues 1 to 4)

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International Journal of Research in Social Sciences, Vol. 8, Issue 10, 2019

[illegible]

Dr. [illegible]
Assistant Professor,
Department of Sociology,
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Social media: The inevitable and pertinent influence in the lives of Indian youth

Dr. Anjula Rajawat

Abstract

[illegible]

Keywords: Adolescent, National Youth Policy, Technology, Social Media, Internet Influencers

1. Introduction

[illegible]

Corresponding Author
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Assistant Professor,
Department of Sociology,
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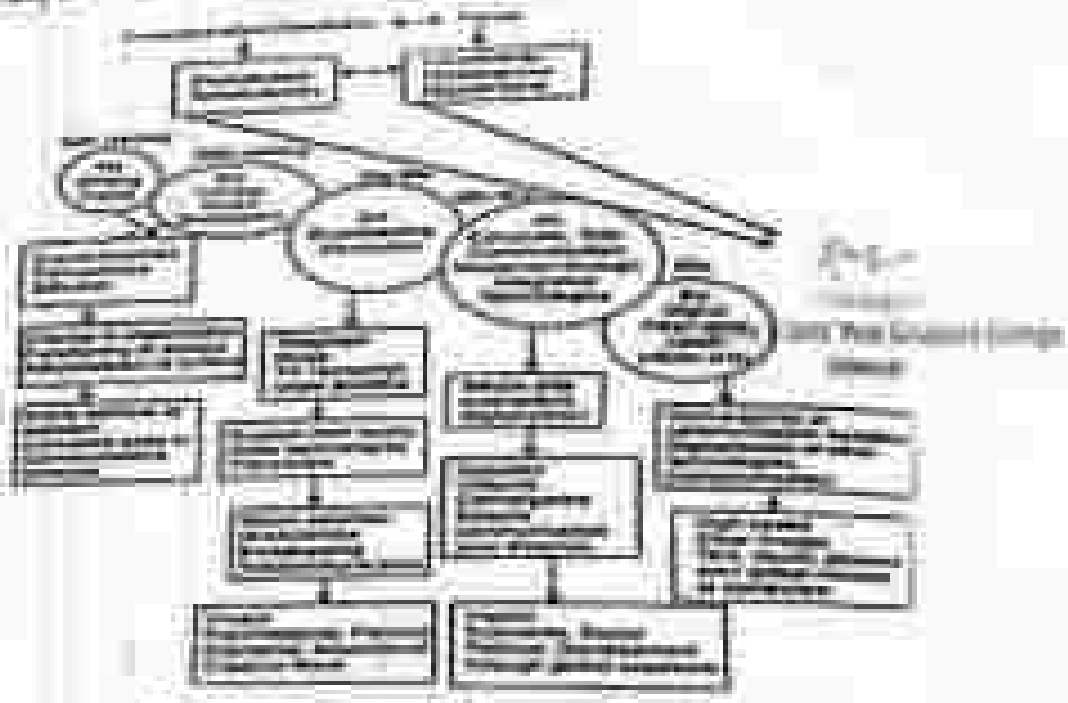

Fig. 4.1 Communication Technologies Revolution

In general, college students are more interested in using internet networking in every fully compared to any other age group. It is also true in the case of mobile, or communication. In the category of users of SNS the majority are youth. It bells the fact is acknowledged by the media studies and hence today the usage of SNS has become large part of the student's time in India. The [illegible] data showed that the percentage of students who told that to use SNS has fallen from 27% to 17% in 2008. In a recent study on Social Networking Sites Facts Perhaps what to look at the impacts of SNS on Indian society, through linguistic and cultural perspectives. The article entitled 'Use of social networking in a linguistically and culturally rich India' described more of the top Indian SNS and provides some instances where people have used web tools to raise their voice against the bad elements forming world's culture. The study helps us to realize the various channels those social networking in India. According to the study Indians are using the power of social networking like Facebook to develop a strong togetherness against activities among groups that are not in keeping with the spirit of Indian culture. Study says a social networking site involves not in the communal despite the backbone of diversity and [illegible]. According to Anuja Kumari (2009-10) in Globalization, attitude in multiple domains: Economic, economic, technology transfer, the circulation of ideas, cultural practices, mixing of people, language, urban culturally [illegible].

History of Social Sites

In mid of 1990's social media sites are here with Web 2.0 technology included were Classmates.com, in 1997 Sixdegrees.com in 1997 focusing on students lives. User profile can be created, managed and shared. Friend's list and other media [illegible] provide. These websites are more more not profitable and eventually shut down due to less features. In 2003 a new flow of social network sites www.linkedin.com and www.myspace.com was started getting more page views than Google, with Facebook's competition, rapidly growing in size. In 2005 www.Facebook.com began showing internally developed add-on applications, and some applications aided in profiling of a user's own social network, thus blog and networks and social networking www.orkut.com was launched on January 22, 2004 by Google, an web-page company which is now quite popular in India, USA and Brazil. Various social networking sites have which are running in different languages and numbers is increasing day, worldwide. There are more over 200 social networks sites using these existing and emerging social networks media. The Chief among these are Twitter is a micro blogging tool, the user is still available a profile view. Though there are privacy options in place only allow to friends, it is not a personal mode of communication like mail or instant messaging. Profile acting is a mode of exhibiting the profile user's personality. Mostly or have are [illegible] to be perceived by the public [illegible].

Statement of the Problem

[illegible]

Methodology of the Study

[illegible]

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]

Significance of the Study

[illegible]

Hypotheses of the Study

1. [illegible]
2. [illegible]
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4. [illegible]

Objectives of the Study

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]

Impact of Social Media on Indian Youth

[illegible]

[illegible]

Advantages of Social Media

(i) Education

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- [illegible]
- [illegible]
- [illegible]
- [illegible]
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(ii) Politics

- [illegible]
- [illegible]
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(iii) Awareness

- [illegible]
- [illegible]
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- Social media [illegible] and [illegible] communication strengthen their relationships.
- Youth now search they will friends and classmates on social sites.
- By the use of social media, they are free to use around the friend's [illegible] at work place. Thus, they do not need any [illegible].
- They can [illegible] with others achievements, share their experience and know the process of grow up the [illegible].
- They are joining without disturbing other's personal life.

(e) Job Opportunities

- Social media is useful for professionals. By the use of social sites they can search for new and progressive field.
- It is helpful in marketing, connecting with other brands and finding business opportunities. Youth are interested to do online shopping. According to them, it is always easy to purchase and on the cause of dissatisfaction [illegible] returned by them.
- With the help of social media, employers find employees and unemployed find work.
- Social media also have created thousands of jobs and new avenues of income.

Disadvantages of Social Media

When we discuss about the disadvantages of social media, youths tell us:

- Copy paste the school assignment. Even not of fresh to prepare the assignment.
- Today's [illegible] of the whole day spent on Facebook daily.
- A study showed that students who were online while studying scored 20% lower in test.
- Social networking sites have [illegible] productivity.
- Poor spelling or grammar is also the result of social media.
- Lack of Privacy. Most of the time no one read privacy policies and may be unaware that their information may be used by third parties.
- Some networking sites allow hate groups to recruit and distribute propaganda online.
- Hacking the account, identity theft, phishing, frauds, and [illegible] online.
- [illegible] on social media [illegible] about the [illegible] of your institution [illegible] social media.
- Sometimes some normal comments posted online [illegible] the victim of youth's [illegible] harassment.
- Promote online engagement in the process of personality and leave disorder like poor social skills, addictive behaviours and other psychological disease like depression, anxiety and loneliness.
- There is no time for them to their interaction with loved ones. [illegible]
- When started to a [illegible] of hours, it takes about 20 to 25 minutes for the average user to return to their original task.

Suggestions given by the students

In the topic of how can youth [illegible] the [illegible] advantages of social media, youths explained that

- Change your settings in [illegible] privacy. [illegible] Students should study and [illegible] from social media.
- Work and time management
- Don't upload personal photographs, information and private part of your life.
- Don't accept all friend's request without [illegible].
- Social media is a learning tool of language [illegible]. Try to [illegible].
- Use language in [illegible].
- No one will remember you as a [illegible]. Only your achievements [illegible] society. So, work for your betterment.
- Make a schedule of daily life. [illegible] the process of [illegible].
- Social media is a great tool to learn [illegible] and opportunities [illegible] a better way.
- In the situation of any harassment and [illegible] social media, discuss with your [illegible] your social circle.

Conclusion

The research [illegible] social [illegible] computer [illegible] sharing, image, video sharing and [illegible] identify their problems such as [illegible] friends request and [illegible] pictures and links, irrelevant [illegible] messages and [illegible] information. [illegible] affected the physical and sports activities [illegible] replaced by social media. The educational institutions must provide [illegible] platform for the students [illegible] the researchers to make their [illegible] in an appropriate [illegible]. There should be [illegible] software in the [illegible] students who are using these sites [illegible] permanently blocked [illegible] the students in the university [illegible] for the use of social media websites. There should be [illegible] academic forum in the educational institutions regarding the instructions about the positive usage of social media networking portals.

Since the last few years, the use of social media has significantly increased in [illegible] youngsters regarding the [illegible] informational images. The users should be [illegible] right [illegible] information which is provided to them [illegible]. There should be [illegible] and fake records on the social media [illegible]. Youths and girls progress in healthy [illegible]. They should be [illegible] in their life and give proper time to the [illegible] activities in their daily life routine. We see youth [illegible] smart phones every few minutes, looking for the latest [illegible] or status update. Thus, it is important [illegible] attitude that these sites may be useful, but [illegible] tools, not lifestyles. It's now becoming [illegible] living is on one hand. Parents, Government, Public and [illegible] can help us solve this problem. [illegible] social networking sites and its impact on college students [illegible] different global and demographic [illegible] secondary source from the [illegible] technologies, adoption of the Internet [illegible] have high levels of usage among college students in India. The impacts of social [illegible]

students have had access to the Internet and computers for a large percentage of their lives. That they are aware of the usages and risk involved in these choices is a positive indication. But higher college students are not only [illegible] and possibly [illegible] through social networking sites but also after graduation. There is no other medium or [illegible] [illegible] for which, over an [illegible] is strongly recommended to avoid, [illegible] activities on social media, monitor the [illegible] on these and social networking activities. It is also a strong recommendation for educational and Government agencies [illegible] to carry joint and free [illegible] of social networking activities, where both government and [illegible] [illegible] parents should always [illegible] the use of social networks in their children and wards [illegible].

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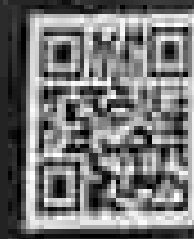

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International Journal of Applied Research

Women rights in India: A post-facto assessment of post independent Era

Dr. Hina Bai

Abstract

Keywords: Women, Rights, Indian Constitution, National Women Rights Commission, Rights of Indian, Rights Discrimination, Rights Violating

Introduction

Corresponding Author:
Dr. Hina Bai

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Human Rights in Human India

[illegible]

Human Rights in Post-Independence Era

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The Constitution of India

[illegible]

Article 14: [illegible]

Article 15: [illegible]

Article 19: Right to Freedom: [illegible]

[illegible]

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Right to Information: [illegible]

Article 21: [illegible]

Article 25: [illegible]

Article 26: [illegible]

[illegible]

Article 29: [illegible]

Part IV of the Constitution of India [illegible]

1. Obligation of the State [illegible]
2. Obligation of State [illegible]
3. Obligation of State [illegible] Scheduled Castes and Scheduled Tribes [illegible]
4. Obligation of State [illegible]

[illegible] Supreme Court of India [illegible]

[illegible]

Right to Food Security: [illegible]

[illegible] Right to Food [illegible] National Food Security Act [illegible]

Article 330: Reservation of seats for Scheduled Castes and Scheduled Tribes in the House of the People: [illegible]

Article 332: Reservation of seats for Scheduled Castes and Scheduled Tribes in the Legislative Assemblies of the States: [illegible]

Article 334: Reservation of seats and special representation to cease after [illegible] years: [illegible]

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Article 335. Claims of Scheduled Castes and Scheduled Tribes to services and posts

The claims of the members of the Scheduled Castes and the Scheduled Tribes shall be taken into consideration, consistently with the maintenance of the efficiency of administration, in the making of appointments to services and posts in connection with the affairs of the Union or of a State.

[illegible] Movement in 1975 during the Emergency

[illegible]

Other Movements

[illegible]

Conclusion: [illegible]

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Women's Human Rights and Indian Constitution

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Introduction:

Human Rights are [illegible] rights that [illegible]. [illegible] Human Rights [illegible] Universal Declaration of Human Rights (UDHR) [illegible] **The UDHR was founded on the principle of universality and non-discrimination. It stood for certain fundamental human rights and held that all human beings are born free and equal in dignity and rights.** The rights and freedoms contained in the declaration were regarded as being available to all women. **Women** of race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status. The UDHR emphasized the [illegible] understanding of these rights and freedoms is of the greatest importance for the full [illegible] of the UDHR. [illegible] The UDHR contained [illegible] and actually [illegible] women's [illegible] Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).

Women emerged as a distinct interest group in the 19th century primarily around the [illegible] revolutions of 19th and 20th century that included women from [illegible] of society. This [illegible] the [illegible]

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The Indian Constitution, by directing the state to provide for equality, fairness, dignity and freedom, flowing the Women's unconditional legacy are contained in equal broad. Vested equality is a principle of equal treatment.

Constitutional Provisions:

1. Equality before Law for **women** [illegible] (Article 14)
2. The State not to discriminate against any citizen on grounds only of religion, race, caste, sex, place of birth or any of them (Article 15 (1))
3. The State to make any special provision in favor of **women** and children (Article 15 (3))
4. Equality of opportunity for all citizens in matters relating to employment or appointment to any office under the State (Article 16)
5. The State to direct its policy towards securing for men and **women** equally the right to an adequate means of livelihood (Article 39(a)), and equal pay for equal work for both men and **women** (Article 39(d))
6. To promote justice, on a basis of equal opportunity and to provide free legal aid, by suitable legislation or schemes or in any other way to ensure that opportunities for securing justice are not denied to any citizen by reason of poverty or other disabilities (Article 39 a)
7. The State to make provision for securing just and humane conditions of work and for maternity relief (Article 42)
8. The State to promote with special care the educational and economic interests of the weaker sections of the people, and of protect them from social injustice and all forms of exploitation (Article 46)
9. The State to raise the level of nutrition and the standard of living of its people (Article 47)
10. No person shall be the right of women traditionally engaged in the weaving of fabrics, and no [illegible] shall be allowed in the dignity of **women** (Article 51(A) e)
11. Not less than one-third (including the number of seats reserved for **women** belonging to the Scheduled Castes and the Scheduled Tribes) of the total number of seats to be filled by direct election in every **Panchayat** to be reserved for **women** and such seats to be allotted by rotation to different constituencies in a **Panchayat** (Article 243 D(3))
12. The chairpersons thereof of the total number of offices of chairpersons in the **Panchayats** at each level to be reserved for **women** (Article 243 D (4))
13. Not less than one-third (including the number of seats reserved for **women** belonging to the Scheduled Castes and the Scheduled Tribes) of the total number of seats to be filled by direct election in every **Municipality** to be reserved for **women** and such seats to be allotted by rotation to different constituencies in a **Municipality** (Article 243 T (3))
14. Reservation of offices of chairpersons in **Municipalities** for the scheduled Castes, the Scheduled Tribes and **women** in such manner as the legislature of a State may by law provide (Article 243 T (4))

Special Initiatives for Women:

1. **Reservation for Women in Local Self Government:** In "73" and "74" amendments of the Constitution, fairly incorporated 33% reservation for women in the local bodies. These two amendments ushered the participation from the period of women representation at the local level. In fact, it has been found that the Panchayats which experienced quality of women in the PRIs followed by Kerala and Maharashtra. In case of the States equal participation of women in the panchayats and local bodies, the 33% participation the [illegible] of seats for women in panchayat and urban bodies and the same benefitted in Parliament's Bicameral Bill, the government in India Since reached a victory of Nari Shakti Vandan Adhiniyam Bill, the parliament passed the Nari Shakti Vandan Adhiniyam Bill, also designed 33% seats to be reserved for women in Parliament and state legislatures that been pending for long. The [illegible] Bill, which is popularly known the "constitution 128th" Amendment Bill, is making the women participation the seats in the LOK Sabha and in the State Legislative assemblies, which is will be [illegible] for women of [illegible] and [illegible] a much higher representation of women in politics and [illegible] and decision-making. The Commission wants to see more seats in top and [illegible] the National Commission [illegible].

2. **The Revised Plan of Action for the Girl Child (1991-2000):** The Ministry Department of Women and Child Development (MWCD) [illegible] "Women and Development" of Women including the girl child. The Commission of India has noted the protection of women through their [illegible] the girl child

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The key elements of [illegible] National Plan are as:
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- **National Policy for the Empowerment of Women, 2001** [illegible] National Policy for the Empowerment of Women" in the year 2001. The goal of this policy is to bring about the advancement, development and empowerment of women.

  The Statutory [illegible] Commission for Women Act, 1990 are as follows:

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  a. Representation of women's rights;
  b. [illegible]
  c. [illegible]

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ADVANCES IN FOOD TECHNOLOGY AND NUTRITIONAL SCIENCES

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A Journal of Science: Life Sciences

Effect of Dissolved Oxygen on Physiology And Behaviour of Freshwater Fishes

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Abstract

Dissolved Oxygen (DO) is an important environmental factor which affect the fish population directly. Sufficient or in hundred and sometimes it is ample. It also depend on chemical composition of water body which is very variable, depending on season, time of day, place and depth. DO of the chemical substances in natural waters dissolved oxygen is one of the most significant. Dissolved oxygen changes very dramatically in short period of time and sometimes causes loss of fishes.

Fishes are important as a food source, the production should increase with time. The requirement of dissolved oxygen is different for different fishes. Which is depend on the habitat of fish. The sufficient level of dissolved oxygen is an important criteria. As the decrease of oxygen reduces the fish level in water polluted species will and population the water.

This review paper contains detailed related to the effect of dissolved oxygen on growth and behaviour of fish. It concludes the data and record we found different studies on this dependent oxygen.

Keywords: Dissolved Oxygen, Growth and fish behaviour.

Introduction

Dissolved Oxygen (DO) tension is key factor and it influences the healthy growth of fish in reproduction. The DO content in water is an indicator of water quality. In the broader sense, it is considered as one of the important water quality variable to fish culture. Hence, dissolved oxygen concentration is more important than any other environmental variables because other factors fish are tolerate the range can by tolerated by fish and may not cause stress to them.

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Dissolved oxygen concentration is important in maintaining fish culture as it shows quick changes, even a slower of future, or sometimes even previous, which can pose repressive level to become lethal to the fish, unlike other environmental variable factors in fish culture. The dynamic nature of Dissolved Oxygen may affect fish in many ways. According to various studies reported, fish growth and differential behavioral responses are been reported from different parts of world, but they prove not the same tolerance or response to the different dissolved oxygen concentrations. With this review an attempt has been made to summarize various studies in this aspect.

Effect of different levels of Dissolved Oxygen for fish

Oxygen level is one of the key environmental factors that affects fish welfare and development. The relation of fishes to the oxygen is an important point of consideration for researchers, as it affect the fish life directly. Decreased level of dissolved oxygen is detrimental to the health of body of water and the fishes that live in it, leading to the death of those fishes (Wolf, Moore, 1992).

The oxygen present in air dissolves in water to meet the requirements inside of water bodies. When the level of dissolved oxygen in water reduced and the oxygen consumption rate exceeds it leads to hypoxia. Certain level of oxygen is required for the life of all fishes. The level of requirement of oxygen is different (mild, chronic and below it the fish does not survive. Reduction in dissolved oxygen cause be all worse and affects the fish life. The effect of reduced oxygen on metabolism, development, growth rate, reproduction of fishes have been investigated (Jones,1952; Fry,1966; Doudoroff & Warren,1965; Doudoroff and Shumway,1967).

Ranges of safety, acceptable dissolved oxygen needs for warm water fish. According to five scale.

- Dissolved oxygen > 6.5 mg/litre, fish do other show stress exposure.
- Dissolved oxygen = 6.5 mg/litre to 3 mg/litre, lethal for long term exposure.
- Dissolved oxygen <3 mg/litre to 2 mg/litre, fish survival but growth rate slow for long term exposure.
- Dissolved oxygen < 2 mg/litre, recession for warm water fish (like goldfish). Most of fresh water fish failure life level.

Effect of low dissolved Oxygen on Growth and Development of fish

The different dissolved oxygen level affects different life stages of fish. Sometimes hatching of egg is accelerated by reduced oxygen and sometimes it is delayed. (P. Doudoroff and D.L. Shumway, 1970). Low DO affects the egg production and hatching period in fish. In Fathead minnows, the number of eggs reduced per female at 3.0 mg/l DO. Fry growth was reduced significantly at all concentration below the normal (7.9 mg/l). Fry survival was reduced at 4.0 mg/l and lower dissolved oxygen concentration, 50% of the survivors at 4.0mg/l were deformed (Wilson, A. Brungs,1971). Fathead minnows were exposed to constant dissolved oxygen concentrations (1.3,2.3 mg/litre) for 11 months,

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The number of eggs produced per female was reduced at 2.0 mg/litre and no spawning occurred at 1.0 mg/litre. Fry survival was reduced at 3.0 mg/litre and lower dissolved oxygen concentration. Highest hatchery of the test levels at 4.0 mg/litre were deformed. The time required for hatching was increased at progressively lower oxygen concentrations by as much as 100%, from 5.0 days under normal conditions to 7.5 days at 2.0 mg/litre. No effect on percent hatch was observed. Fry growth, therefore, was the most sensitive indicator. A comparable 12 month exposure of brood females to elevated water temperatures (26.34 C) showed that reproduction was more sensitive than survival, growth, or egg hatchability to lowering the effect of temperature (Bisogni 1978b). The number of eggs produced per female, the number of eggs per spawning, and the number of spawnings per female were each gradually reduced at successive temperatures above the control (23.5 C). The spawning is normally assumed at 32 C, which was the lowest temperature where growth was appreciably reduced. Male secondary sexual characteristics were functionalized at 30 C, also at lower temperatures.

(c) 1974 Anthony & Carlson Richard Effective studied the effects of reduced oxygen on the embryos and larvae of lake trout. Substrate consequently will large mesh fish Salmonoid salmonids. They found at 7 and 10 °C lake trout development from fertilization through first feeding was retarded in all reduced oxygen saturations tested (30% and lower) survival was adversely affected at all reduced concentrations although only slightly at 50% saturation at 7°C At 20 and 17 mg/litre concentration at low as 10% saturation were adequate for large mesh fish survival. However even in the highest reduced oxygen saturation (10%) growth was reduced and in saturation of (10%) and below hatching was postponed and first feeding was delayed.

Davis (1973) found that fish species differ widely in their ability to survive from the survival of adults of yellow fishes under reduced at low concentration of 2.0 U.S. of Spencer and D.G. Blanchar and M.J. Mazzini (1970).

The variation in the range of lethal oxygen concentration studied by many workers on different species of fish. There are many studies on the dissolved oxygen requirements of salmonids or cold water fishes/species. Trout and Charr that are considered to be more sensitive group of fresh water fish especially at the time of hatching (modified from Alabaster & Lloyd 1980).

The survival mechanisms of different fish species at low oxygen concentration, a great deal of work has been done by S. S. Kleiger, T.J. Magnuson and G.W. Gallepp (1971 and Carassi (cold intolerant Cichlid fish), Tilapia (Tropically premeditated fresh water fish) Colisa (ornamental).

G. Singh & G. S. Vasudevan gave lethal oxygen concentration for some Indian fish were fully.

In one more study by Dalela and Sinty (1972) on the influence of medium oxygen on feeding and growth in Oreochromis mossambica. In the experiment the performed different growth tests on high, medium and low level of dissolved oxygen and proved that the lowest rate of growth was at high dissolved oxygen and maximal growth in the low DO. The fish were given different concentration for determining the rate of resisting their oxygen demands.

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Vistaar: Vol. 1 (1), Special Issue 2016 ISSN: 0976-7436, (e) 2455-6161

Hui (2002), studied the effect of hypoxia on large mouth largemouth bass in vitro. He concluded that various human activities such as addition of nutrients to the water body leads to seasonal hypoxia or hypoxic water which affects growth of fish.

Even dissolved oxygen also considered a major factor in determining food intake for. Dissolved oxygen is a type of stress in fish farms with high fish densities. Here the food conversion ratio (FCR), which is the amount of fish feed consumed to generate a given weight gain. It is the ratio between the weight gained in a given period to the total feed intake by the fish in the same period. It is the inverse of feed intake. The FCR was improved (lowered to higher growth rates) Mai Kum and Rosenlund (2011), Champion et al. 2003, Nengoukia et al. 2003).

The results of the study done by Molina et al in 2007 showed that oxygen concentration level had a positive effect on the growth and feed conversion ratio where it was set at 50% to 120% saturation in Atlantic halibut. The study concluded that in case of Atlantic Halibut the growth rate is higher when oxygen level is between 95% and 110 %. The FCR ratio for halibut was lower at 120%oxygen saturation. These species appear more sensitive to oxygen saturation than Tilapia. Most research is needed in order to know at which saturation point the growth is maximum.

Effect of low dissolved Oxygen on behaviour of fish

Fish activity was lowered in response to reduced oxygen concentration. The fish is able to detect low oxygen concentration in water and try to avoid it by natural conditions. Fish avoid initial level necessarily when oxygenated water is accessible. Upstream migration of adult salmonid has been reported at low dissolved oxygen (Davidson et al. and Hvingey, 1978).

Different species have different dissolved oxygen concentration by. When the level of DO is high in flowing water and it is low in Summer. Due to low DO the fish move to hot/cold place. Other behavioral changes acquired by the fish due to low DO are change in activity of fish , increased rate of air breathing, increased use of atmospheric surface respiration and vertical or horizontal habitat change. (Kramer 1987, Tuelle and Kelly 1987).

Effect of low dissolved Oxygen on Movement, Respiration and Distribution of fish

Swimming performance of the fish is reduced markedly at low DO. Five study has been done by Mishal L.Dahlberg J. (1968) on Juvenile Large mouth bass, (Micropterus salmoides). In this fish swimming performance of fish is reduced when oxygen concentration is below the 4 mg/ l (4 hour at 22°C in a tubular chamber.

Even the swimming performance of young Atlantic salmon (Salmo salar) affected by reduced oxygen (modified by Ed H Kerr, R.L Beaulieu, 1973).

Hypoxia small pits stress increase, decrease of swimming activities and reduction in immunity to diseases. So there is need to determine the level of dissolved oxygen at optimum level for physiological

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[illegible] are not efficient. So to have high production in any culture system, the dissolved oxygen level should be maintain in sufficient [illegible].

Oxygen is important for respiration and metabolism processes in fish. The fish metabolic rate is efficient for the availability of oxygen in rearing environment. As DO concentration decrease, heartbeat and feeding activity also decrease. As a result the growth rate is decreased and susceptibility of disease attack is increased. At low dissolved oxygen fish is not able to overcome the hard conditions [illegible].

Studies on Tasmanian populations of Atlantic salmon have the ability to regulate metabolic rate in low oxygen concentrations and show a relatively high degree of hypoxia tolerance. This is the first formal study to examine the effect of progressive hypoxia on individual Atlantic salmon and at a range of environmental temperatures ([illegible] 2010).

Jennette W (2012) found oxygen consumption rate of Clarias batrachus affect, Clarias magur, Ophiocephalus channoides and Labeo rohita. The study shows that smaller size fish has moderately high rate of dissolved oxygen consumption than big large ones.

Gilbert PW(2011) studied low oxygen tolerance of different life stages of three commercial or recreational species sandbar sharks (SBS). The difference in lethal oxygen concentrations between adults and juveniles was larger for three species. In addition lethal dissolved oxygen concentration were compared to oxygen concentration corresponding to maximum thermal water temperature of the same species.

Chatterjee D.K.(2014) reviewed P.D.J. Fry's concept and the effect of ambient oxygen availability upon fish metabolism and examined the distribution of feeding, critical and incipient lethal oxygen levels. Finally, how the cardiovascular system contributes to the capacity of fish to respond to reduced oxygen availability is considered.

CONCLUDING REMARKS

After reviewing the literature the authors have come to the conclusion that it was not to familiar with the effects of dissolved oxygen on fish, we can overcome them by adopting various new strategies. So, further area of research needs need to be done.

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EFFECT OF CADMIUM SULPHATE ON CERTAIN BIOCHEMICAL PARAMETERS OF TEMPLE, CLARIAS BATRACHUS

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ABSTRACT

Discharge of heavy metals into aquatic environment from various sources poses serious health hazards to aquatic organisms particularly to fish fauna. The persistence bioaccumulation of these heavy metals causes alterations in various biochemical profile of one of the major food fish, *Clarias batrachus*. This paper investigates the effect of Cadmium Sulphate on biochemical parameters of *Clarias batrachus* viz. Serum Protein, Serum Cholesterol and Glucose after 96, 48 and 96 days of post treatment. Decline in Serum Protein after all three exposure periods 96, 48 and 96 days is suggestive of stressed condition in fish. Inclination in Serum cholesterol profiles after 96, 48 and 96 days indicates hypercholesterolemia contributing to liver failure. Serum glucose showed decrease after 96, 48 and 96 days of exposure showing hypoglycemia.

KEY WORDS: *Clarias batrachus*, cadmium sulphate

INTRODUCTION

Among various types of pollutants, aquatic pollution is of greater concern at present due conditions of risk and every part of the life depends on water. Among various types of aquatic pollutants, heavy metals are of greatest concern. Cadmium is one of the heavy metal, which is reported to cause contamination of aquatic ecosystem.[1] It has severe toxic effects on aquatic organisms when present in large amounts and even if present in extremely low concentration. Cadmium is a toxic substance for many organisms and its toxicity to fresh water organisms has been well documented in literature. It is widely used in Ni-Cd batteries manufacture, metal and mining industry, coating etc. It is released in considerable amounts

through industrial effluents into soil and ground water systems. It has been found to the 'Greatest' of Endangered community.[1] The Asian catfish, *Clarias batrachus* is one of food delicacies in India because it has lovely soft muscular bones, good tasty flavor. High growing, very common, tear fat, very digestibility characteristics across and traditional questions. Clarias batrachus is now facing a serious threat from pollutants of cadmium in aquatic systems. Fish through the upper respiratory tract and thus are greater chances of transferring cadmium to higher organisms particularly to man. In fishes, pollutants absorbed via gills can be metabolized before reaching the liver and even with extremely low metabolic capacity.

Cadmium is regarded as a major concentrate of aquatic contaminants posing great threat to fish populations. Generally metal uptake by aquatic organisms occurs at two phases, first a rapid initial adsorption and normally transport the interior of cell. The bioavailability of fish is affected, either directly through uptake from the water, or indirectly through their diet. Cadmium, which is released into aquatic ecosystems, is responsible for several physiological irregularities found in fish. Cadmium enters into plant through their roots mainly gills, skin and from food via the intestinal tract.[2] The metal retention capacity of the fish is dependent on the metal accumulation and excretion capacity of fish consumed. Cadmium was reported to cause "Itai-Itai Disease" disease in Japan 1955[3] because of high level of cadmium in food field mostly due to irrigation water from mining of cadmium ores. The enhancement of cadmium along a food chain was evidenced by numerous[4] and fish are known to be used as biological indicators to assess water pollution.[5]

MATERIAL AND METHODS

Test fish

Healthy living specimens of adult, *Clarias batrachus* were collected from local fish market of Meerut. Fish measuring 15 ± 2 cm in length and 40 ± 4 gm in weight were selected for the present study. They were brought to the laboratory in cans as to be found the high mortality. Prior to the experiments, fishes were thoroughly washed for 5 minutes with 0.01% Kmno4 to avoid any dermal infection. Selected fishes were acclimatized to the laboratory conditions for period of 15 days.

Determination of LC_{50} for Cadmium Sulphate and Chemical exposure to fishes

LC_{50} was determined by exposing the fishes to seven (5,6,8,10,12,14,16mg/l) increasing concentrations of cadmium sulphate. Concentration mortality was determined after 96 hrs, the dead fishes were removed each day were observed. The 96 h LC_{50} (± 95 cl) [illegible]

Subjects were determined by periodically plotting the percentage mortality versus concentration of chemicals. Fishes were divided into 4 equal groups each comprising of 10 fishes. Each group was kept in separate glass aquaria of 200 litre capacity. First group was treated as control group. Fishes of other 3 groups were treated with sublethal concentration 1.25mg/lit cadmium sulphate for period of 30, 40 and 50 days. Water under experiments were changed after 24 hours and fresh solution of the toxicants were added to bring the concentration to the desired level.

Blood Collection

The blood of the fish was collected by cardiac puncture after respective periods of 30, 40 and 50 days of exposure with cadmium sulphate. The blood was stored in vials.

Biochemical studies

All biochemical studies were performed with the serum collected as well as stored groups of fishes.

Preparation and preservation of serum

Fish blood was centrifuged at the speed of 1000 rpm. The serum was separated and preserved in the refrigerator at -20°C in the deep freezer. These vials were properly labelled according to the experimental design. Whenever the serum was required, it was kept at all brought to the room temperature and then further estimations were done.

1. Determination of Serum Protein

Total Serum Protein was determined by Biuret method.

2. Determination of Serum Cholesterol

Serum Cholesterol was estimated with the help of one step method (Trinder and Pickupp).

3. Determination of Glucose

Glucose level was estimated by Kit method (Glucose oxidase).

RESULTS

The Serum Protein was observed to be 5.3 g/dl at Control Subjected After 30 days of FC with cadmium sulphate. This parameter was observed to be decreased when (p<0.05) compared with control value after 40 days. After 40 days of FC with experiment, decreased serum protein was observed to be 3.9 g/dl. The value was decreased when (p<0.05)

increased with normal value after 60 days. After 90 days of PT the value was found to be [illegible]. The value was observed to be decreased when ($p<0.05$), compared with control value noted after 90 days (Table). Maximum decline was observed after 60 days of exposure and minimum after 30 days of exposure period.

Serum Cholesterol was observed to be 10 mg/dl in Cluster Interaction after 30 days of PT with cadmium sulphate. This parameter was observed to be increased when ($p<0.05$), compared with control value after 30 days. The value was observed to be 2.5 mg/dl in Cluster Interaction after 45 days of PT with cadmium sulphate. This value showed increase when ($p<0.05$), compared with control value after 45 days. After 60 days of PT with cadmium sulphate this parameter was observed to be 2 mg/dl in Cluster Interaction. The value was observed to be increased when ($p<0.05$), compared with control value observed after 60 days.

Serum Albumin was observed to be 10 g/dl in Cluster Interaction after 30 days of PT with cadmium sulphate. The value was observed to be increased when ($p<0.05$), compared with control value after 30 days. This parameter was observed to be 8.5 mg/dl in Cluster Interaction after 45 days of PT with cadmium sulphate. The value was observed to be increased when ($p<0.05$), compared with control value after 45 days. After 60 days of PT with cadmium sulphate this parameter was observed to be 11.5 mg/dl in Cluster Interaction.

Statistical analysis

For Statistical analysis Two Way Statistical Analysis of Variance technique was used to calculate analysis of Variance and Duncan Multiple range test was used to set level of significance.

Table 1: Biochemical parameters in Cluster Interaction after 30, 45 and 60 days of treatment with Cadmium Sulphate (n = 3, *standard error, **standard deviation).

Parameters	30 Days		45 Days		60 Days	
	Control	Treated with Cadmium sulphate	Control	Treated with Cadmium sulphate	Control	Treated with Cadmium sulphate
Serum Protein (mg/dl)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Serum Cholesterol (mg/dl)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Albumin (mg/dl)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

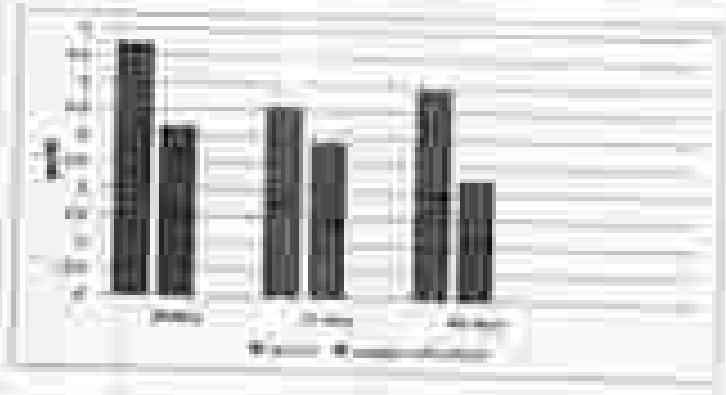

Fig 1: Serum Protein.

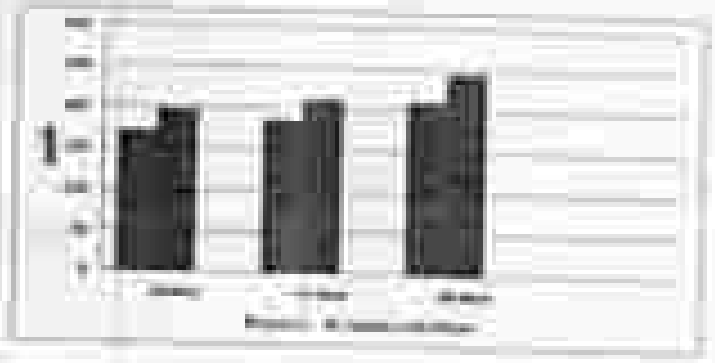

Fig 2: Serum Cholesterol.

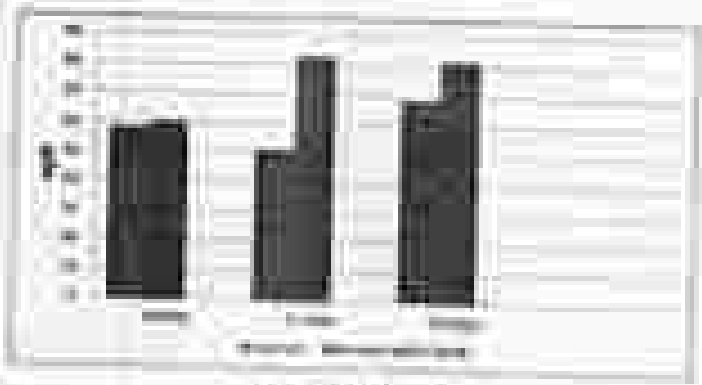

Fig 3: Glucose.

DISCUSSION

Showing the general hemoglobin significant decrease in serum protein 3.11gm/dl was found during 30 days of exposure period and 11.0% decrease was observed. The value observed after 45 days showed decrease of 2.82gm/dl, 60 days of exposure period showed percentage decrease of 42.18% and value [illegible] in 2.77gm/dl in calcium sulphate coagulated test. Similar kind of decrease in parameter was observed[illegible] in [illegible]

Glucose gluconate and it was observed that glucose protein was decreased when exposed to individual effect of cadmium. It is known that proteins are responsible for maintaining the normalcy of tissues and thereby maintained requirement of tissues therefore decline in this parameter means normal condition is lost.

Decline in Serum Protein level has been reported[illegible] in Chinese hamsters after exposure to Nickel metals. Many other workers also reported similar type of findings[illegible] in other fish exposed to other chemicals. Thus it can be concluded that measurement of protein contents can be used as diagnostic tool to determine physiological status of fish.

In the present investigation Serum Cholesterol showed increase in value (166mg/dl) observed after 30 days of exposure then and percentage increase was 16.67%. After 45 days this parameter showed increase when compared with control group of fishes and the percentage increase was 14% when compared with control group of fishes, 60 days of period showed percentage increase of 17.78%. The same steps of values have been reported by workers in Polychaeta worms, Chinese hamsters and in air breathing fishes.[illegible] Increase in cholesterol observed in present study was similar to findings of investigators who worked on other chemicals[illegible]. Thus it is quite evident from the present study that hypercholesterolemia observed in Clarias is due to impairment of liver and cholesterol of enzymes.

Cholesterol concentration in the serum of exposed fish generally increased when compared to the control values.[illegible] The report of many investigators[illegible] support the increase in serum cholesterol concentration in the present study. The concentration of cholesterol is an important structural component of membranes and the precursor of all steroid hormones.

In the present study Alpha amylase in gill of 3 mg/dl was observed after 30 days of exposure with cadmium sulphate solution then was observed increase in this parameter after 45 and 60 days and which showed significant increase in values, when it is compared with control group of fishes. 60 days of exposure period showed percentage increase of 14.16%. This increase in value was found to be statistically significant. Similar observations were recorded by different investigators on different species of fishes when exposed to different concentrations of cadmium.[illegible] Hyperglycemia and increased glycogen was reported in liver of Prawns.[illegible] The effect of cadmium concentration on the level of glucose in the blood of rainbow trout was also reported which are in accordance with the present investigations.[illegible]

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CONCLUSION

The measurement of biochemical changes in blood of fish under exposure to any toxicant may be used to predict effects upon diverse organisms. Fish have been largely used as a bioindicator for environmental toxicity studies. Effect of Cadmium sulphate on the adult cat fish, Clarias batrachus revealed significant changes in the biochemical constituents of the fish and hence give an idea about the health status of the fish population.

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Bio Medical Application of Fullerenes : An Overview

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ABSTRACT

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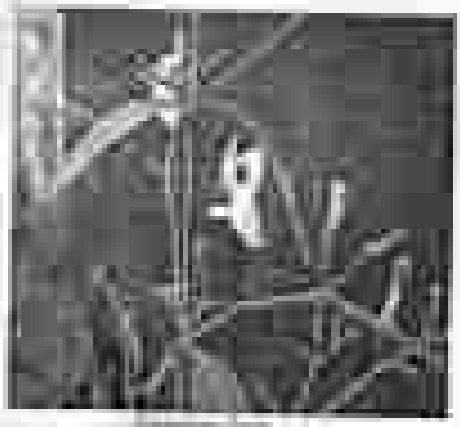

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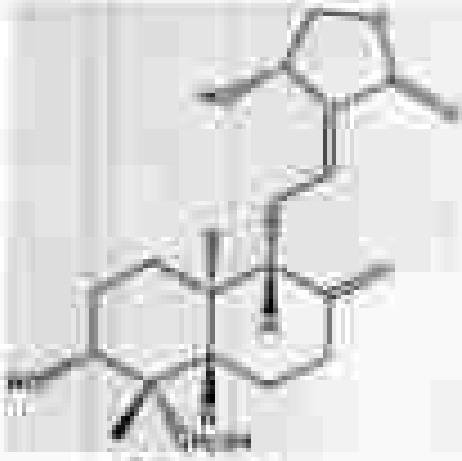

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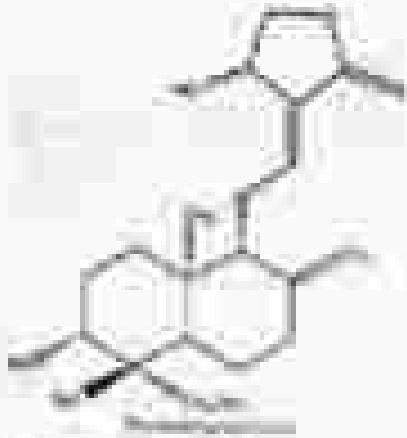

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Child Labour Problem : National Plans & Policies in Different Sectors

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Abstract :

Child is the most important asset of nation. Hence Pandit Jawaharlal Lal Nehru remarked that "The children must be given foremost in our thought". In this reference former [illegible] Bhagwati, Former Chief Justice of India said, "The Child is a soul with a being, a nature and capacities of its own must be helped to find them, to grow into their maturity into a fullness of physical and vital energy and the nature". No doubt that children are [illegible] of progress and therefore they are considered future of the nation. It is the responsibility of the society to undertake every measure which may be instrumental in the welfare development of children because our future depends on them.

Introduction :

According to the official estimates, the number of working children was estimated at 17.36 million in the 1981 Census of child labour estimates, which was [illegible] to [illegible] million in 1991 and estimated [illegible] million in the year 2000. However, these figures are a gross underestimation. But [illegible] of the Operations Research Group in a study sponsored by the Labour Ministry reveals that about 44 million children in the 5-14 age group are in the labour force. A subsequent assessment has placed the figure of working children even higher at 114 million. Most children work in hazardous conditions and all are deprived of even the most minimal educational facilities.

World Bank Report published in January 2000 has revealed that there are [illegible] working children in India [illegible] highest [illegible] of any country in the world. India becomes the second highest country where child labour in the world is concentrated. Andhra Pradesh has the highest number of [illegible] lakh children as per the 1981 census. Presently, the child labourers are concentrated mainly in Sivakasi, Tamil Nadu (matches and fireworks industries), in Uttar Pradesh, Firozabad (glass industry), Bhadohi (carpets), Moradabad (brassware), [illegible] in Rajasthan, Jaipur (gems and jewellery), in Madhya Pradesh, [illegible] and Mandsaur (slate industry). The latest report of the World Bank reveals that child labourers in India are found to [illegible] work [illegible] from generations to hazardous occupations. [illegible] in their work place, lakhs of child labourers have become permanently sick.

The commission on child labour in India pointed out that child labour is not a new [illegible]. It [illegible] in one form [illegible] a large number of children are engaged in almost all sectors of the economy and performing a variety of jobs. The jobs performed by children and the conditions in which they work, has [illegible] their

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work and child labour. What participation of children in economical activities interferes with the physical, mental or personality growth of children is termed exploitation. The committee on child labour has pointed out that -

"Labour becomes an exploitation and in the case of the child when he is compelled to work beyond his physical capacity, when hours of employment interfere with his education, recreation and rest, when his wages are not commensurate to the quantum of work done and when the occupation he is engaged in is dangerous to health and safety."

In the context of different, child labour has been a controversial topic. The word child labour has been defined in various ways.

According to the Indian council of child Welfare "every child below 14 years who contributes to the family income or is gainfully employed including those marginally working is treated as a worker".

At the other hand, [illegible], member of the united nations Child Labour Committee has defined child labour as any work by children that interferes with their full physical development, their opportunities for a desirable level of education [illegible].

According to the United Nations and the International Labour Organization, child labour is to be considered [illegible] Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education or to be harmful to the child's health or physical, mental, spiritual, moral or social development. (UN stipulation in article 32 of the Convention on the Rights of the Child). In layman's term child labour is any kind of work, children below the age of 14 are made to do that harm or exploit them physically, mentally, morally, or by preventing access to education. Child labour therefore can be defined here in any work undertaken by children below 14 years in such works which are injurious to their health, and harmful to their proper development.

There are various labour activities involving children across the length of India such as bonded child labour known as [illegible] labour, one of the worst forms of labour for children, child labour in the agricultural sector, rural children, children employed at glass factories, in matchbox, fireworks, [illegible] child labour used in the other industries. According to researchers there are [illegible] children employed in the [illegible] industry of India and almost the same amount in the [illegible] industry. Domestic child worker is also a form of child labour. Child domestic workers would be children under the age of 18 who work in other people's households, doing domestic chores, and caring for children.

The first step to solve any problem is to be aware of it. And the prime focus should be on the awareness of the causes or promoting factors. The following factors, though from the Indian perspective, are the major causes to child labour.

The leading cause for increasing child labour is poverty. Poverty has an obvious relationship with child labour and

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studies have "revealed a positive correlation between child labour and such factors as poverty." The lack of schooling and [illegible] parents to engage their children in the [illegible] child labour. Families need additional sources of income. Parents are forced to send little children into hazardous jobs for reasons of survival, even when they know it is wrong. Food for food, shelter and clothing drive their children in the trap of premature labour.

According to well known expert Dr. Asmeeta Dixit, who is principal of Bombay based Tata Institute of Social Science (TISS) poverty was the sole reason for the [illegible] of child labour. She also highlighted another important aspect that child labour works against the interest of adult labour in the sense that children are available for work at low wages which not only leads to the lowering of labour cost rather drives the adult labour out of the employment market as the child labour fulfills the need of the workers of the employer the need of the workers off the employers by substituting themselves in place of adult labour. This was also of opinion that profit motive by industry is the sole reason for employing child labour.

New population in rural regions [illegible] of resources. When there are limited means and poor [illegible] children are [illegible] and are not [illegible] for their development needs.

Poverty itself has underlying determinants, and such determined being caste. It has been seen that a comparatively higher proportion of scheduled caste children work at a younger age for less [illegible] than their [illegible]. Urbanisation and so-called development has compelled people to migrate [illegible] domestic workers [illegible] from a huge population of these migrant workers.

Traditions Families in an ancient culture where traditional business families [illegible] put the child into the business other than sending them to school. Child labour is more concentrated in traditional professions involving low technology as carpet weaving, lock making, match making, crackers and fire work, [illegible] gem polishing, [illegible] fishing etc. [illegible] Census of [illegible] Child Labour it was found that at least [illegible] children are working in various [illegible] and most of them would be [illegible] [illegible] contained by the survey of Census for Child Labour, the employment of children in non-formal sector has been increasing rapidly as compared to modern industries involving technology of advanced nature. Small scale industries particularly [illegible] like family based cottage industries, [illegible] industries, [illegible] engage more unorganised labour including their [illegible].

The attitudes of parents also contribute to child labour. Some parents feel that children should work in order to develop skills useful in the job market, instead of taking advantage of a formal education. Illiterate and ignorant parents do not understand the need for wholesome proper physical, cognitive and emotional development of their child. They are

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[illegible] they don't realize the importance of education for their children.

Adult un employment and [illegible]

According to the 'State of Child Labor', noting UNICEF's 1997 State of the World's Children Report,

"The presence of child labourers and adult unemployment [illegible] employment and income. 'Yet it is their children [illegible] — who are offered the jobs. In other words, UNICEF said that children are employed because they are easier to exploit."

Adults often find it difficult to find jobs because factory owners find it cheaper [illegible] children [illegible]. This exploitation is particularly visible in [illegible]. Majority of [illegible] in every place. [illegible] the labour of poor helpless children.

Child abuse is another cause for child labour especially in the case of the girl child. [illegible]

Another important cause is lack of proper educational facilities, which force parents to send their children to work, rather than keeping them at home and giving them a [illegible] education. In some areas, education is [illegible]. With no other [illegible], children have to spend their time in working. In [illegible] and others (2008) conducted a study to explore the [illegible] conditions, and health of [illegible] child domestic labour. Majority of the domestic child labourers were girls and migrants coming from [illegible] families. These children were physically, mentally or sexually abused. The study highlighted the poor state of domestic child labour in Kolkata, India.

Social problems within the family situation such as single parent household, alcohol and substance abuse are also responsible for child labour.

The [illegible] for child labour. Many children work, because it is an accepted norm, within the social [illegible]. [illegible] children of [illegible] at an early age.

According to the notion of "globalization" at present, it appears that people have become more mobile and the mobility is also reflected in their search for jobs. As a result, it leads to the emergence of migrant labourers and [illegible] shedding new light on the old problem of child labour.

One of the most [illegible] of the child labour is improper implementation of legislation. Shortage of staff [illegible] as well as lack of sincerity on their part leads to [illegible] of the child labour.

Principal

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[illegible]

Child Labour in Different Sectors of India :-

According to the International Labour Organization's (ILO) [illegible] through [illegible] global estimate, approximately 246 million children between the age of five and 17 are engaged in "Child labour". This [illegible] further points that [illegible] of them are in agriculture, followed by service businesses (32 per cent) and industry (16 per cent). Asia-Pacific claims the greatest share of child workers (122 million). Sub-Saharan Africa (49 million). In India, the government itself is [illegible] estimates that 12.5 million children under the age of 14 are at work in various occupations including [illegible] recognizes. NGO estimates put the number of children employed in domestic work and unofficial services sector at two million. Centre of Concern for Child Labour, a Delhi based NGO has found that there are nearly 70 million school age girl children in India who are out of schools. So the total number of working children in India is much higher than the government estimates. Child workers are engaged mainly in agriculture and allied activities, in small scale and in a variety of industries and informal sector activities in the urban areas. The most exploitative form of child labour includes child prostitution and forced and bonded labour, which is found in some parts of the country. The existence of [illegible] children in the country would not be particular attention. Children under other labour could commonly [illegible] conditions, handling [illegible] chemicals, [illegible] heavy loads, [illegible] weights. They are usually overworked, underfed and underpaid. Often we pay at all. They will be that their healthy and [illegible]

Leather Silk Industry and Child Labour :-

The India government is failing to protect the rights of hundreds of thousands of children who toil as bonded slaves in the country's silk industry. Human Rights Watch interviewed children, employers, government officials and members of non-governmental organizations in three states that form the core of India's raw silk production. Karnataka, Uttar Pradesh and Tamil Nadu. In every stage of the silk industry, bonded children are working in the unsafe work. Children work from 6 to 8 hours a day, six and a half to seven days a week. Children working silk thread dip their hands in boiling water. Use hands and bleach them. They breathe in raw and boiled from [illegible] handle dead worms that cause infections and gradually developing [illegible] that can then happen. As they move [illegible] children are at constant risk in dangerous conditions. They do not get to school and are often forced to work long hours. By the time they

[illegible] children, their are [illegible] [illegible] and other supplied by the [illegible] [illegible] said.

Child Labour in Agriculture :

[illegible] 250 million children engaged in child labor around the world, [illegible] 70 percent, or [illegible] 170 million working in agriculture. Child agricultural workers frequently work for long hours in scorching heat, hold heavy loads of produce, are exposed to toxic pesticides and suffer high rates of injury from sharp knives and other dangerous tools. Their work is grueling and hurts and violates their rights to health, education, and protection from sexual harassment and exploitation. According to the International Labour Organization's new report on child labor, the number of children working in agriculture (mainly on farms) has fallen of children involved in heavy work such as garment manufacturing, [illegible] in mines hell [illegible] [illegible] and the [illegible] percent of their work children working in agriculture have increased fully [illegible] compared to child labor in manufacturing. The report on children involved in [illegible] [illegible]

Brassware :

[illegible], **Uttar Pradesh** has a thriving brass industry that exports products such as vases, figurines, glasses, [illegible] and [illegible] [illegible] the world. It has also been a large number of [illegible] years old children (about 40,000 - 45,000) according to a study conducted in 2002, working long hours in this industry. Children are involved in almost all aspects of brassware production – removing [illegible] from molds, wear furnaces, [illegible] polishing, [illegible] chemicals in the water. They suffer from [illegible] and other respiratory diseases, [illegible] in the constant inhalation of fumes from the furnaces and metal dust.

Leather :

The footwear industry is another labour intensive industry that employs an [illegible] children in the age group [illegible] years. Manufacturers based, which are now finding a growing market in Europe and the United States. About 80 percent of the children work in [illegible] [illegible] Children work on using [illegible] They work [illegible] in [illegible] and [illegible] from neighbouring [illegible] long [illegible] and skin infections. Due to continuous [illegible] with industrial [illegible] chemicals, many from [illegible] Children are reported to be making leather [illegible] Agra, including wallets, [illegible] and [illegible] **Carpets :**

Independently reports point to hundreds of millions of children. The majority of the years are domestic, which are generally sold and published in Britain, Germany and [illegible] which are published in Japan, Belgium. Children are very commonly engaged in "[illegible]" in the carpet industry, but we do find a number of young labour. The working [illegible] from 6 years [illegible] during the first two years children [illegible] in [illegible], working for 10 hours a day. After [illegible] a child worker is paid 10 rupees per month (approximately [illegible]). Studies conducted by [illegible]

positions), Burra Burra (Back to Work: Child Labour in India, New Delhi: Oxford University Press, 1995), revealed that more than 10 percent of the children get tuberculosis, due to unhygienic conditions, overcrowding, and malnutrition. Major health hazards include body aches, fingertips [illegible] caused by the polishing dust. It is alleged that up to 100,000 children, in the age group 8-14 years, are working in the diamond industry, cutting and polishing diamond chips. These figures are [illegible]. Estimates of child workers in the gem industry in Jaipur range from 7,000 to 13,000.

Glass

The glass and glassware industry in India is concentrated in Firozabad. The glass factories of Firozabad produce a number of glass items, such as bangles, chandeliers, [illegible] glasses, beads, [illegible] bulbs, and cut glass items. The factories also produce [illegible] lamps, and laboratory glass products. The industry [illegible] 8,000 to 50,000 children as young as 8 years old. The factory floor is [illegible] due to [illegible] heat (1500-1800 degrees Celsius), [illegible] and no protective equipment whatsoever.

Child workers in the glass factories in Firozabad suffer mental retardation, asthma, bronchitis, eye problems, [illegible] injuries, and tuberculosis. Studies conducted at the Maulana Azad Medical College in New Delhi, showed genetic damage [illegible] in the body cells of the labourers working there to [illegible] for three years or more.

The list of industries exploiting children [illegible] match, fire works, stone quarrying, cigarette making, fireworks, fishing and [illegible]. Of course, the [illegible] number of children are forced to work in [illegible] domestic [illegible] and forced to beg.

The list is endless, but the point is [illegible]. Forced labour, [illegible] long hours, lack of [illegible], no free time, no education, no [illegible], no privacy, no freedom of movement, no sick leave/health care, [illegible], constant exposure to toxic [illegible], emotional isolation, [illegible] physical punishment, [illegible], sexual abuse and extremely high mortality rate.

We must all put an effort forward to [illegible] products that may include Child labour. India has the highest number of NGO's working for children and fighting against child exploitation, but this is not enough; a problem [illegible]. The problem would need to be looked at and tackled from a variety of fronts and would require a lot of time and effort, but with the world's involvement, this problem can be fixed. All [illegible] figures could finally be brought to light and these children could get back to being children again.

National Plans & Policies for Child Labour

Child labour has become a global phenomenon today and is 'harsh reality'. The 'harsh reality' of child labour arises out of the fact that in the present state of development in the country, many parents [illegible]

Principal

[illegible] College

[illegible]

on account of poverty have to send their children to work in order to supplement their income. The burden derived from the child labour, however meagre, is essential to sustain the family. The problem exists in almost all countries of the world but its extent varies from country to country. However, the predominance of child labour in many Third World countries continues to be quite pronounced, even though reliable data are limited. India has the large population of child labourers who constitute nearly [illegible] per cent of the work force and are result of economic compulsions of parents in many cases.

The main reasons which give rise to child labour are widespread poverty, unemployment and underemployment among the adult workers, large families, lack of [illegible] facilities, illiteracy and ignorance of parents about the importance of education as well as about the impact of labour on the health of their children are some of the reasons which breed child labour.

The issue of [illegible] children is very important because the issue of [illegible] [illegible] to a child. Actually child is future of the nation. On December 10, 1948 the General Assembly of the United Nations adopted and proclaimed the "Universal Declaration of Human Rights" which [illegible] to every individual some basic rights only by the virtue of being human. Though human rights are for everyone it has been recognised by societies all over the world that children are the most vulnerable humans. They ought to be given special care and protection for their healthy development. Many special instruments have been drawn up to safeguard and enforce child rights.

Rights to Survival & Healthy Development:-

Every child has the right to develop to his or her full potential, and is entitled to:

- Right to basic needs including food, shelter and access to healthcare.
- Right to a childhood: to rest and play and to have friends.
- Right to protection from economic exploitation or any work that interferes with education or that is hazardous and harmful physical, mental, and social development.
- Right to special assistance for children with special needs. For example, [illegible] children, displaced children, children of [illegible] and disabled children.
- Right to free primary education.

Considering the importance the General Assembly adopted on 20th Nov. 1989 the United Nations Convention on the Rights of the child which came in force on 2nd sept., 1990 after receiving the necessary ratification. India acceded to it in the year 1992.

Recently [illegible] "A world fit for children" for improving health, education, protection of children under the age of 18 yrs, has been ratified on [illegible] February 2002 by the UN General Assembly special session. This was the [illegible] special session in which children were not only [illegible]. Now the commissions for protection of child rights act, 2005 has been enacted.

Principal
[illegible] College
[illegible]

Indian Journal of Positive Psychology

Chief Editor
Manuel Vieira, PhD

IAHPP

Indian Journal of Positive Psychology

Volume: 9 Issue: 2 June, 2018

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Dr. Rina Rai

Associate Professor

Department of Political Science

R.G.P.G.College, Meerut

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I[illegible]

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RESEARCH ARTICLE

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[illegible]*

Department of Botany,
[illegible]

Received [illegible]

[illegible]

Keywords: [illegible]

INTRODUCTION

[illegible]

MATERIAL AND METHOD

[illegible]

*Corresponding Author

RESULTS AND DISCUSSION

[illegible]

Table 1: [illegible]

IOSR Journal of Humanities and Social Science

IOSR Journals
International Organization of Scientific Research

(46)

e-ISSN: [illegible] | Volume [illegible] | Issue [illegible] | p-ISSN: [illegible]

IOSR-JHSS

Contents:

[illegible]

International Organization of Scientific Research [illegible] organization, world of [illegible] delivering services and services to education professionals and researchers around world, especially those from developing countries.

IOSR is the association of Scientists, Research Scholars, Professors, Directors, Managers, Engineers, Doctors, pursuit of various fields like Engineering, Management, Pharmacy, Applied Sciences and Mathematics.

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- IOSR Journal of Electrical and Electronics Engineering (IOSR-JEEE)
- IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)
- IOSR Journal of Electronics and Communication Engineering (IOSR-JECE)
- IOSR Journal of VLSI and Signal Processing (IOSR-JVSP)
- IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT)
- IOSR Journal of Humanities and Social Sciences (IOSR-JHSS)
- IOSR Journal of Pharmacy and Biological Sciences (IOSR-JPBS)
- IOSR Journal of Business and Management (IOSR-JBM)
- IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
- IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS)
- IOSR Journal of Applied Physics (IOSR-JAP)
- IOSR Journal of Applied Chemistry (IOSR-JAC)
- IOSR Journal of Mathematics (IOSR-JM)
- IOSR Journal of Research & Method in Education (IOSR-JRME)
- IOSR Journal of Applied Geology and Geophysics (IOSR-JAGG)
- IOSR Journal of Nursing and Health Science (IOSR-JNHS)
- IOSR Journal of Humanities and Finance (IOSR-JHF)
- IOSR Journal of Sports and Physical Education (IOSR-JSPE)
- IOSR Journal of Polymer and Textile Engineering (IOSR-JPTE)
- IOSR Journal of [illegible]

IOSR Journal of Humanities and Social Science

IOSR Journals
International Organization of Scientific Research

e-ISSN: [illegible] | Volume: 21 | Issue: 1 (Series-3) | p-ISSN: [illegible]

Contents:

[illegible]

Women Entrepreneurs In India: Challenges And Opportunities

Dr. [illegible]
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

5. WOMEN ENTREPRENEURSHIP AND SHGs

After independence, several legislative acts were passed like the special act of 1956(the Hindu marriage act of 1955 and the Hindu succession act of 1956), the dowry education and maintenance act of 1956 and the dowry prohibition act, 1961, the maternity benefits act, 1961 the legal remuneration act, 1976 and the criminal law amendment act, 1983 . There are laws been formulated to remove constraints hindering the progress of women.

Bajpai & Nirmla (2007) present data project in the form of a book i.e. Women Empowerment and Reproductive Behaviour. They we gave their strong recommendations for women empowerment in India.Few recommendations are relevant to this study :

- Concept of women empowerment in Indian context has to be different from that of western countries. Women empowerment must be conceptualized in double track 'Partner Upward' and 'Partner Midward' and create 'Partner Northward' relationships and levels.
- Women empowerment is a social responsibility. This economic benefit for this should not factor to the proportional share of males to stop and the gains of decline in gender consideration in males, opportunity opening in the course of time.

Bali and Singhal (2015,p.7) move to the paper about Social Entrepreneurship. They explained, "Social entrepreneurship is generally outlined as a multi-disciplinary access to this pursuits to a variety of ways in business and professional life of an individual. This concept is endeavour for those individuals or business organizations that want to find explanations for social obstacles with the help of business skill and know how. Social entrepreneurs are more interested to taking into consideration what they have done for the society rather than the profit that they have earned their revenue. These social entrepreneurs normally indulged in facilitate wide ranging [illegible] developmental and ecological objectives usually linked with the non profit establishments." In this research paper they quoted the name of Christian Seelos and Johanna Mair. Christian Seelos and Johanna Mair in their article titled "Social Entrepreneurship: Creating New Business Models to Serve the Poor" state that the term "Social Entrepreneurship"(SE) is used to refer to the rapidly growing number of organizations that have created models to efficiently carrying to have human needs that existing markets and institutions have failed to satisfy. Social Entrepreneurship combines the resourcefulness of traditional entrepreneurship with a mission to change society.

In the era of globalization, Indian women are playing a magnificent role in the progress of their country and trying to increase and raise the and per capita income. In rural areas, women are helping in agricultural work with the male family members. They are not earning money in that time but they are saving money. In other areas, especially in developing countries, Indian women are actively participating in two sectors – organized and unorganized. S. D. Gaur and J.L. Singh (2002:171-175) said – 'The concept of entrepreneurship is not a new concept but what is new is the importance given to this term in recent years. The word entrepreneur

[illegible]

[illegible]

[illegible]

1. [illegible]
2. [illegible]
3. Challenges for women entrepreneurs.
4. Opportunities for women entrepreneurs.
5. Suggestion to the government and policy makers.
6. Suggestions for [illegible]

II. WHAT IS WOMEN ENTREPRENEURSHIP?

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Principal

III. REVIEW OF LITERATURE

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Table 1 – [illegible]

Country	Economic Impact	Year	Source
Canada	[illegible]	[illegible]	[illegible]
	[illegible]		
	[illegible]		
Germany	[illegible]	[illegible]	[illegible]
	[illegible]		

	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

It is a fact that the number of women in business world is very low. By the table we can explain the [illegible].

The United Nations economic commission for Europe also has similar data that can [illegible] estimation of the importance of women entrepreneurship.

While we can't assume the every firm included represents an independent firm, we do know that the situation mapping represents primarily field independent firms, thus making the available data [illegible] suitable for our purpose of establishing the importance of women's entrepreneurship. In all countries [illegible] women represent the minority of the employers and were dominant workers. Yet there are important variations among the countries. The lowest ratios of women employers are found in Iraq between 14% and 19% and the highest ratios vary between 29% and 34% when excluding the extreme cases of both ends (Iran might be overestimating).

In Iraq, for the 28 countries that have data available for the year 2000, we find close to [illegible] million women employed and nine million workers. Hence women employers and own account workers represent a substantial part of the entrepreneurial economy. However, we are still unable to estimate their structural impact in terms of employment, internal active or GDP growth.

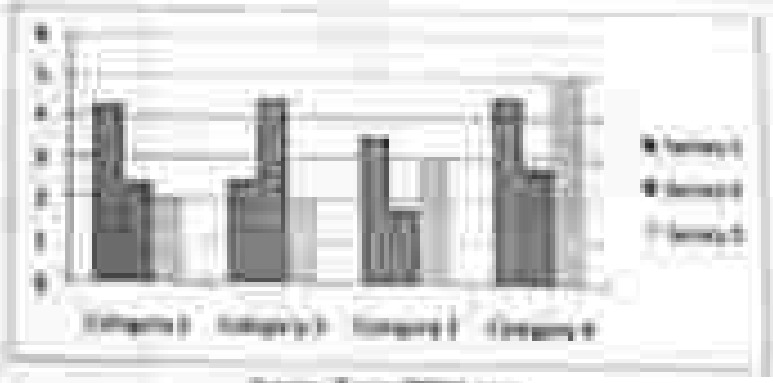
No doubt that women had a relatively inferior position than men in society. They are facing Double Burden, biologically reproductive and as caregivers, family work load but no money. Since late 1960s for women's entrepreneurship, we should try to change the interests and attitude of women and society. So far there many women entrepreneurs are busy in retailing and simple manufacturing work very little growth potential or they are just focusing on education and health care. If women entrepreneurship will come in the picture of business, Indian society will increase its social capital with social, political, legal, cultural and business values.

Till now, we are not familiar with women entrepreneurs but we can divide them into four parts (A) Big Scale Business Women (B) Medium Scale Business Women (C) Small Scale Business Women Medium and Small Scale Business Women cannot come in counting because they are not highlighted. In the table we can show the percentage of self-employed women in selected Asian countries:—

Table 2 – Self-employment for women in Selected Asian countries (percentage)

Category	Nepal (1998)	Thailand (1993)	The Philippines (1994)	Pakistan (1992)	Bangladesh (1996-96)
Employer	0.36	[illegible]	[illegible]	1.20	0.19
Self-employed	9.60	18.20	11.20	42.40	1.60
Employers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Employed	0.14	[illegible]	[illegible]	[illegible]	[illegible]
Family		[illegible]	[illegible]	[illegible]	[illegible]

Women					
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



Source: Kumar (2004) [illegible]

To know the [illegible] of women in business, we can [illegible] some [illegible], which [illegible] published in Times Together (Newspaper) in [illegible]

(a) **Gujarat: Women's Dairy Cooperatives** – Traditional India's dairy cooperatives involving farm [illegible] running for [illegible] but are gradually changing. Today, 50% of Gujarat's members are women, and nearly all, 2000 women cooperatives are functioning in his country. Amongst Sabra Ganga (Gujarat) [illegible] Gujarat, where now livelihoods for women are being [illegible] this year (Gujarat, September 2015).

(b) **Technology transformer rural Women** – Women and men from [illegible] in Uttar villages of Madhya Pradesh, Chhattisgarh and Jharkhand have transformed their [illegible] and technology [illegible] (Times Group [illegible] the project [illegible] in [illegible] 2015).

(c) **Barefoot female solar engineer** – The social [illegible] community problems by [illegible] priority [illegible] the solutions in their own family. The "Barefoot" solar engineers [illegible] simple evidence of the benefits of this [illegible]. Drawn from [illegible] families, they [illegible] established for [illegible] a [illegible] based on [illegible], and [illegible] of their communities.

These are some [illegible], which are published in Times Together of Monday [illegible] April 2017

1. **Resources For Women Business Owners**

Some associations are helping women entrepreneurs in America. [illegible] (Association of Women's small Business) has [illegible] of [illegible] in useful solutions for women entrepreneurs.

- Alliance of Business Women International
- American Business Women's Association
- Association for Enterprise Opportunity (AEO)
- Association of Women's Business Centers (AWBC)
- Athena Foundation
- Business Women's Network
- Center for Women's Business Research
- Center for Women and Enterprise Community Entrepreneurship Programme
- Committee of 200
- Count me in
- Digital Women
- Direct Selling Women's Association
- [illegible] Network, Inc.
- Franchise Initiatives For Women
- Kiva Bank
- Ladies who launch

Principal
Raghunath Girls' [illegible] College
Dhanbad

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
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- [illegible]

IV. STUDY OF WOMEN ENTREPRENEURS IN DISTRICT CITY [illegible]

[illegible]

1. Lack of [illegible]
2. Lack of [illegible]
3. [illegible]
4. [illegible]
5. [illegible]

V. SOLUTION FOR THE BETTER CONDITIONS OF WOMEN ENTREPRENEURS

[illegible]

[illegible]

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[illegible]

[illegible]

[illegible] the bride's family also incurs wedding expenses and the possibility of future monetary demands from the groom's family.

Compounding the problem is that Indian women traditionally marry at a young age when they may not have the necessary skills to obtain an income. In rural areas, [illegible] of Indian women are married before their 18th birthday; the median age at first pregnancy is [illegible]. Combined with an inability to own land, this makes them financially dependent upon their husbands, and may contribute to the common viewpoint that women and girls are a burden to families, husbands, and society at large.

Infrastructure plays a part in the low status of women as well. Many schoolhouses, especially in rural areas, do not contain bathrooms. Although men are allowed to relieve themselves wherever they please, this is not the case for women. Lack of access to a private bathroom has consequently kept many women and girls from attending school and therefore improving their circumstances.

Enhancing the quality of growth is an important objective of the development paradigm in many developing countries. Key indicators of quality of human capital are quality food in adequate quantity, adequate clothing, comfortable shelters, clean environment, quality education and employment, dignity and life security and economic equality. Health is a major segment of human capital. The health status is usually measured in terms of life expectancy at birth, infant mortality rate, mortality rate, crude birth rate, crude death rate, absenteeism at work place and work efficiency. Life expectancy is average number of years of life remaining at a given age and it is one of the broadest standard of living measures. The average age to which an Indian can expect to live is increasing every year. The increase is consistent and almost uniform. It can broadly be concluded that the standard of living in India is improving consistently though not upto the expected levels.

Low Birth Weight (LBW) remains an unresolved important [illegible] in India. [illegible] infant mortality rate is associated with LBW in India. [illegible] of the new born in India have LBW. The prevalence is slightly higher in rural areas ([illegible]) than in urban area ([illegible]). The prevalence has remained almost static over the last two decades. In a rural area of Haryana, LBW prevalence was [illegible] in [illegible] and [illegible] in [illegible]. Nutritional deficits in pregnancy is among one of the many factors associated with LBW in developing countries. Nutritional needs increase during pregnancy especially in the [illegible]

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life-threatening of pregnancy. Additional counseling to mothers early in pregnancy can help improve dietary intake during pregnancy. Anemia is more prominently prevalence among adolescents and preschool children, pregnant and lactating mother, among adolescents have gained more importance as they are the most crucial segment of the population whose well-being influences the future mothers. Microcephalic deliveries, especially near deliveries in adolescent females can seriously affect their health. Eighty percent of adolescent girls of 10 to 19 years of age are suffering from iron deficiency anemia.

Among adolescents, iron deficiency anemia not only increases peak prevalence but also leads to complications of pregnancy in the later years. Targeting adolescent girls in anemia prevention programme would not only have an immediate corrective effect, but may also have long term preventive effect during pregnancy and increase female employment that consist of nutritional aspects should be one of the general development goals to be achieved in the early years of the new millennium. Field based approaches from higher economic achieving for reaching will long lasting benefit for the control of iron and other micronutrients deficiency.

Infant mortality rate is defined as the number of deaths of infant per 1000 live births. The most common cause of infant mortality is dehydration from diarrhea which is invariably due to severe vomiting water and poor sanitation. The infant mortality rate is associated with a variety of factors, such as maternal health, access to medical care, socio-economic conditions and public health practice. The UNICEF's latest figures released state that infant mortality rate in India is 57 percent per thousand live births.

Fertility rate is the rate of live births in an area to the population of that area expressed per 1000 population per year. It is basically the number of children that the average woman will have in her life time. If the average woman have exactly two children in her life time, that is just enough to replace herself and her mate and thus maintain the population. For the first in India's history, fertility rate fell below 3 in 2000.

Birth rate is the ratio of total live births in a population in a specified community or country in a specified period of time. The birth is often expressed as the number of live births per 1000 population per year.

Death rate is the ratio of total deaths in a population in a specified community or area over a specified period of time. The death rate is often expressed as the number of deaths per 1000 population per year.

These indicators of health are determined by numerous factors such as per capita income, nutrition, housing, sanitation and drinking water, social influences, health

and medical services provided by government. Sanitation is an issue and disease for women and development. The results of good sanitation are stronger national economy, less illness and better health.

Hence, India faces the daunting challenge of making health care access of its rich population and lowering accessibility, efficiency and quality of health care and thereby achieving the objective of growth with equality and social justice. India is still one of the under-nourished where communicable diseases are still not under control.

Today's world demands flexibility and responsive change for which many are not prepared. Health related issues should be designed to make everyone to meet future challenges with confidence. Health economy should help people apply the finding of the physical, biological and social sciences to improve the quality and standards of individual and family life thus contributing to the health of all.

The predicament of hungry and poor of poverty of India and other parts of the world is due to large amount to the subjugation, marginalization and disenfranchisement of women. Women suffer from hunger and poverty in greater numbers and to a great degree than men. On the other hand, it is women who bear the primary responsibility for activities related to food, hunger, education, nutrition, health and family income. India, with a population of 125 crores, is the world's second most populous country. Of that number, 120 million are women who live in poverty. India is one of the few countries where women significantly outnumber men, and this population has increased over time. India's abnormal mortality rates to need women are among the world's highest. From a global perspective, Indian women (at for 19 percent of all from Africa and 27 percent of all maternal deaths.

Nutritional deprivation has two major consequences for women. They cause retardation of growth potential and anemia. Both are risk factors in pregnancy, which remains ranging from 40-50% in urban areas to 70-90% in rural areas. This condition complicates child bearing and result in maternal and infant deaths, and more weight infants. One study found anemia in over 95% girls of age 6-14 in Calcutta, around 87% in the Hyderabad area, and about 10% in the Chennai area. This study notes, "The prevalence of anemia among women age 15-19 and 20 depends follows similar patterns and levels."

Surviving through a normal life cycle in a resource poor household's presents challenges. In adults, women get less health care than men. They tend to be less nutritious in the belief that they are sick and they will wait until their ailments are progressive before they seek help or help is sought for them. Studies on promotion of rural primary health centers reveal

[illegible] Women are treated in almost all part of the country with differences greater in [illegible] Women's consciousness to [illegible] suffering and lack satisfaction to be assessed by male [illegible] are additional constraints in their getting adequate health care, [illegible] maternal mortality rate in rural areas are among the highest in the world. Women's health is hampered by lack of privacy as and poor quality of reproductive services.

Government, in drafting health policies and programs, need to adopt a rights based, gender sensitive and women and adolescent friendly approach to health.

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Terrorism, Media and Society: A Brief Observation

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New communication technologies such as mobile phones and cable television are allowing journalists to gather the photographic information with ease from more part of the world. The digital nature of the new industry which had led to a compression of time and space means not just new style images of demonstrations, but also nearly active involvement of these occurring on the screen of laptop, home or mobile. What makes photographic technology of today's condition, basically more role can take in different and diversed ways. Either the media as active part in the conflict and have responsibility for increased violence or more enlightened and out of the conflict, showing contributing to the resolution of conflict and prevention of violence. Indian role of media today is a great contribution, only a little change further and after, depending on contemporary situation, including the relationship of the media has to power in the conflict and the dependence the media has on the power holders in society. Media is both a channel and tool of state propaganda. Media can also be weapon of violence that propagates biased information and misinformation. Media of all have in conflict with diverse ideologies and harmful groups, in this way media becomes personalized and extremely influential in attributes towards conflicts.

While reporting this aspect, so many ethical relationship in keeping the consistency and independent journal, it is more often than not that exhibition of a single event journal show shock and trauma at the viewers.

Journalism must appropriate relationship to safeguard deeper meaning of the matter and not leaving behind more the more effect of their reporting. They should seem as witnesses of the suffering need for such disappointed. Journalism must be aimed at bond of strong nation and not contribute by amusing the others. Journalists play a vital role for human in showing the perpetrators of terror, encouragers of protesting in order to stand the servant of the terrorists, be honest here, honest, continue, stand of harmony in this beautiful a world.

The amount spent from and the media the media grab has on the Indian print media. The Indian print media has the advantage of time in order to achieve relatively more balanced coverage, which contributes to the time spent between terrorist incidents and their coverage in print.

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The conference revealed that the goals of terrorists are not solely limited to attracting the attention of the masses but rather to publicize their political causes, inform about the increase for terrorist needs, and explain their reasons for resorting to violence.

The media functions as a tool to decide the power asymmetries between state and the society. They figure against in an annual and ideological fashion, based on perceptions of their self-expression, legitimacy their acts, and justifying their violence.

Media Use against Extremism

Technical impacts of communication globally may indeed, technological advancements and changing audience behavior in the past decade evoked concerns globally on global media and greater consciousness. The mass media of communication have changed in dramatic ways, mostly because of the global reach of the internet. The new and emerging media has made it easier for terrorists to publicize their messages to the world as well as to draw attention and have technological tools enabled the transmission of terrorist messages to spread a broader audience with a more consistent message.

Considering its key framework as an effective power for media coverage, media focusses terrorist activity mainly between strategic surge and accomplishment. To be more specific, comparison has highly suggested that media, as a very attractive subject for the media, as it has the elements of drama, danger, blood, human interest, religious stories, heroes, shocking footage, and action.

Another element is that audience is a critical and defining security in accomplishing celebrated culture and is critical to the success and financial maintenance of contemporary media organizations.

The audience highlighted that the problem arises not in why the media covers terrorism, but how to have the media's own behaviour. It is not a large the case that the media should not be acting exclusion seeking, changing attention, giving publicity or what it is doing, repeating the same images over and over again, concerning physical and mental health consequences of disasters, and creating new conditions.

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To understand how the media perceives terrorists and terror related incidents and news, one should take a closer look at the mediums the media employs. The media generally uses agenda setting and framing to highlight and make certain issues more prominent than others. Agenda setting is the theory that the more attention a media sector pays to a certain phenomenon, the more importance the public attributes to such an issue.

Framing, on the other hand, is "selecting some aspects of a perceived reality and making them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described".

Internet Cyber Terrorism

The Internet has become a central forum in a global view for terrorist groups. Numerous communities that are being directly affected by the global political crisis, the communication of violent and extremist groups has also found its way on the internet. In other words, the age of the internet has brought an age of cyber terrorism and cyberwar terrorists. In way the web is mixed, news sources, and spread from messenger sites to traditional mediums of the media, identifying the internet presents a fundamental dilemma due to the inherent tension between international and the communication mediums. For speech, privacy, and press freedom, it is important that governing measures against the cyber activities of terrorists. These measures can include tracking their activities on social networks, following their conversations and activities on social media, and ensuring the option of collaborating between cyber security agencies. In addition to this, ensuring that of national level to protect the news using the internet to propagate the policy, morality and trust and preservation can identify terrorists and prevent a potential attack.

From the above discussion, it becomes clear that a full-blown symbiotic relationship exists between terrorism and the media. Terrorists try to use the media for their advantage, and media are happy to broadcast events related to terrorism. Simply because it is newsworthy, but also because it possesses many of the features that make it very attractive to the public and thus to the media. New media, especially the internet and social networks are particularly attractive for terrorists since they give their objectives directly, leading to a situation where the media becomes an extension of their propaganda part of the terrorist organisation. Media should understand their responsibility towards the

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[illegible] and doubt about the news that matter the people. Therefore the news should not be more sensationalizing news to increase its readership rather on that criteria spreading the news.

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New Trends in Politics for Both Sharif [illegible]

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Conclusion:-

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महिला शिक्षकों का भारतीय समाज में योगदान

डॉ० अर्चना पाण्डे*
शिवी वर्मा**

I

[illegible] समाज में हमेशा से ही नारी शिक्षा का अभाव की दृष्टि से देखा जाता रहा है। आज हम प्राचीन [illegible] की बात करें तो उस समय शिक्षा पुरुषवर्ग में ही जाती थी तथा शिक्षा प्राप्त करने का अधिकार केवल पुरुषों [illegible] को ही था। लड़कियों को शिक्षा की कोई व्यवस्था नहीं थी। इसके पश्चात् बौद्ध कालीन युग में भी नारी शिक्षा की उपेक्षा की गई। इस समय में भी शिक्षा केवल बौद्ध [illegible] एवं विहारों में दी जाती थी। यद्यपि शिक्षा पाने वाले प्रत्येक व्यक्ति इसके लिये बनाये गये नियमों का पालन करते हुए बुद्ध बौद्ध भिक्षु तथा विहारों में रहकर शिक्षा प्राप्त करते होंगे थे। आगे तथा पुरुषवर्ग के भोजन की व्यवस्था, [illegible] आदि सभी कार्य इन बातों को ध्यान में रखते होंगे थे। इसलिये इन नियमों के रहते भी पुरुष ही केवल पाठ्यक्रम बड़े पर्याप्त भी महिला वर्ग में पाकर भी वह शिक्षा प्राप्त कर सकती थी किन्तु स्त्रियों वर्ग की महिलाओं को शिक्षा प्राप्ति के लिये कोई व्यवस्था नहीं थी। इसलिये पुरुष वर्ग पुरुषों [illegible] ही पुरुषवर्ग पूर्ण। मुस्लिम समाज में पहले भी शिक्षा का कोई विशेष महत्व नहीं दिया जाता था। इस काल में शिक्षा मकतब एवं मदरसों में दी जाती थी। इस मकतबों में छोटी लड़कियाँ लड़कों के साथ पढ़ती थी तथा कुछ इसके बाद आगे की शिक्षा प्राप्त करने के लिये घर पर ही शिक्षा की व्यवस्था की जाती थी। केवल उच्च घराने की महिलाओं के लिये अलग प्रबन्ध था। उन्हें घरानों में शिक्षा अनिवार्य रूप से दी जाती थी।

इस युग में महिला, पुरुषवर्ग, पुरुषवर्ग आदि विभुतों सहित्यों हुई विभिन्न वर्गों के बीच शिक्षा प्राप्त करने में मुस्लिम समाज में अत्यन्त नगण्य व अत्यन्त कम दिया। इस युग में मुसलमानों की शिक्षा पर ही दी जाती जाती थी। [illegible] में मुस्लिम [illegible] मुस्लिम [illegible] स्थापित करते थे। इसलिये [illegible] व [illegible] महिलाओं के लिये अलग व्यवस्था नहीं की व्यवस्था दिया गया। इस समय लिखित

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*[illegible] (Ph.D.) [illegible] [illegible] (वि० लेखा) [illegible] केन्द्र
**[illegible] (Ph.D.) [illegible] [illegible] (वि० लेखा) [illegible] केन्द्र

[illegible] में बाधा न आती अधिक कन्या का पाता अवश्य था। इसलिये इस युग के अधिक [illegible] की स्थापना मिलेगा। इसके अतिरिक्त कन्या विद्यालय व गुरुकुलों का विकास [illegible] गति से हुआ। विदेशी भी इस अधिक कन्याओं में विशेष रुचि रखते हैं। इसी [illegible] के अतिरिक्त कन्याओं में विदेशी [illegible] देखा जाने लगी। अधिक कन्या की शिक्षा हेतु विभिन्न कन्या शिक्षा केन्द्रों की व्यवस्था की गई। इन केन्द्रों को [illegible] के साथ ही जाना जाता था।

विदेशी की अनुपस्थिति की बात की जाए तो नारी शिक्षा पर [illegible] के उपदेशों का गहरा प्रभाव पड़ा है। नारी की शिक्षा के विषय में अधिक बल [illegible] है। पुरुष जाति अधिकतर दया नारी पुत्र नारी शिक्षा के प्रति [illegible] से पूर्वाग्रहित था है। यह नारी बुद्धि एवं क्षमता में किसी पुरुष से कम नहीं है। उसमें पुरुषों के [illegible] उपलब्ध क्षमता है जो उन्हें किसी भी प्रकार की शिक्षा प्राप्त करने का अधिकार प्रदान करती है। मनु ने भी यही तर्क बताया है कि नारी–शिक्षा का [illegible] के लिए विवाह से पूर्व के [illegible] की आवश्यक शिक्षा अवश्य दें। [illegible] कन्या की शिक्षा उन्हें अवश्य दिलानी चाहिए।

[illegible] राष्ट्रीय [illegible] के [illegible] के दल की [illegible] एवं विकास की जाति पढ़ने के लिये शिक्षा की महत्ता को समझा दिया था। साथ ही उन्होंने नारी शिक्षा के [illegible] की व्यवस्था। स्वतंत्रता आन्दोलन के दौरान नारी शिक्षा के क्षेत्र में कई [illegible] कार्य प्रारंभ किये गये। सन् 1947 तक भारत में नारी शिक्षा की संख्या [illegible] थी और पढ़ने वाली छात्राओं की संख्या [illegible] थी। इस प्रकार विदेशों की शिक्षा में काफी सुधार किये गये तथा उन्हें [illegible] का अधिकार प्रदान करते हुए पुरुषों के समान शिक्षा प्राप्त करने का अधिकार प्राप्त हुआ। विदेशी की [illegible] कन्याओं की शिक्षा की ओर ध्यान दिया गया। इस कारण कन्या शिक्षा के लिये कई विद्यालय स्थापित नहीं थे। विदेशी [illegible] शिक्षा [illegible] ने कन्या की [illegible] शिक्षा के लाभ के पक्षधर थे। परन्तु जैसे जैसे समय में परिवर्तन आया कन्या के विभिन्न शिक्षा [illegible] की व्यवस्था का [illegible] गया। अब विदेशों की कन्या शिक्षा के लिए [illegible] कार्य किये जाने लगे। भारत के महिलाओं कन्या शिक्षा [illegible] कन्या [illegible] प्रदान करने के लिये [illegible] आगे आने लगी। भारत में महिला [illegible] के विषय में अगर बात की जाये तो [illegible] कन्या के [illegible] की प्रोत्साहन [illegible] है। [illegible] कन्या को केवल महिलाओं की कन्या माना जाता है, क्योंकि [illegible] कन्या का [illegible] [illegible], [illegible], [illegible] आदि से होता है तथा

महिलाएँ इन सम्बन्धों अनुपातों व आकारों को पूर्ण पूर्ण करते हुए लोक चित्रों का निर्माण करती हैं।

आधुनिक युग में महिला कलाकारों ने न केवल निजी तौर पर नयी पहचान दिलाई है अपितु [illegible] भाग ले अपनी श्रेणियों को समाज रचने में महत्वपूर्ण भूमिका भी अदा की है। आधुनिक युग में महिलाओं की कला के क्षेत्र में भागीदारी काफी प्रशंसनीय रूप से बढ़ी है। आरम्भ में केवल मुख्य ही महिला कलाकारों की गणना आता था। इनमें चन्द एक मशहूर मुसलमान का नाम उल्लेख है। इन दोनों कलाकारों ने न केवल अपने को अपितु [illegible] नारी जाति को सम्मान दिलाया। आज तक नारी को घर की चार दीवारी के अन्दर कला करने की मनाही समझा जाता था [illegible] कोई जाने या [illegible] कोई महिला ही देखा हुए हुए तक नहीं था। परन्तु बीसवीं-बीस कला के माध्यम से महिलाओं ने स्वतंत्र व [illegible] अपना अपना मनमुख स्थापित करना आरम्भ कर दिया। यह एक ऐसी कला थी जो [illegible] को भलाने का नाम नहीं लिया। ब्रिटिश इंडिया इण्डिया कम्पनी के भी विभाग [illegible] कलाओं के लिए 1822 में कलकत्ता में स्कूल ऑफ आर्ट फॉर लेडीज (School of art for Ladies) के नाम से विदेशी महिलाओं के लिये एक स्कूल आरम्भ किया। इस स्कूल में कलात्मक महिलाओं को शिक्षा दिलवाने वाला था। ब्रिटिश सरकार काल में ही कलकत्ता में सन 1929 में पूरा महिला कलाकारों की [illegible] कलाकृति का आयोजन किया गया जिसमें महिलाओं द्वारा [illegible] कृतियाँ प्रदर्शनी [illegible] देवी को लोक कला (Naive Art) के लिये [illegible] प्रदान किया गया। [illegible] ऐसी कई महिला चित्रकार हुई जिनकी कलाकृतियाँ दूर दिखाई [illegible] [illegible] (लिखाई) [illegible] तैलचित्र, लोककला महिला चित्रण, मुगलिया व मुगलानी शैली आदि शैली की महिला चित्रकार हैं। [illegible] के कारण कलाओं की [illegible] के महिला चित्रकारों की कला के क्षेत्र में [illegible] चित्रकार के मुकाबला प्रदान किये। [illegible] कलाओं के कला के क्षेत्र में [illegible] महिला नारी। इस महिला ने [illegible] मुख्य [illegible] कई [illegible] चित्रकार [illegible] नारी। इन चित्रकारों के [illegible] चित्रकार के [illegible] महिला ने चित्रकार [illegible] [illegible] चित्रकारों के [illegible] चित्रकार [illegible] [illegible] चित्रकारों के [illegible] [illegible]

[illegible]

[illegible]

[illegible] Interior Designing [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

संदर्भ संकेत

1. [illegible] – [illegible] 2002–03, पृष्ठ–[illegible]

2. [illegible] – अक्टूबर 2003, अंक 7, वर्ष 4, पृष्ठ–[illegible]

3. [illegible] – अक्टूबर 2003, अंक 7, वर्ष 4, पृष्ठ–[illegible]

4. [illegible] – [illegible] पृष्ठ – [illegible]

5. [illegible] – [illegible] पृष्ठ –[illegible]

6. [illegible] – [illegible] पृष्ठ [illegible]

7. [illegible] – [illegible] पृष्ठ–[illegible]

8. [illegible] – [illegible]

पृष्ठ – [illegible]

9. [illegible] – [illegible]

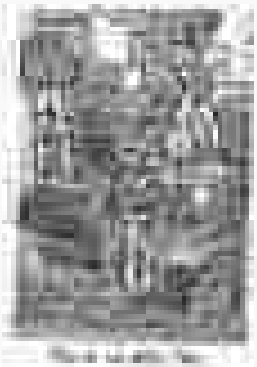
पृष्ठ–[illegible]

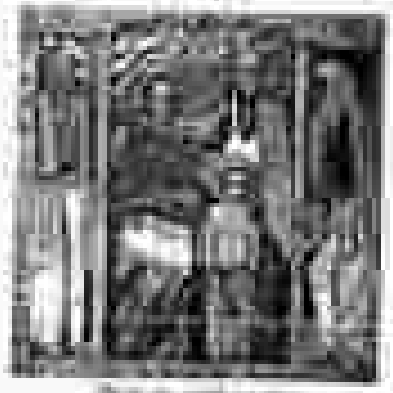
10. [illegible] – [illegible]

11. [illegible] – [illegible]

[illegible]

Principal





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[illegible]

Home Science

A study on Conduct Pattern and Intellectual Maturity in Insomnia

[illegible]

[illegible]

I. Introduction

[illegible]

Insomnia, the most prevalent sleep disorder, affects 10-15% of the general population. Insomnia is a sleep disorder that is characterized by difficulty falling asleep. People with Insomnia have one or more of the following problems:

(i) Difficulty falling asleep.

(ii) Waking up often during the night and having difficulty falling back to sleep.

(iii) Waking up too early in the morning.

(iv) Feeling tired upon waking.

Insomnia affecting people may get less sleep or poor quality sleep. They may not feel refreshed when they get up.

Type A constructs pertinent to and central Intellectual [illegible] for attainment of competitiveness, meeting the achievement, organizations. Salient characteristics [illegible] implications of speech, [illegible] of social [illegible], and feelings of being under the challenges of [illegible]. Persons having this pattern are often or [illegible] to done work.

Intellectual Maturity is attaining, consolidating and [illegible] other than attempts for creative [illegible].

Taylor and Francis (1995) found that Type A Conduct Pattern is a risk factor in the development of coronary heart disease (CHD).

Patterson and Kunz (1984) studied [illegible] and [illegible] were significantly higher for [illegible] behaviour at [illegible] than [illegible] other [illegible] and [illegible] than Type A others.

Research [illegible] that [illegible] in [illegible]

[illegible] of Insomnia & Relationship Pattern and Intellectual Maturity

Objectives :

To study Type A Conduct Pattern and Intellectual Maturity of Insomnia patients.

Hypothesis :

[illegible]

Tools :

[illegible]

Procedure :

[illegible]

Table 1 : Means, SD Scores and T Values for Type A Conduct Pattern and Intellectual Maturity of Insomnia and Normal Group

	Insomnia		Normal Group		T Value

*Significant at 0.01 level

Assistant Professor (Department of Home Science), R.D. & S.H. College, Akola (Mah.) India

JOURNAL OF GLOBAL VALUES

A Comparative Assessment of The Nutritional Status of Adolescent Boys and Girls Studying In Government Schools

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]

[illegible]

[illegible]

Principal
[illegible]
[illegible]

[illegible]

Objectives:

- [illegible]
- [illegible]
- [illegible]

Hypothesis:

- [illegible]
- [illegible]

Methodology:

- **Local of the Study:** [illegible]
- **Study design:** [illegible]
- **Sampling design:** [illegible]
- **Study plan:** [illegible]
- **Statistical methods:** [illegible]

Results and Discussion:

	Normal (%)	Moderate (%)	Mild (%)	Normal (%)	Over weight (%)	Pre-obese (%)	Obese (%)
Boys	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Girls	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	

[illegible]

[illegible]

[illegible]

[illegible]

Conclusion

[illegible]

References

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

Principal
[illegible]

International Food Research Journal 22(3): 1156-1160 (June 2015)

Antioxidant potential of some agri-horticultural wastes

*Gupta, C., Prakash, D. and Gupta, S.

[illegible]

Article history

[illegible]

Abstract

[illegible]

Keywords

[illegible]

Introduction

[illegible]

[illegible]

Materials and Methods

Chemicals and Materials

All the chemicals used in this study were of analytical grade and were purchased from Rankem (India) and E. Merck, India. The AR grade samples of vegetables like *Polygonum chinense* (Bengali), *Amaranthus tricolor* (Tamil), and *Brassica oleracea* (Cabbage) were collected from the local markets of Delhi, NCR region (India) in the month of October-November 2014. The leaves or edible shoots of these vegetables were cleaned, washed with sterile distilled water, chopped, dried, powdered, lyophilized and stored in polyethylene bags at 4°C until further use.

Extraction of polyphenols from plant material

For the extraction of polyphenols from the agro-horticultural waste of *Amaranthus tricolor* (Tamil), *Polygonum chinense* (Bengali), and *Brassica oleracea* (Cabbage), 100 g of each dried & powdered vegetable sample (Bengali, Tamil, and Cabbage) were soaked overnight in 100 mL of 70% aqueous methanol at room temperature with stirring. The solution was filtered and the filtrate was used for the antioxidant assay. Under the above, 0.1% solutions of all the vegetable extracts were prepared.

Determination of antioxidant activity

The antioxidant activity of different plant extracts was determined by 1,1-Diphenyl-2-picrylhydrazyl (DPPH) assay with some modifications. This method measures the capacity of an antioxidant in reducing density of polyphenols, vitamin C and vitamin E. This is a simple and widely applicable antioxidant assay method for dietary polyphenols, vitamin C and vitamin E. It makes use of the stable free radical 2,2-diphenyl-1-picrylhydrazyl (DPPH) reagent as the chromogenic oxidizing agent.

Preparation of 1,1-Diphenyl, picrylhydrazyl (DPPH) reagent

The 1,1-Diphenyl-2-picrylhydrazyl (DPPH) reagent was prepared by modified method of Kim et al. (2002) using 0.01 mM ethanolic solution. Cupric chloride hydrate (Merck) 20.5 mg was prepared by dissolving 0.1 g of cupric chloride in 100 mL distilled water. This solution was used within the hours prepared before use. Bathocuproine (Cu+2) 2.5 g in 50 ml was prepared by dissolving 0.1 g of bathocuproine in ethanol, ethanol. Acetate-acetic acid buffer (pH 5) was prepared by dissolving 2.7 g of anhydrous sodium in ethanol, ethanol.

Method of extraction

In a test tube, 1 ml aliquot of each extract, 1 mL Bathocuproine, 2 mL acetate-acetic acetate buffer and 1 mL of distilled water. To this sample solution, 0.5 mL of DPPH was added in the same sequence. The test tubes were kept in room temperature for 20 minutes and the absorbance was measured at 476 nm in a UV-Vis spectrophotometer against DPPH solution. Ascorbic acid in a blank. [illegible] Hydroxyl [illegible] 2004). A standard calibration was used as a reference standard.

The antioxidant activity of extracts of Bengali, Tamil, and cabbage extracts determined individually and then after combination like Bengali and Tamil, Bengali and cabbage, Tamil and cabbage and finally the combination of all three viz. Bengali, Tamil, and cabbage. This was done to check the synergistic effect of these antioxidant activity.

Calculation of antioxidant activity

The antioxidant activity was calculated in terms of Trolox equivalent (TE) through TEAC assay by using the following formula.

Capacity via usual TE (g) = (Vo - Vf)(C/F) x [illegible]

Where A, absorbance

C = Trolox Absorbance of Trolox = 1 g/L or 1M

E = Extinction coefficient (L/g)

F = Sample volume taken from diluted extract (mL)

Vo = Blank volume (mL)

Vf = Sample volume (mL)

[illegible] = Molecular Formula of Trolox

m = Weight of the sample taken (g)

Principal

Rajdhani College

Delhi

[illegible]

Results and Discussion

[illegible]

[illegible]

[illegible]

Conclusion

[illegible]

Acknowledgements

[illegible]

References

[illegible]

Periodic Research

[illegible]

Periodic Research

MedCrave

Journal of Microbiology & Experimentation

Prebiotic efficiency of blue green algae on probiotics microorganisms

Abstract

Corresponding author:

Introduction

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Algal Species with Probiotic Potential

[illegible]

Spirulina platensis

[illegible]

[illegible]

Chlorella species

[illegible]

Tetraselmis species

[illegible]

[illegible]

[illegible]

[illegible] species

[illegible]

[illegible] species

[illegible]

[illegible] species

[illegible]

Principal

[illegible]

Symbiosis

Research Article: International Nutritional Health & Food Science

Comparative Study of Antimicrobial Effects of Lemon Oil and Peel Extract against Food-Spoilage Microbes

[illegible]

[illegible]

Abstract

[illegible]

Introduction

[illegible]

Principal
Rajhanshi Colleges [illegible]
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Materials and Methods

Materials

[illegible]

Bacterial and fungal strains

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Principal

[illegible]

[illegible]

[illegible]

[illegible]

Results

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

Discussion

[illegible]

[illegible]

[illegible]

[illegible]

Conclusions

[illegible]

References

[illegible]

[illegible]

International Journal of Fisheries and Aquatic Studies

Current status of ichthyofaunal diversity of carbon water marsh of western Uttar Pradesh, India

[illegible]

[illegible]

[illegible]

1. Introduction

[illegible]

2. Site of the Study

[illegible]

Principal
[illegible]

2. Materials and Methods

[illegible]

2.1 Survey of the Western Uttar Pradesh

[illegible]

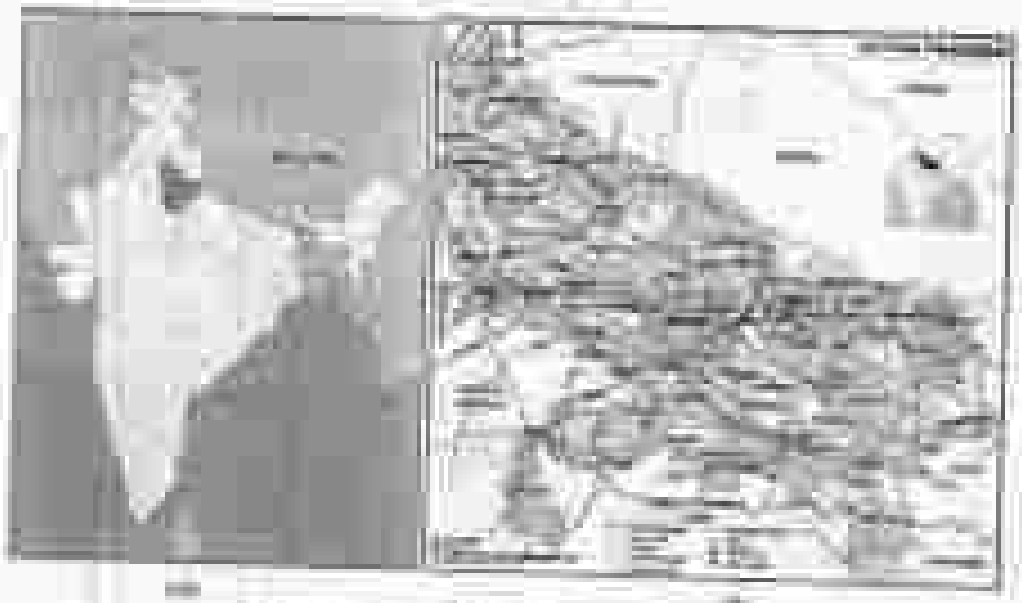


Fig. 1: [illegible]

[illegible]

1. Meerut division
2. Saharanpur division
3. Moradabad division
4. Bareilly division
5. Agra division
6. Aligarh division

2.2 Stations

[illegible]

2.3 Selection of the area

[illegible]

2.4 Sample Collection and Preservation

[illegible]

[illegible]

2.5 Taxonomic Identification of fish

[illegible]

2.6 Data collection

[illegible]

3. Results

[illegible]

Principal
Raghunath Girls' P.G. College
Meerut

Fig. 3. [illegible]

[illegible] total number of injective homomorphisms [illegible] high [illegible] (Table 1).

Table 1. [illegible]

S. No.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

Fig 5 [illegible]

[illegible]

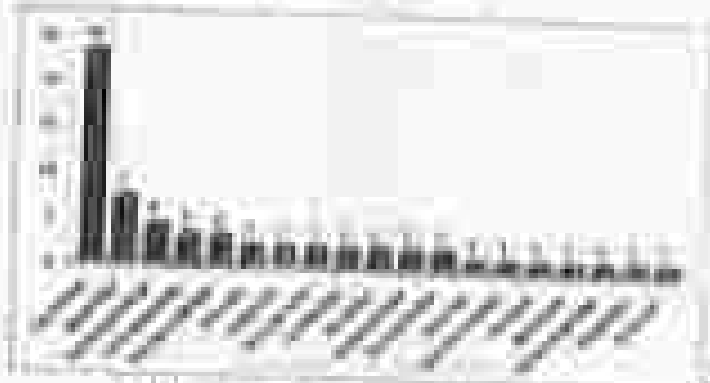
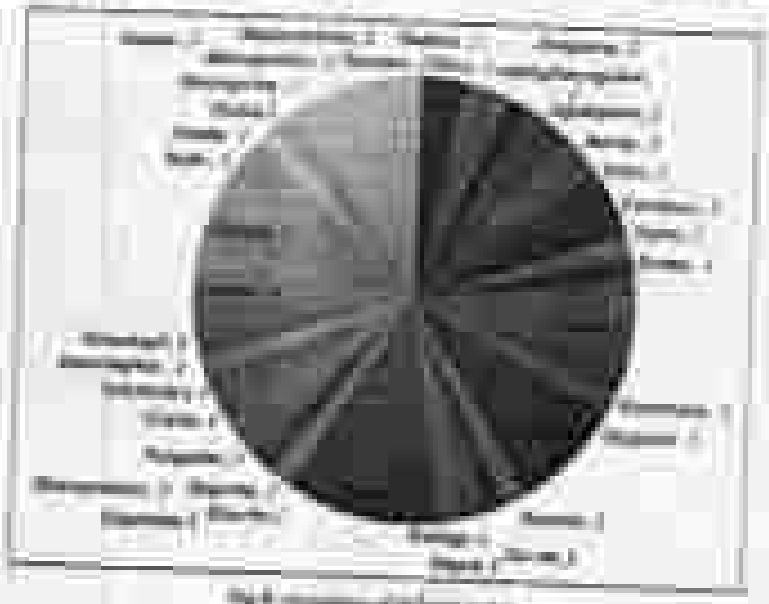


Fig 6 [illegible]

Principal
Raghunath Jaiswal Nath Mahavidyalaya College
Nawada



5. Discussion

6. Conclusion

References

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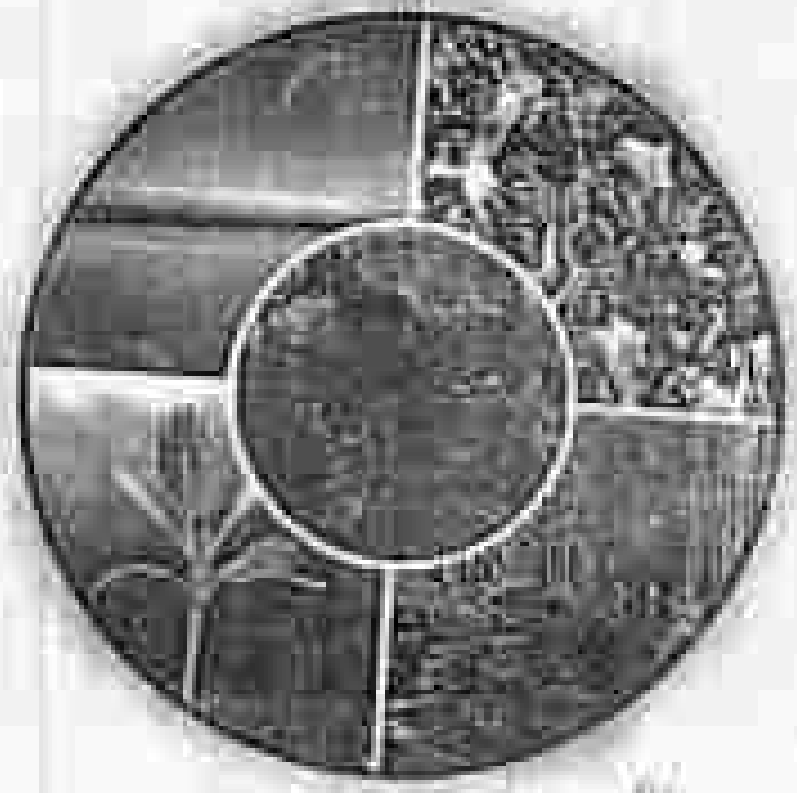
A Journal of Geography

A Peer Reviewed Journal



Volume : 3, Issue : 3, October 01, 2016

गन्ने की फसल के उत्पादन पर मौसम की बदलती प्रवृत्तियों का प्रभाव : जनपद बागपत का भौगोलिक अध्ययन

*डॉ० [illegible]

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सार :

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मुख्य शब्द : जनपद बागपत, बदलती मौसम की प्रवृत्तियाँ, जलवायुविक कारक, गन्ना उत्पादन मौसम, जिलेवार सूचि, मौसमविज्ञ डेटा।

प्रस्तावना :

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अध्ययन क्षेत्र

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अध्ययन के उद्देश्य :

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2. [illegible]

सर्वेक्षण का तकनीक एवं विधि तंत्र :

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Subhashis Dutta
B.Sc. College, Hooghly

Bidhannagar
Bidhannagar Govt. College
Hooghly

जिला साक्षरता में उतार-चढ़ाव

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संदर्भ ग्रन्थ

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INFLUENCE OF GAIN SEEDLING GROWTH OF *LEUCAENA LEUCOCEPHALA* (LAMK) DE WIT CULTIVARS

MOSO GEKU

RESULTS

MATERIALS AND METHODS

[illegible]

[illegible] Number of Lateral Roots (Fig.2, Tab.1) [illegible]

[illegible] Fresh Weight (Fig.2, Tab.1) [illegible]

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DISCUSSION

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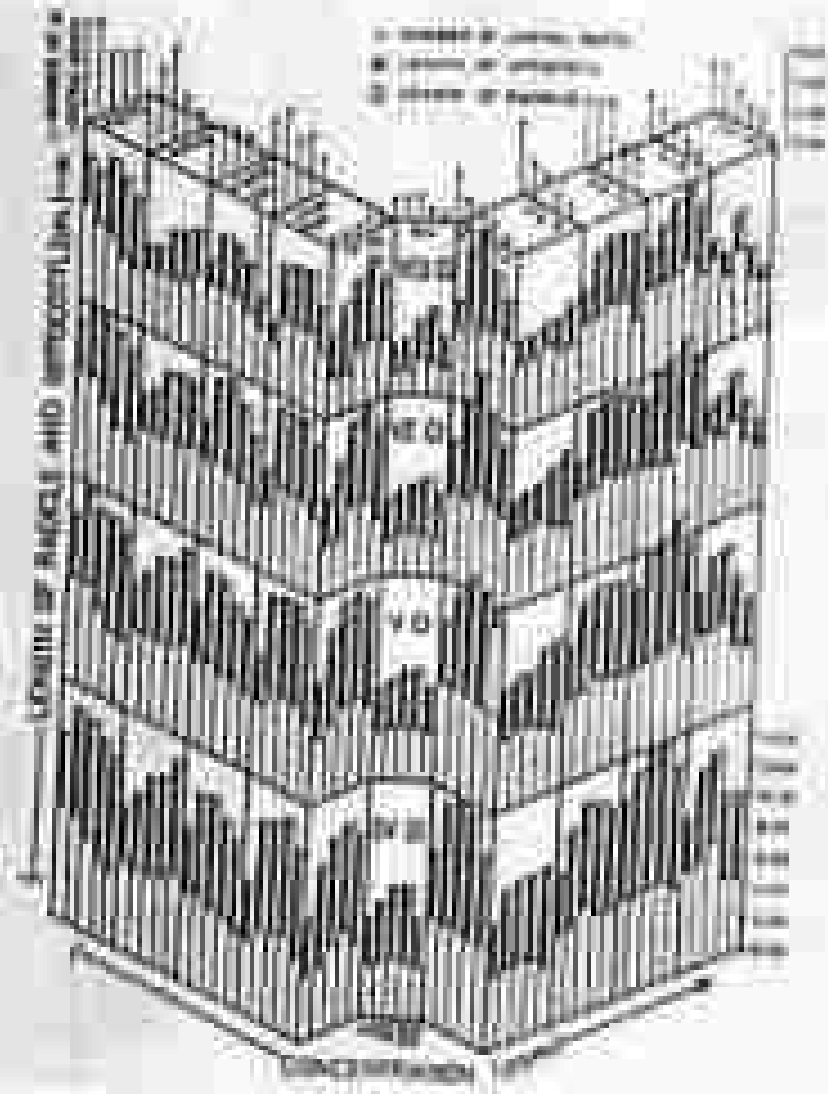

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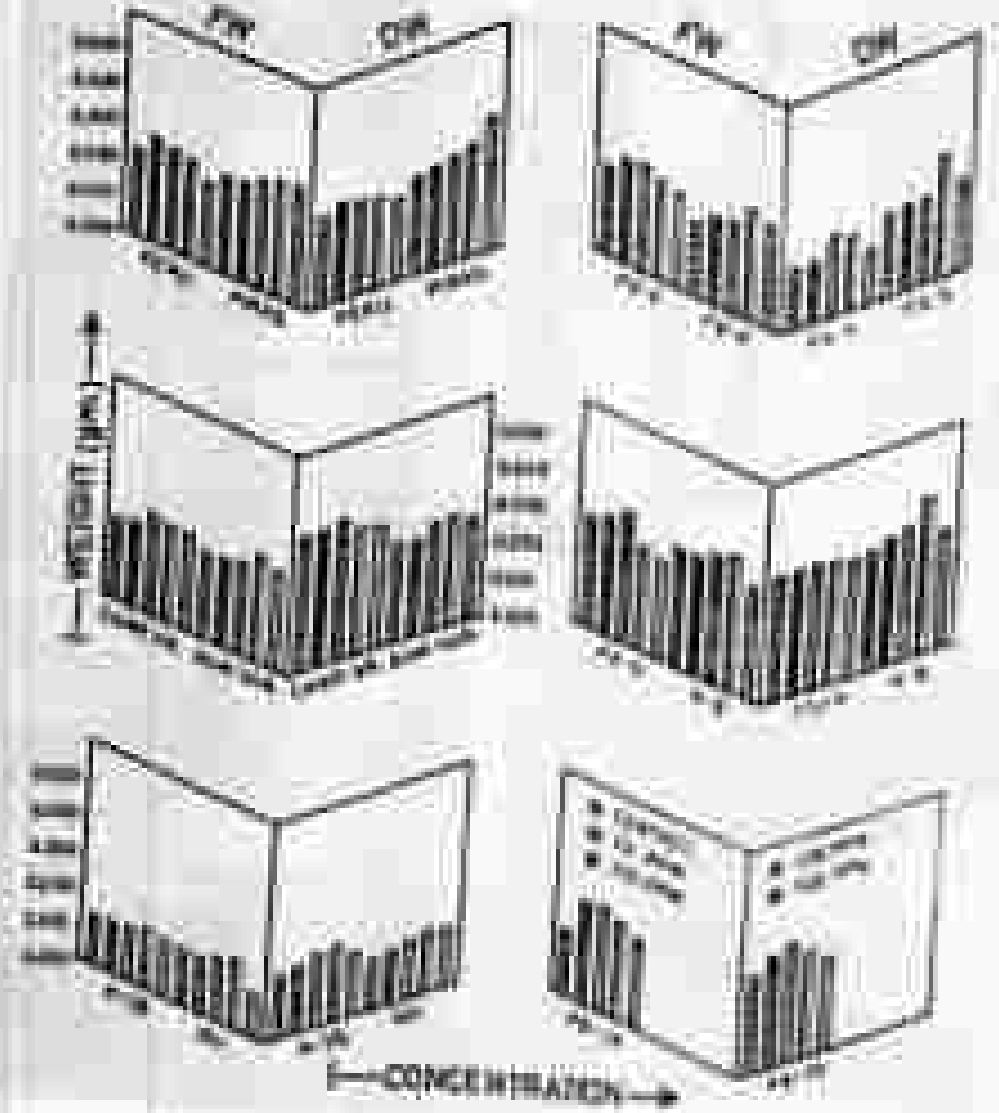

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Meerut

valuable suggestions. [illegible] is also acknowledged for providing financial assistance through granting a [illegible] research project.

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