

ISSN 0973-9777

Volume-6 Number-4 July-August 2012

The Indian Journal of Research

# ANVIKSHIKI

Bi-monthly International Journal of all Research

Science



**MPASVO**

Published on behalf of the MPASVO in  
association with the Member's of Anvikshiki

**MANEESHA PUBLICATIONS**  
[www.anvikshikijournal.com](http://www.anvikshikijournal.com)

# Anvikshiki

## The Indian Journal of Research

Bi-Monthly International Journal of All Research

### *Editor in Chief*

Dr. Maneesha Shukla, maneeshashukla76@rediffmail.com

### *Review Editors*

Prof. H. D. Khanna, Head Department of Biophysics, Institute of Medical Sciences Banaras Hindu University, Varanasi U.P. India  
Ranjana S. Khanna, Department of Chemistry, Faculty of Science, Banaras Hindu University, Varanasi U.P. India

### *Editors*

Dr. Mahendra Shukla, Dr. Anshumala Mishra

### *Editorial Board*

Dr. Anita Singh, Dr. Bhavna Gupta, Dr. Madhavi Shukla, Dr. S. M. Shukla, Dr. Nilmani Prasad Singh, Dr. Reena Chatterjee,  
Dr. Pragya Srivastava, Dr. Anup Datt Sharma, Dr. Padmini Ravindra Nath, Manoj Kumar Singh, Archana Rani, Avanish Shukla,  
Vijaylaxmi, Kavita, Jyoti Prakash, Uma Shankar ram, Rashmi Saxena, Dr. A. K. Thakur, Narendra Shanker Tripathi.

### *International Advisory Board*

Dr. Javad Khalatbari (Tonekabon, Iran.), Dr. Shohreh Ghorbanshiroudi (Tonekabon, Iran.), Mohammad Mojtaba Keikhaifarzaneh  
(Zahedan, Iran.), Saeedeh Motamed (Tonekabon, Iran.), Majid Karimzadeh (Iran), Phra Boonserm Sritha (Thailand),  
Rev. Dodamgoda Sumanasara (Kalutara South), Ven. Kendagalle Sumanaransi Thero (Srilanka), Phra Chutidech Sansombat  
(Bangkok, Thailand), Rev. T. Dhammaratana (Srilanka), P. Treerachi Sodama (Thailand), Sita Ram Bahadur Thapa (Nepal)

### *Manager*

Maheshwar Shukla, maheshwar.shukla@rediffmail.com

### *Abstracts and Indexing*

<http://nkrc.niscair.res.in/browseByTitle.php?Keyword=A, ICMJE>, [www.icmje.org](http://www.icmje.org), [Academia.edu](http://Academia.edu), [banaras.academia.edu](http://banaras.academia.edu),  
[ebookbrowse.com](http://ebookbrowse.com), [BitLibrary!](http://BitLibrary!) <http://www.bitlib.net/>, [Tech eBooks](http://Tech eBooks), [freetechbooks.com](http://freetechbooks.com), [ARTAPP.NET](http://ARTAPP.NET), [artapp.net](http://artapp.net), [Catechu PDF / printfu.org](http://Catechu PDF / printfu.org), [File Away](http://File Away), [www.fileaway.info](http://www.fileaway.info), [KMLE 의학 검색 엔진](http://KMLE 의학 검색 엔진), [www.kmlibrary.com](http://www.kmlibrary.com), [www.docslibrary.com](http://www.docslibrary.com), [MyCelular.ORG](http://MyCelular.ORG), [Android Tips, Apps, Theme and Phone Reviews](http://Android Tips, Apps, Theme and Phone Reviews) <http://dandroidtips.com>, [EduDoc](http://EduDoc), <http://www.edu-doc.com>, [www.themarketingcorp.com](http://www.themarketingcorp.com), [Dunia Ebook](http://Dunia Ebook)  
[Gratis duniaebook.net](http://Gratis duniaebook.net), [www.cn.doc-cafes.com](http://www.cn.doc-cafes.com), [Google](http://Google), <http://scholar.google.co.in>, Website : [www.onlineijra.com](http://www.onlineijra.com). Motilal  
Banarasi Das Index, Varanasi, Motilal Banarasi Das Index, Delhi. Banaras Hindu University Journal Index, Varanasi. [www.bhu.ac.in](http://www.bhu.ac.in),  
D.K. Publication Index, Delhi. National Institute of Science Communication and Information Resources Index, New Delhi.

### *Subscriptions*

Anvikshiki, The Indian Journal of Research is Published every two months (January, March, May, July, September and November) by mpasvo Press, Varanasi, U.P. India. A Subscription to The Indian Journal of Research : Anvikshiki Comprises 6 Issues in Hindi and 6 in English and 3 Extra Issues. Prices include Postage by Surface mail, or For Subscription in the India by Speed Post. Airmail rates are also available on request. Annual Subscriptions Rates (Volume 3, 6 Issues in Hindi, 6 Issues in English and 6 Issues of science 2012):

### *Subscribers*

Institutional : Inland 4,000 +500 Rs. P.C., Single 500+51 Rs. P.C., Overseas 6000+2000Rs. P.C., Single 1000+500 Rs. P.C.  
Personal : 2,500+500 Rs. P.C., Single 500+51 Rs. P.C., Overseas 5000+2000Rs. P.C., Single 1000+500Rs. P.C.

### *Advertising & Appeal*

Inquiries about advertising should be sent to editor's address. Anvikshiki is a self financed Journal and support through any kind or cash shall be highly appreciated. Membership or subscription fees may be submitted via demand draft in favor of Dr. Maneesha Shukla and should be sent at the address given below. Sbi core banking cheques will also be accepted.

### *All correspondence related to the Journal should be addressed to*

B.32/16 A., Flat No.2/1, Gopalkunj, Nariya, Lanka, Varanasi, U.P., India  
Mobile : 09935784387, Tel.0542-2310539, e-mail : maneeshashukla76@rediffmail.com, [www.anvikshikijournal.com](http://www.anvikshikijournal.com)  
Office Time : 3-5 P.M. (Sunday off)

### *Journal set by*

Maheshwar Shukla, maheshwar.shukla@rediffmail.com

9415614090

### *Printed by*

mpasvo Press



**Maneesha Publication**  
(Letter No. V-34564, Reg. 533/2007-2008)  
B-32/16-A-2/1, Gopalkunj, Nariya, Lanka  
Varanasi, U.P., India

# Anvikshiki

## The Indian Journal of Research

Volume 6 Number 4 July 2012

### Science Papers

Oral Health Considerations for the Treatment of Patients with Diabetes Mellitus – A Review 1-7  
*Dr. Rajul Vivek, Dr. Ankita Singh and Dr. T. P. Chaturvedi*

Concept of Homeostasis in Ayurveda 8-13  
*Sunil Kumar Chaudhary and N.S. Tripathi*

Implant Dentistry in Medically Compromised Patients- A Review 14-19  
*Dr. Ankita Singh, Dr. Rajul Vivek and Prof. T. P. Chaturvedi*

Impact of Breakfast Eating Pattern on Performance in School Children in Urban Lucknow – A Survey 20-24  
*Reema Singh and Ruchira Rathaur*

Smart and Intelligent Energy Management System Using GSM Technology 25-32  
*Aditya Narian*

A Novel Skeleton to Explore Provider's Context and User's Context 33-40  
*Jitendra Pratap*

Controlling Computer Integrated Manufacturing System Using Data Mining 41-47  
*Manoj Kumar*

Performance Analysis of Broadband OFCDM System For Wireless Communications 48-52  
*Prince Katiyar*

PV-Assisted Wind Energy System with A Dfig 53-60  
*Nidesh Gangwar*

Social Network Analysis of by Mining Enron Email Dataset 61-69  
*Rajesh Kumar*

A Novel Methodology for Software Teambuilding Using Anns 70-76  
*Hemant Kumar Chaudhary*

Web Service Discovery Systems Focusing on Systems that Support Qos 77-84  
*Vikas Porwal*

An Overview of Handoffs in Fourth Generation Mobile Networks 85-95  
*Vivek Sagar*

Approach for Resource and Knowledge Discovery 96-103  
*Mohd Shahid and Dr. Mohd. Hussain*

Study of Lattice Dynamics of Diamond 104-111  
*S.R.B.Thapa*

Studies on Mixed Ligand Complexes of Alkaline Earth Metals with 8-Hydroxyquinoline and Benzil 112-115

*Vivek Singh*

Applications of Acidifiers in Fish Nutrition 116-120

*Arun Kumar*

Metal-Alloy Nanoclusters in Silica by Ion Implantation 121-126

*Prabhat Ranjan and Deepak Kumar*

Study of Aquaculture Feed & Sea Food Quality 127-130

*Pooja Kumari*

Nutrition and Morphogenesis in Fish Larvae : Analytical Study 131-134

*Deepak Kumar*

Effect of Aquaculture on World Fish Supplies 135-137

*Vikash Kumar Jawala*

Analysis of Oil Replacement in Fish Feed on Lipid Composition 138-143

*Prabhat Ranjan and Vikash Kr. Jawala*

Analysis of Trace Gas Using Pulsed (Las) Laser Absorption Spectroscopy 144-148

*Arun Kumar*

Fish Feed to Assist in Aquaculture Nutrition Management 149-154

*Vikash Kr. Jawala*

History of Sweat Gland – An Overview 155-158

*Ajay Kumar and Dr Ranjit Kumar*

PRINT ISSN 0973-9777, WEBSITE ISSN 0973-9777

## IMPACT OF BREAKFAST EATING PATTERN ON PERFORMANCE IN SCHOOL CHILDREN IN URBAN LUCKNOW – A SURVEY

REEMA SINGH\* AND RUCHIRA RATHAUR\*\*

### *Declaration*

The Declaration of the authors for publication of Research Paper in The Indian Journal of Research Anvikshiki ISSN 0973-9777 Bi-monthly International Journal of all Research: We, *Reema Singh and Ruchira Rathaur* the authors of the research paper entitled IMPACT OF BREAKFAST EATING PATTERN ON PERFORMANCE IN SCHOOL CHILDREN IN URBAN LUCKNOW – A SURVEY declare that , We take the responsibility of the content and material of our paper as We ourself have written it and also have read the manuscript of our paper carefully. Also, We hereby give our consent to publish our paper in Anvikshiki journal , This research paper is our original work and no part of it or it's similar version is published or has been sent for publication anywhere else.We authorise the Editorial Board of the Journal to modify and edit the manuscript. We also give our consent to the Editor of Anvikshiki Journal to own the copyright of our research paper.

### *Abstract*

*School children have more nutritional requirement due to their involvement in lot of physical and mental activities and to fulfill these requirements adequate diet is necessary. Objectives of the study were: (a) Assessment of breakfast eating pattern in school children in the age group of 9-10 yrs (b) To identify major nutrients in the breakfast (c) To assess the effect of breakfast eating pattern on the physical activity and academic performance of school children. A cross sectional study was conducted in a selected school in which 50 school children aged 9-10 year were interviewed after taking permission from Principal. Twenty four hour dietary recall method was used to assess breakfast eating pattern and Harvard step test was used for physical activity. Class register was used to obtain school attendance rate. Analysis of data revealed that children who consumed breakfast had 72% capacity of physical activity, 50% satisfactory examination result and 82% attendances in class. While children who skiped breakfast were found with 22.5% capacity of physical activity, 19.5% satisfactory examination result and only 35% attendance in the class.Morning dietary intake plays a crucial role in the development of school children.*

**Key words:** breakfast eating pattern, physical activity, academic performance, 24 hour dietary recall method.

### *Introduction*

School children performs lot of physical as well as mental activities and threfore need more nutritional intake. Children who do not eat breakfast have reduced memory function, poorer attention spans and reduced performance in tasks requiring concentration when compared with those who consume an

\*Ph.D Scholar, Community Medicine [Institute of Medical Sciences] Banaras Hindu University Varanasi (U.P.) India. e-Mail : ([reemasingh 2008 @ rediffmail.com](mailto:reemasingh2008@rediffmail.com))

\*\* Associate Prof, Mahila P.G. College [Aminabad] Lucknow (U.P.) India.

adequate breakfast. Therefore, consuming a healthy breakfast improves cognitive function and learning outcome (Mahoney *et al.*, 2005). To fulfill the nutritional requirement of the body full day diet is necessary in which morning breakfast has a crucial role. A nutritious breakfast provides approximately one-fourth of the recommended dietary allowances (RDA) for key nutrients such as protein, vitamin A, vitamin B6, calcium, magnesium, iron and zinc. Eating breakfast provides children with energy for their brains as it improves their learning skills. However, without breakfast, body energy reserves become depleted over night. A gap of about to 12 h between dinner and breakfast cause a decline in blood glucose levels, which may lead to glucose deprivation. If this happens in sufficient degree, it can result in a rapid disturbance in cerebral functions (Wurtman *et al.*, 1977). More than half of the school children studied skipped breakfast frequently as they get up late in the morning. Children who consumed breakfast had higher daily intake of energy and protein than children who skipped breakfast. The study was planned to look at the impact of morning breakfast on the physical activity and academic performance of the school children in the age group of 9-10 years which may reflect their overall development.

### *Methodology*

A cross sectional study was conducted among 50 school children in the age group of 9-10 years, selected purposively. The study was conducted on the subjects in a school located in the urban area of Aminabad, Lucknow. Twenty four hour dietary recall method was used to assess nutrients intake and Harvard step test was used for physical activity (Brown and William *et al.*, 2008). Class register was used to assess the attendance rate.

The breakfast eating pattern of children in the age of 9-10 year age group was selected for the study because that age group is like a bridge of transition from primary to secondary school (Hackett *et al.*, 2002). The data was collected, tabulated and analyzed with help of Microsoft excel 2007 and SPSS 16<sup>th</sup> version. The average daily nutrient intake was calculated with the help of the food composition tables from Gopalan *et al.*, 1989.

### *Results*

Cross sectional study conducted on 50 school children in the age group of 9-10 years and the assessment was made in respect of physical as well as academic performance for each subject on the basis of their dietary intake. It was observed the subjects children who had habit of morning breakfast were found to consume 66% energy, 95% protein, 86% calcium and 81% vitamin A of their Recommended Dietary Allowance (RDA) suggested by ICMR. [Figure-1]. Children who did not have habit of morning breakfast were found to consume 42% energy, 55% protein, 16% calcium and 12% vitamin A of their Recommended Dietary Allowance (RDA) suggested by ICMR.

Children who were consuming breakfast daily were found with 72% capacity of physical activity. Their examination results were satisfactory up to 50% and their attendance in the class was 82%. [Figure-2] Those children who were not consuming breakfast daily were found with 22.5% capacity of physical activity. Their examination results were satisfactory only up to 19% and their attendance in the class was 35%.

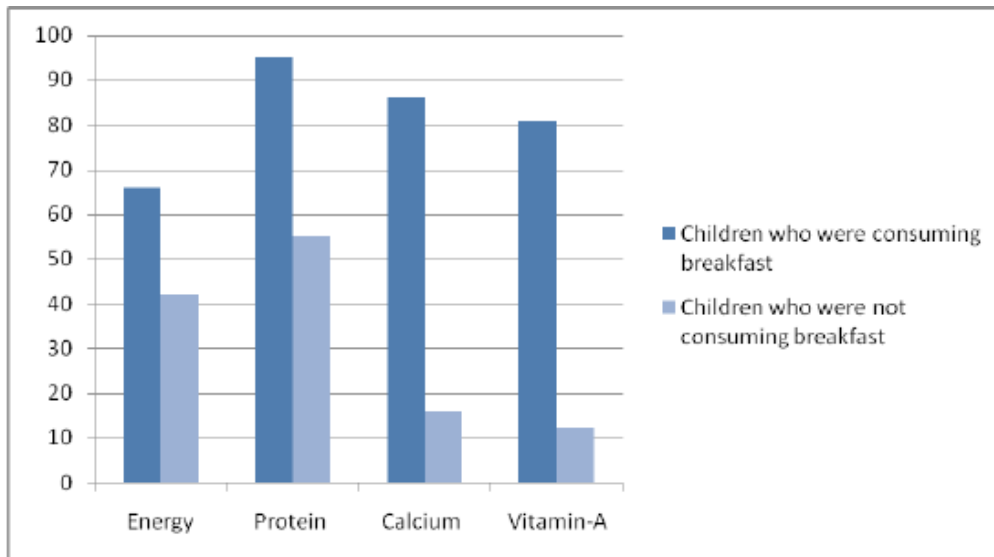


Figure 1: Comparison between Nutrient intake by children who were not consuming and consuming breakfast in the morning

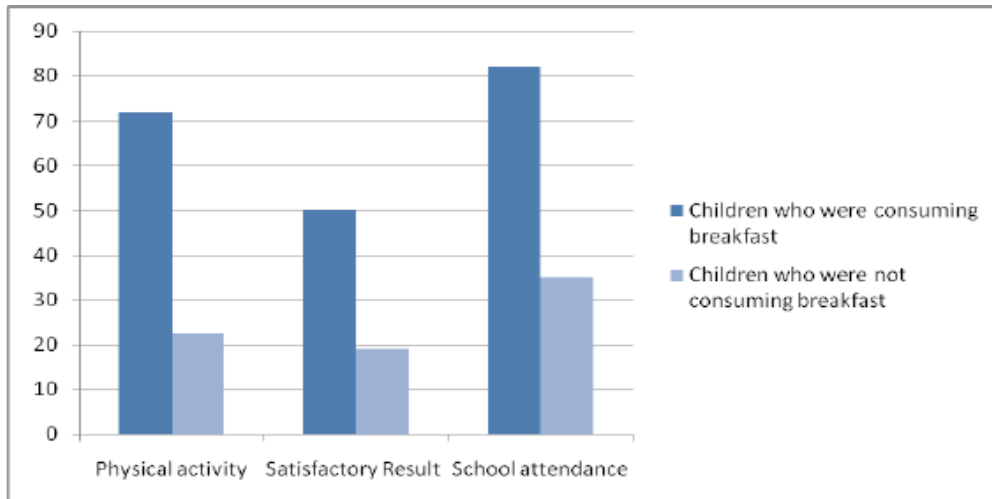


Figure 2: Comparison of performance between children who were consuming breakfast and not consuming breakfast in the morning.

### Discussion

Breakfast eating pattern and thereby nutritional status is a very important factor for growth and health maintenance. Children who have habit of breakfast are more likely to consume foods with adequate levels of minerals, such as calcium, phosphorus, magnesium, and vitamins, such as riboflavin, vitamins A, C, and B12, and folate than children who skip breakfast.

Research has demonstrated that children’s eating patterns are strongly influenced by characteristics of both the physical and social environment (Patrick and Nichlas, 1989). This statement is supported by the findings of the present study by setting a relationship between capacity of physical activity and breakfast eating pattern.

Satisfactory examination results were also showing relationship with breakfast eating pattern in the present study. Children who skip breakfast perform poorly in terms of physical and academic activity. A 1989 Tufts University study found that children who eat school breakfast perform better on standardized tests and are late or absent from school less often than children who do not eat breakfast at school. In addition, a 1996 Hebrew University study found that children who eat breakfast at school closer to class and test-taking time perform better on standardized tests than those who skip breakfast or eat at home much earlier.

School attendance rate was increasing sharply in children who were not consuming breakfast, consuming light breakfast, consuming better breakfast and consuming adequate breakfast, respectively. The fact and early reports on previous school breakfast program evaluations who had shown decreased rates of absence and tiredness, when provide breakfast to children (Briefel *et al.*1999) supports the findings of the present study.

### *Conclusion*

To sum up all these observations among 9-10 year old school going children of urban lucknow revealed a positive relationship between breakfast eating pattern and nutrient intake, academic performance in terms of attendance rate at school and satisfactory examination results. Beside these physical activity was also going hand in hand with breakfast eating pattern. There is a need and scope to implement intervention program for improving the awareness about breakfast eating pattern and its importance for health. Beside health education this program should include education regarding what dietary intake in breakfast and some easy tips for adopting a regular healthy breakfast eating pattern regularly.

### *Acknowledgement*

I wish to record my high regards and gratitude to my supervisor Dr. Sangeeta Kansal (Associate Professor, Community Medicine, Institute of Medical Sciences, BHU) and Dr. Ruchira Rathour (Associate Professor, Mahila Vidyalyaya P.G. College, Lucknow) for their guidance.

### REFERENCES

- BRIEFEL R, MURPHY M, KUNG S, DEVANEY B (1999), Universal-free school breakfast program evaluation design project; Review of the literature on breakfast and learning. Final report. Princeton, NJ.
- C. GOPALAN, B. V. RAMA SASTRI, S. C. BALASUBRAMANIAN (1989), National Institute of Nutrition (India), Nutritive value of Indian foods, Indian Council of Medical Research, , Hyderats in India.
- HANDA R, AHAMAD F, KUMAR KK, PRASAD R (2008), Assessment of Nutritional Status of 7-10 Years School Going Children of Allahabad District: A Review Middle-East Journal of Scientific Research ;3(3):109-115.
- HACKETT AF, GIBBON M, SRATTON G, HAMILL L (2002), Dietary intake of 9-10-year-old and 11-12-year-old children in Liverpool. Public Health Nutr.;5(3):449-55.
- HEATHER P, THERESA A (2003), A Review of Family and Social Determinants of Children's Eating Patterns and Diet Quality. Presented at the 44th Annual Meeting of the American College of Nutrition, Nashville, TN, October 9–12.
- LARRY BROWN J, BEARDSLEE H & PROTHROW-STITH D (november 2008),( harvard school of public health) impact of brakfast on children's healthand learning, commissioned by the sodexo foundation.
- LATIFAH M. AL-OBOUDI (2010), Impact of Breakfast Eating Pattern on Nutritional Status, Glucose Level, Iron Status in Blood and Test Grades among Upper Primary School Girls in Riyadh City, Saudi Arabia Pakistan Journal of Nutrition ;9(2):106-111
- MAHONEY CR, LORD & CARRYL (2005), "Effect of Breakfast Composition on Cognitive Performance in Elementary School Children," *Physiol Behav* 85 (2005): 635- 45.



- PATRICK GERSTER & NICHOLAS CORDS (Urbana: University of Illinois Press, 1989), "*physical and social environment*", 169–90. 13.
- SENANAYAKE MP & PARAKRAMADASA HMLN (2008), A survey of breakfast practices of 4-12 year old children. *Sri Lanka Journal of Child Health* ;37:112-117
- SUSAN MG, YVONNE B, CLAUDETTE W, NATALIE DM, DAVID MP (2004), Breakfast and lunch meal skipping patterns among fourth-grade children from selected public schools in urban, suburban, and rural Maryland. *Journal of the American Dietetic Association* ;104(3):420-423
- SWAMINATHAN, M (2002), *Essentials of Food and Nutrition* 2nd Edn., Bappco Publication, 2:337-338.
- UMA C & REDDY CR (2006), The role of breakfast in nutrient intake of urban schoolchildren. *Public Health Nutrition* ;10(1):55–58.
- WURTMAN RJ, JUDITH J, WURTMAN J (1977), Determinants of the availability of nutrients to brain. *Cereb Nut Energy Metab* ; 1: 103-129.
- WHO (2000), *Turning the tide of malnutrition: responding to the challenge of the 21st century*. Geneva: WHO, (WHO/NHD/00.7).

## *Note for Contributors*

### **SUBMISSION OF PAPERS**

Contributions should be sent by email to Dr. Maneesha Shukla Editor-in-Chief, Anvikshiki, The Indian Journal of Research (maneeshashukla76@rediffmail.com), www.onlineijra.com

Papers are reviewed on the understanding that they are submitted solely to this Journal. If accepted, they may not be published elsewhere in full or in part without the Editor-in-Chief's permission. Please save your manuscript into the following separate files-***Title; Abstract; Manuscript; Appendix***. To ensure anonymity in the review process, do not include the names of authors or institution in the abstract or body of the manuscript.

***Title:*** This title should include the manuscript, full names of the authors, the name and address of the institution from which the work originates the telephone number, fax number and e-mail address of the corresponding author. It must also include an exact word count of the paper.

***Abstract:*** This file should contain a short abstract of no more than 120 words.

***MANUSCRIPT:*** This file should contain the main body of the manuscript. Paper should be between 5 to 10 pages in length, and should include only such reviews of the literature as are relevant to the argument. An exact word count must be given on the title page. Papers longer than 10 pages (including *abstracts, appendices and references*) will not be considered for publication. Undue length will lead to delay in publication. Authors are reminded that Journal readership is abroad and international and papers should be drafted with this in mind.

***References should be listed alphabetically*** at the end of the paper, giving the name of journals in full. Authors must check that references that appear in the text also appear in the References and *vice versa*. Title of book and journals should be italicised.

#### ***Examples:***

BLUMSTEIN, A. and COHEN, J. (1973), 'A Theory of Punishment' *Journal of Criminal Law and Criminology*, 64:198-207

GUPTA, RAJKUMAR (2009), *A Study of The Ethnic Minority in Trinidad in The Perspective of Trinidad Indian's Attempt to Preserve Indian Culture*, India: Maneesha Publication,

RICHARDSON, G. (1985), 'Judicial Intervention in Prison Life', in M. Maguire, J. Vagg and R. Morgan, eds., *Accountability and Prisons*, 113-54. London: Tavistock.

SINGH, ANITA. (2007), *My Ten Short Stories*, 113-154. India: Maneesha Publication.

In the text, the name of the author and date of publication should be cited as in the Harvard system (e.g. Garland 1981: 41-2; Robertson and Taylor 1973: ii.357-9). If there are more than two authors, the first name followed by *et al.* is mandatory in the text, but the name should be spelt out in full in the References. Where authors cite them as XXXX+date of publication.

***Diagrams and tables*** are expensive of space and should be used sparingly. All diagrams, figures and tables should be in black and white, numbered and should be referred to in the text. They should be placed at the end of the manuscript with their preferred location indication in the manuscript (e.g. Figure 1 here).

***Appendix:*** Authors that employ mathematical modelling or complex statistics should place the mathematics in a technical appendix.

***NOTE :*** Please submit your paper either by post or e-mail along with your photo, bio-data, e-mail Id and a self-addressed envelop with a revenue stamp worth Rs.51 affixed on it. One hard copy along with the CD should also be sent. A self-addressed envelop with revenue stamp affixed on it should also be sent for getting the acceptance letter. Contributors submitting their papers through e-mail, will be sent the acceptance letter through the same. Editorial Board's decision will be communicated within a week of the receipt of the paper. For more information, please contact on my mobile before submitting the paper. All decisions regarding members on Editorial board or Advisory board Membership will rest with the Editor. Every member must make 20 members for Anvikshiki in one year. For getting the copies of 'Reprints', kindly inform before the publication of the Journal. In this regard, the fees will be charged from the author.

COPYRIGHT of the papers published in the Journal shall rest with the Editor.

Search Research papers of The Indian Journal of Research Anvikshiki-ISSN 0973-9777 in the Websites given below

<http://nkrc.niscair.res.in/BrowseByTitle.php?keyword=A>



[www.icmje.org](http://www.icmje.org)



[www.scholar.google.co.in](http://www.scholar.google.co.in)



[www.kmle.co.kr](http://www.kmle.co.kr)



[www.fileaway.info](http://www.fileaway.info)



[www.banaras.academia.edu](http://www.banaras.academia.edu)



[www.edu-doc.com](http://www.edu-doc.com)



[www.docslibrary.com](http://www.docslibrary.com)



[www.dandroidtips.com](http://www.dandroidtips.com)



[www.printfu.org](http://www.printfu.org)



[www.cn.doc-cafes.com](http://www.cn.doc-cafes.com)



[www.freetechebooks.com](http://www.freetechebooks.com)



[www.google.com](http://www.google.com)



[www.onlineijra.com](http://www.onlineijra.com)

ISSN 0973-9777



09739777

₹ 1500/-