



# SHRI SHANKARACHARYA TECHNICAL CAMPUS SHRI SHANKARACHARYA GROUP OF INSTITUTIONS

[Estb. 1999]

Managed by Shri Gangajali Education Society, Bhilai  
Approved by AICTE & Affiliated to CSVT University, Bhilai  
NBA Accredited for B.E. (Mech, EE, EEE, IT) Courses  
Accredited by NAAC with 'A' Grade  
An ISO 9001:2015 Certified Institution

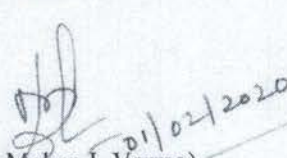
Date: 01-02-2020

Dr. Tawnenga  
Principal  
Pachhunga University College  
Mizoram Central University, Aizawl, India 796001

Dear Sir:

This is a letter of collaboration between the Research Group of Department of Physics, Pachhunga University College, Aizawl, Mizoram, and my group. Over the years, **Dr. Dibya Prakash Rai** have discussed many critical phenomena of Computational Materials Science with me. Dr. Rai also sent his scholar Mr. Bhanu Chettri to my lab for a whole month of Jan. 2020 to learn SIESTA code, which is a Density Functional Theory based computational program. In this collaboration there will be exchange of MSc/MPhil/PhD students between the two institutes. I agree to Dr. Rai in his keen interest in sharing joint guide ship for PhD scholars and in executing joint projects of UGC/CSIR/DST etc. Also, I'll strongly support him to organize a joint workshop/seminar in computational materials science in his institute and to develop a research lab in the region. It'll boost R&D in the North-East region, so I feel this collaboration would definitely benefit to your institute in terms of national exposure as well as in academics. The strengthening of bonds between the institutions with various expertise would largely benefit to young students/scholars/academicians of both the institutes.

Kind regards,

  
(Dr. Mohan L Verma)  
Prof. & Head  
Department of Applied Physics  
Shri Shankaracharya Technical Campus-SSGI, Bhilai  
C.G. India  
Email: drmohanlv@gmail.com  
(www.drmlv.in)

  
Principal  
Pachhunga University College  
Aizawl, Mizoram



  
Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)

JUNWANI, BHILAI-490 020 (CHHATTISGARH), INDIA

Phone : 0788-4088888, 2298605, 607 Fax: 0788-2298606 , Email : sstc@sstc.ac.in, Website : www.sstc.ac.in





TON DUC THANG UNIVERSITY

No.19, Nguyen Huu Tho Street, Tan Phong Ward, District 7,  
Ho Chi Minh City, Viet Nam

Tel: (084) 028 37755 024. Fax: (084) 028 37755 055

*Ho Chi Minh City, July 01<sup>st</sup>, 2018*

**Letter for Research Collaboration**

**To: Prof. Dibya Prakash Rai,**

Department of Physics, Pachhunga University College,  
(Constituent of Mizoram University), Aizawl, Mizoram India – 796001.

**From: Prof. Nguyen Thoi Trung**

Director of Institute for Computational Science (INCOS),  
Ton Duc Thang University, Viet Nam

**Dear Professor,**

You may consider this letter as an official invitation for a collaborative research work. I write to express our interest and confirm commitment to collaborate with you in determining the promising properties of novel crystalline materials from density functional theory (DFT). As you know well, we have a strong interest in analysing materials functional properties and developing cost-effective technological devices. We have a good computational facility with strong Cluster Computing System installed in our department. Your theoretical background coupled with expertise in simulation would prove to be an asset in developing new prospective materials.

Consequently, discoveries emanating from this bilateral research would culminate to joint publication which the number of co-authors will be basically determine by leaders of both groups based on significant contributions. I would be pleased to be actively involved in this research and subsequent ones by providing support in offering insights, inputs on areas that we see as challenging, and applying theories and methodologies developed under this research. We will also support your research in terms of incentives wherever of if necessary.

I look forward to this cooperation with you and your group.

Thanks for your kind consideration.

Yours sincerely,

**Director of INCOS**



**Prof. Nguyen Thoi Trung**



Principal  
Pachhunga University College  
Aizawl: Mizoram

Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)



## DEPARTMENT OF PHYSICS

Centre of Advanced Study in Physics

PANJAB UNIVERSITY, CHANDIGARH - 160 014 (INDIA)

(Established under the Panjab University Act VII of 1947-enacted by the Govt. of India)

Tel. : +91-172-2541741, 2534446, 2534466

Fax : +91-172-2783336

E-mail : physics@pu.ac.in



PHS : 4642

Dated : 11/11/2017

It is pleasure for me to record that **Dr. D.P.Rai** from Department of Physics, Pachhunga University, Aizawl, has worked in our research group under INSA fellowship from 12/12/2016 to 08/01/2017. He has worked on three problems using DFT theory. He calculated the electronic and thermoelectric properties of HfPtPb, a half-Heusler (HH) compound using density functional theory and semi-classical Boltzmann transport equation with constant time approximation. He has also worked on Electronic bandgap modulation of mono and bilayer ZnS under applied electric field and mechanical strain. These works have been culminated in writing two research papers which shall be communicated to reputed peer reviewed journals

In the process, he has gained hand on working experience with DFT software packages like SIESTA, Quantum Espresso, BoltzTrap and ShengBTE codes.

Dr. D.P.Rai has a pleasant personality, takes initiatives and is a good researcher. He worked in our research group with great enthusiasm. Hope that we can collaborate in various research areas in future also. I wish him all the best for his future endeavors.

(Dr. Sumita Srivastava)  
Associate Professor  
Associate Professor  
Department of Physics  
P.U. Chandigarh

Principal  
Pachhunga University College  
Aizawl : Mizoram



Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)





INRS-EM7,  
Université du Québec 1650,  
Boulevard Lionel-Boulet Varennes,  
J5X 1S2 Québec,  
Canada.

Department of Physics and Astronomy,  
University of Nigeria,  
Nsukka,  
Enugu State,  
Nigeria.

April 27, 2016

**Prof. Dibya P. Rai,**  
Department of Physics,  
Pachhunga University College,  
Mizoram University,  
Aizawl, Mizoram  
India - 796001.

Dear Professor,

With deep humility, I write to express our interest and confirm our commitment to collaborate with you on the proposed project titled "*Electronic Band Structure and Pseudocapacitance Behaviour of Mn-doped CeO<sub>2</sub>: A DFT First Principle Approach*".

As you know well, we have a strong interest in developing cost-effective and novel deposition techniques employed in the synthesis of semiconducting materials. Your theoretical background coupled with expertise in simulation would prove to be an asset in developing new carbon-based and polymer-based materials.

Consequently, discoveries emanating from this bilateral research would culminate to joint publication which the number of co-authors will be basically determine by leaders of both groups based on significant contributions. I would be pleased to be actively involved in this research and subsequent ones by providing support experimentally (synthesis), offering insights and inputs on areas that we see as challenging, and applying theories and methodologies developed under this research.

I look forward to this cooperation with you and your group.

Thanks for your kind consideration.

Yours sincerely,

Ifeanyichukwu C. Amaechi

Principal  
Pachhunga University College  
Aizawl: Mizoram



Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)




P-2021-0008

## TO WHOM MAY IT CONCERN

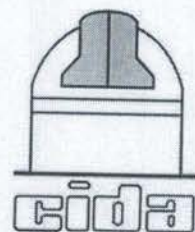
Between the Centro Nacional de Tecnologías Ópticas (CNTO), Venezuela, represented by their President, Dr. Pedro Grima Gallardo, and the Physical Sciences Research Center (PSRC), Pachunga University College, India, represented by **Dr. Dibya Prakash Rai**, it has been realized a fruitful research collaboration in the area of Materials Science resulting in the publication of several articles in internationally recognized journals in the last years.

It is the scope of this scientific relationship to *formalize the collaboration in an official convention between both laboratories to increase the interchange, for mutual benefit, in the next future*. We are sure that this will be very profitable, not only for both institutions but also for both friendly countries, Venezuela and India.

Collaboration that is agreed and formalized on August 4, 2018.

  
**Dr. Pedro Grima Gallardo**  
President  
Centro de Investigaciones de Astronomía (CIDA)  
Centro Nacional de Tecnologías Ópticas (CNTO)

PEG/mr



Apartado Postal 264, Mérida 5101-A. Telf: (0274) 2450106 – 2451450 Fax: (0274) 2451587  
Rif: G-20003519-6 / Nit: 0281333674

[www.cida.gob.ve](http://www.cida.gob.ve)

  
Principal  
Pachhunga University College  
Aizawl: Mizoram



  
Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)



O'ZBEKISTON RESPUBLIKASI  
OLIY VA O'RTA MAXSUS TA'LIM  
VAZIRLIGI  
ISLOM KARIMOV NOMIDAGI  
TOSHKENT DAVLAT TEXNIKA  
UNIVERSITETI



MINISTRY OF HIGHER AND SECONDARY  
SPECIALIZED EDUCATION OF  
THE REPUBLIC OF UZBEKISTAN  
TASHKENT STATE TECHNICAL  
UNIVERSITY NAMED AFTER ISLAM  
KARIMOV

O'ZBEKISTON-YAPONIYA YOSHLAR  
INNOVATSIYA MARKAZI

UZBEK-JAPAN  
INNOVATION CENTER OF YOUTH

100095, Toshkent sh., Universitet ko'chasi, 2B uy,  
email: ujicy.gov@gmail.com

University str. 2 B, Tashkent city, 100095  
email: ujicy.gov@gmail.com

No \_\_\_\_\_

« \_\_\_\_\_ » 2020 r.

To whom it may concern

It is my great pleasure to inform you that we have a strong and productive collaboration on mechanism sulvanite nanoparticles growth in solution with **Dr. Dibya Prakash** and **Dr. Lalhriatzuala**.

The properties of sulvanite nanoparticles discuss in terms of theoretical methodology focused on the *ab initio* calculation. Based on our experimental results, Dr. Dibya Prakash and Dr. Lalhriatzuala predict that the state of crystalline structure is more stable. With future our coloboration we will submit manuscript to peer reviewed journal.

If you need any additional information, please contact with me.

Sincerely Yours,

Dr. Oksana Ismailova

Signature of Dr. Oksana Ismailova confirmed by Dr. Nargiza Amirova



Principal  
Pachhunga University College  
Aizawl : Mizoram



Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)

# **Report on Faculty Exchange Programme – cum- Special Lecture of Department of History of Pachhunga University College, Aizawl and Government of J Buana College, Lunglei**

Date: October 27-28, 2021

Mode : Online (Zoom)

Participating faculties:

1. Prof. J Zorema, Principal, Govt. J Buana College, Lunglei – Special Lecture on October 28, 2021
2. Dr Rohmingmawii, Assistant Professor – Historiography on October 27, 2021
3. Dr Esther Laltlankimi, Assistant Professor – Modern India I on October 28, 2021
4. Rothangliana, Assistant Professor – Early Modern Europe on October 27, 2021
5. Dr Lalarzoa, Assistant Professor- History of North East India (1822-1986) on October 28, 2021

Participating students:

Semester V students with History as core subject.

Closing function with special lecture on October 28, 2021

Chair: H.S Lalsangpuia, HoD, Department of History, PUC

Short speech : Dr B Lalrinchhani, HoD, Dept of History, Govt. J Buana College

Special lecture : Prof. J Zorema, Eminent Historian & Principal, Govt. J Buana College

Concluding remarks: Dr Rohmingmawii, Assistant Professor, Dept of History, PUC

(Function video available at <https://youtu.be/ZbaKXzZSTJo>)



# Department of History



**Pachhunga  
University  
College**

&



**Govt.  
J. Buana  
College**

## **FACULTY EXCHANGE PROGRAMME CUM SPECIAL LECTURE**

*27-28 October 2021*

*History Paper 5:  
Modern India - I*

*History Paper 6:  
Historiography*

*History Paper 7:  
Early Modern Europe*

*History Paper 8:  
History of Northeast India  
(1822-1986)*



**Rothangliana**

Government J. Buana College  
History Paper 7  
10:00 AM, 27 October 2021



**Dr. Lalzarzoa**

Government J. Buana College  
History Paper 8  
11:00 AM, 27 October 2021



**Dr Esther Laltlankimi**

Pachhunga University College  
History Paper 5  
10:00 AM, 28 October 2021



**Dr. Rohmingmawii**

Pachhunga University College  
History Paper 6  
11:00 AM, 28 October 2021



# Department of History



**Pachhunga  
University  
College**

&



**Govt.  
J. Buana  
College**

# FACULTY EXCHANGE PROGRAMME CUM SPECIAL LECTURE

## **Closing Function:**

*Date: 28 October 2021*

*Time: 7:30 PM*

### **Chairperson:**

*Mr. H.S. Lalsangpuia  
HOD, Dept. of History, PUC*

### **Short Speech:**

*Dr. B. Lalrinchhani  
HOD, Dept. of History, GJBC*

### **Special Lecture:**

*Prof. J. Zorema  
Eminent Historian &  
Principal, GJBC*

### **Concluding Remarks:**

*Dr. Rohmingmawii  
Asst. Prof., PUC*



Chairperson:

Mr. H.S. Lalsangpuia

Head of Department  
Dept. of History, PUC



Short Speech:

Dr. B. Lalrinchhani

Head of Department  
Dept. of History, GJBC



Special Lecture:

Prof. J. Zorema

Eminent Historian &  
Principal, GJBC

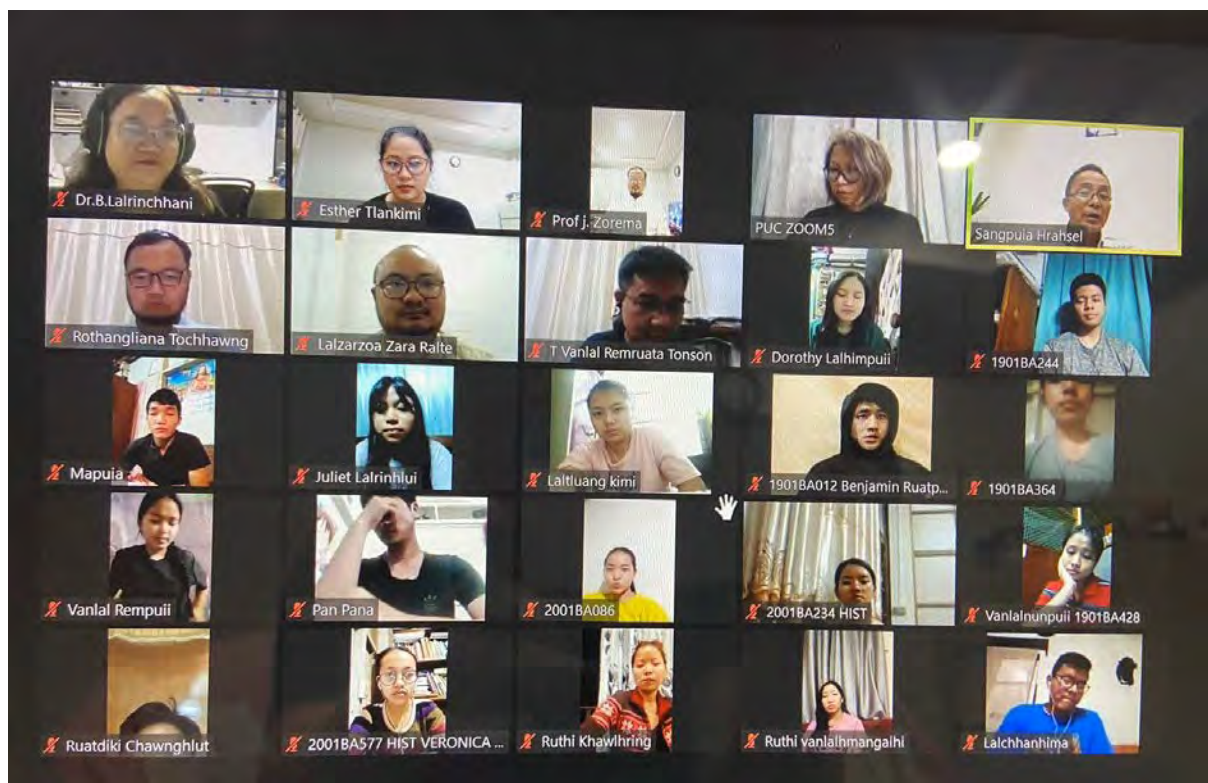
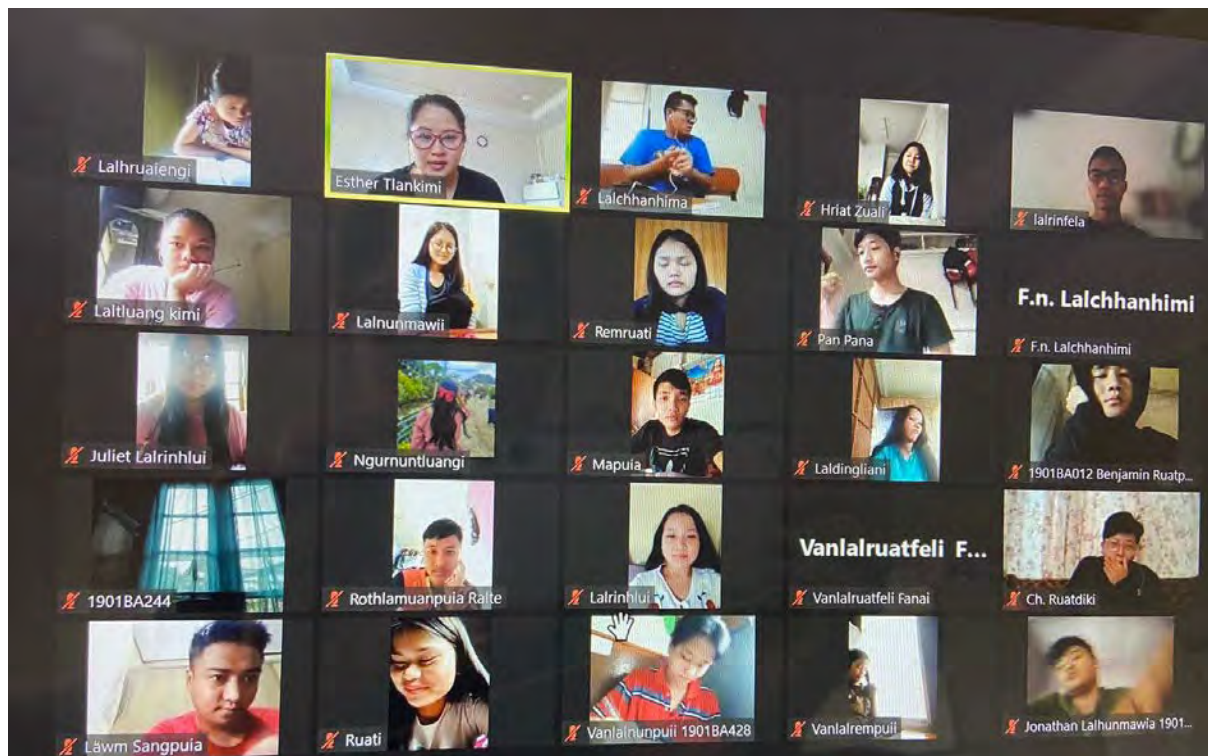



Concluding Remarks:

Dr. Rohmingmawii

Asst. Prof., PUC





  
 ( H. S. LALSANGPUIA )  
 Head  
 Department of History





## Soil and Agro Bioengineering Laboratory

Dr. Satya Sundar Bhattacharya  
Assistant Professor

Department of Environmental Science  
Tezpur University  
Napaam – 784028  
Assam, India

Date: 01.05.2020

### TO WHOM IT MAY CONCERN

This letter testifies the academic cum research collaboration constituted between the two partners from two institutions: Tezpur University and Pachhunga University College (Mizoram University). Tezpur University is represented by Soil and Agro Bio-engineering Laboratory (Department of Environmental Science) which is headed by the undersigned. At Pachhunga University College (Mizoram University) the partnership is facilitated by Dr. Subhasish Das in the Department of Environmental Science.

Out of this fruitful collaboration, both these parties involved in mutual research endeavors materializing into sound publications in international journals. It is also understood that such an effort would help both these institutions achieve research milestones in the coming future.

*Satya Sundar Bhattacharya*  
01/5/2020

Assistant Professor  
Dept. of Environmental Science  
Tezpur University

Satya Sundar Bhattacharya, PhD

Phone: + 91-3712-267007/8/9 Extn.-5610, Cell: +91-9436184848  
Email: satya72@tezu.ernet.in,  
Home page: www.sabelab.weebly.com

*[Signature]*  
Principal  
Pachhunga University College  
Aizawl : Mizoram



*[Signature]*  
Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)



त्रिपुरा विश्वविद्यालय

TRIPURA UNIVERSITY

(केन्द्रीय विश्वविद्यालय)

(A CENTRAL UNIVERSITY)

सूर्यमणिनगर, अगरतला, त्रिपुरा, भारत

Suryamaninagar, Agartala, Tripura, INDIA

पिन Pin - 799022



फोन Phone : (0381) 237 4801

237 4803

237 5355

237 9004

237 4804

237 9005

फैक्स Fax : (0381) 237 4802

237 4804

ई-मेल e-mail : touffice@tripurauniv.in

वेबसाइट website : www.tripurauniv.in

To,

Dr. Dibya Prakash Rai

Department of Physics

Pachhunga University College

Aizawl, India-796001

Date: 22/02/2016

Sub: Letter of Invitation for Research Collaboration.

Dear Dr. Dibya Prakash Rai,

This is to state that I, Dr. Surya Chattopadhyaya, Associate Professor, Department of Physics, Tripura University, Agartala Tripura, is supportive to research works for studying of elastic, structural, optical and electronic properties of some multifunctional compounds using density functional theory (DFT). I also hope that this kind of collaborative works may enable in exchange ideas and greater scientific thoughts for the advancement of technology.

This letter may be treated as an official invitation of research collaboration in this field. I heartily welcome Dr. Rai and your group members to visit my research lab and carry out some sorts of computational work in the form collaboration.

I am ready to assist you for further execution of this kind of research work. I will extend all my possible help and available research facilities to carry out the above mentioned works.

I wish you all the Good Luck !!!

*Surya Chattopadhyaya* 22/02/2016  
Dr. Surya Chattopadhyaya  
Associate Professor

Department of Physics

Tripura University,

Agartala, Tripura, India

Dr. Surya Chattopadhyaya

Associate Professor

Department of Physics

Tripura University


Central University



*[Signature]*  
Principal  
Pachhunga University College  
Aizawl : Mizoram

*[Signature]*  
Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)



<b>Phone: 258836/258508(O)</b> <b>Fax : (03712) 258534</b> <b>army: 2355 (O), 2356(R)</b>		<b>भारत सरकार, रक्षा मंत्रालय</b> <b>Govt of India, Min. of Defence</b> <b>रक्षा अनुसंधान प्रयोगशाला</b> <b>Defence Research Laboratory</b> <b>पोस्ट बैग नंबर 2 / Post Bag No. 2 तेजपुर,</b> <b>Tezpur, असम / Assam</b> <b>784 001</b>
<b>सभी पत्राचार केवल निदेशक को संबोधित करें / All Correspondence to be addressed to the Director only</b> <b>mail:director@drl.drdo.in</b>		

## LETTER OF COLLABORATION

The Defense Research Laboratory Tezpur (DRL under DRDO) and Pachhunga University College (Mizoram University) had formalized a fruitful collaboration on this day, **June 15<sup>th</sup> 2020**. Dr. Subhasish Das from the **Department of Environmental Science, Pachhunga University College (Mizoram University)** is the co-partner in this collaboration with the undersigned. The collaboration has produced good research publications and some works are also in the pipeline. This collaboration is made truly for advancement of scientific research between the two institutions in the area of waste remediation and biomass management. Under the purview of this scientific relationship both organizations would strive to increase the interchange of knowledge and man-power in the coming years.

*Utsab*  
15/06/2020.

UTSAB DEB  
Sc 'D'

Sh. Utsab Deb  
Scientist  
DRL, Tezpur

Defence Research Laboratory  
Tezpur, Assam



Principal  
Pachhunga University College  
Aizawl: Mizoram

*Vette*  
Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)





OFFICE OF THE PRINCIPAL  
GOVT. ZIRTIRI RESIDENTIAL SCIENCE COLLEGE  
(NAAC ACCREDITED : 2.75 CPGA)

[www.qzrsc.edu.in](http://www.qzrsc.edu.in) email : [contact@qzrsc.edu.in](mailto:contact@qzrsc.edu.in)

Ramthar Veng, Aizawl. Pin – 796001. Ph. No 0389 2305848

No.A.28019/1/16-GZRSC (QAC)/46 : Dated Aizawl, the 24<sup>th</sup> May, 2021

To,

The Principal,  
Pachhunga University College.  
Mizoram : Aizawl

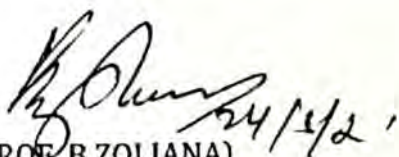
Sir,

Greetings from Government Zirtiri Residential Science College.

I am pleased to learn that the Department of Geology, Government Zirtiri Residential Science College and the Department of Geology, Pachhunga University college are taking steps to work in collaboration for academic and research purpose.

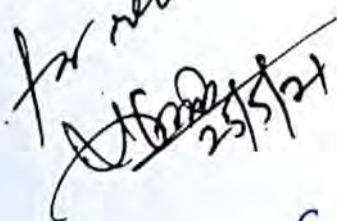
Our Institute encourages these kind of academic and research activities. For this purpose, I am pleased to forward a draft of the memorandum of understanding between the two institutes which will define the nature of our collaboration. The MOU may be signed by both parties as early as possible.

Yours faithfully,

  
(PROF. B. ZOLIANA)

Principal

Govt. Zirtiri Residential Science College  
Mizoram : Aizawl

Approved & signed  
801  
for record  
  
25/5/21

Sir Sir



# MEMORANDUM OF UNDERSTANDING FOR ACADEMIC&RESEARCH COOPERATION

Between

Department of Geology  
Government Zirtiri Residential Science College  
And

Department of Geology  
Pachhunga University College

## Purpose

The purpose of this Agreement is to promote academic and research cooperation between the Department of Geology, Government Zirtiri Residential Science College and Department of Geology, Pachhunga University College.

## Types of Cooperation

Through this memorandum, both Parties affirm the value of the academic and research collaboration and agree to promote the following activities:

- 1.1 Exchange of Teaching Faculty during the semesters as per their consent/ convenience.
- 1.2 Exchange of students as per convenience
- 1.3 Other activities as mutually agreed

This Agreement places no financial obligations or supplementary funding commitments on either Party. Subsequent program agreements must be approved in writing by the authorized representatives of each institution.

## Terms

This Agreement will become effective upon the date of signature by both Parties.

i) It shall remain valid for a period of one (1) year from the date of the last signature, with the understanding that it may be modified or extended by written mutual consent of both Parties.

ii) This Agreement may be terminated by either Party with advance written notice of at least thirty (30) days.

iii) The agreement may be extended by mutual consent of the two Parties after the one-year period, and it must be renewed in writing.

This Memorandum of Understanding is hereby signed in two (2) copies with one (1) copy remaining in the possession of each institution.





(Dr. C. ZORAMTHARA)

Head,

Department of Geology

Government Zirtiri Residential Science College

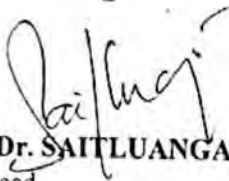
Head

Dept. of Geology

Govt. Zirtiri Resi. Science College

Aizawl : Mizoram

Date: 02.06.2021



(Dr. SAITLUANGA)

Head,

Department of Geology

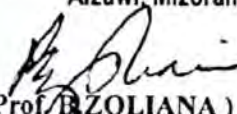
Pachhunga University College

Head

Department of Geology

Pachhunga University College

Aizawl, Mizoram



(Prof. B. ZOLIANA)

Principal,

Government Zirtiri Residential Science College

Date: 25.05.2021

Date: 2.6.2021.

Principal  
Govt. Zirtiri Resi. Sc. College  
Aizawl



(Prof. H. LALTHANZARA)

Principal,

Pachhunga University College

Principal

Pachhunga University College

Aizawl : Mizoram

Date: 25.05.2021





## **Special Programmes organised by the Department of Education, Pachhunga University College 2018**

### **‘Academic Exchange Programme’**

For the commemoration of P.U.C. Diamond Jubilee Celebration, an important programme was organised by the Department of Education, Pachhunga University College in collaboration with Government T. Romana College, Aizawl.

Academic Exchange Programme of V Semester students of Pachhunga University College and Govt T. Romana College was organised on 18<sup>th</sup> September 2018. 40 students from Pachhunga University College and 35 students from Govt. T. Romana College participated in the exchange programme. The students of Education Department, PUC went to Govt. T. Romana College for a day and the students of Govt. T. Romana College came to PUC for a day. Lecture sessions were conducted in the forenoon and lunch was provided to the students. Four teachers i.e. Dr. Lalthankungi, Mrs Susan Lalthanpuui, Mrs Lalrintluangi and Mrs Lalchhuanmawii delivered lectures on different topics of V Semester syllabus respectively. The same routine was followed at Govt. T. Romana college.

In the afternoon, both group of students came together at the Lecture Hall of Department of Education, Pachhunga University College, for Interaction Session and a tour of PUC Campus was organised for both groups. The students reported that the programme was different and exciting and they were supportive of conducting more programmes like this in the future.

  
**Coordinator**  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)



  
**Principal**  
Pachhunga University College  
Aizawl : Mizoram





(Pic: V Semester Education Core students of Pachhunga University College and Govt. T. Romana College at Academic Exchange Programme organised on 18. 9. 2018 at Pachhunga University College, College Veng, Aizawl, Mizoram 796005, India. Latitude N 23° 43' 21.3168'', Longitude E 92° 43' 31.7136'', 27.7.2017 2.30 pm.)

(DR. LALTHANKUNGI)  
Head of Department,  
Department of Education,  
Pachhunga University College

Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)



Principal  
Pachhunga University College  
Aizawl : Mizoram



## Faculty Exchange Programme 2021 between Department of Biotechnology PUC and Department of Biochemistry, GZRSC

Biotechnology department, PUC has signed an MoU with Department of Biochemistry, Government Zirtiri Residential Science College. Following the agreement, 2<sup>nd</sup> Teaching exchange between the two departments was organised during 13<sup>th</sup> August, 2021 to 20<sup>th</sup> August, 2021. Dr Zothanpuia and Dr Punuri Jayashekar Babu from PUC and Dr PC Lalrinfela and Ms K Zosangpuii from GZRSC presented a paper on selected topics.

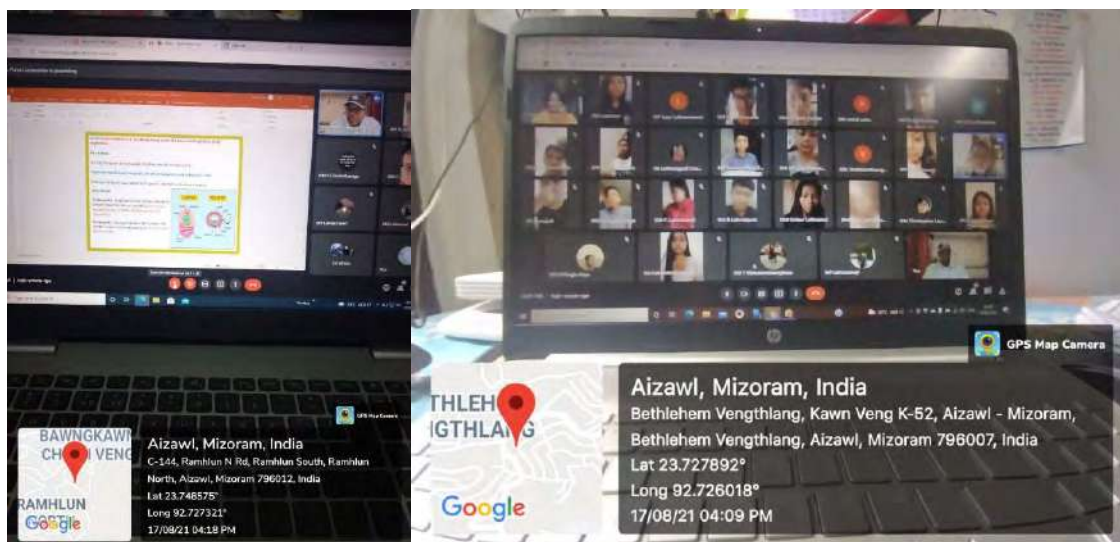
<div style="display: flex; justify-content: space-between; align-items: center;">  <div style="text-align: center;"> <p>DEPARTMENT OF BIOTECHNOLOGY PACHHUNGA UNIVERSITY COLLEGE AND DEPARTMENT OF BIOCHEMISTRY GOVERNMENT ZIRTIRI RESIDENTIAL SCIENCE COLLEGE</p> <p><b>FACULTY EXCHANGE PROGRAMME</b> <b>ODD SEMESTER 2021</b></p> </div>  </div>			
Date	Semester	Topic	Teacher
13 August 2021 (Friday)	III (Biotechnology, PUC)	Biotech/III/EC/05 Unit 2: Binomial nomenclature of microbes	Dr. P.C Lalrinfela, Assistant Professor, Department of Biochemistry, GZRSC
17 August 2021 (Tuesday)	I (Biochemistry, GZRSC)	Bchem/I/EC/01 Unit 4: Cell types, cell organelles and their functions	Dr. Punuri Jayashekar Babu, Assistant Professor, Department of Biotechnology, PUC
18 August 2021 (Wednesday)	I (Biotechnology, PUC)	Biotech/I/EC/01 Unit 2: Cell membrane and membrane transport system	K. Zosangpuii, Assistant Professor, Department of Biochemistry, GZRSC
20 August 2021 (Friday)	III (Biochemistry, GZRSC)	Bchem/III/EC/05 Unit 2: Factors affecting enzyme activity	Dr. Zothanpuia, Assistant Professor, Department of Biotechnology, PUC

### Schedule of the faculty exchange programme for odd semester 2021



Dr PC Lalrinfela from GZRSC delivered a lecture on “Nomenclature of Microbes” on 15<sup>th</sup> August 2021

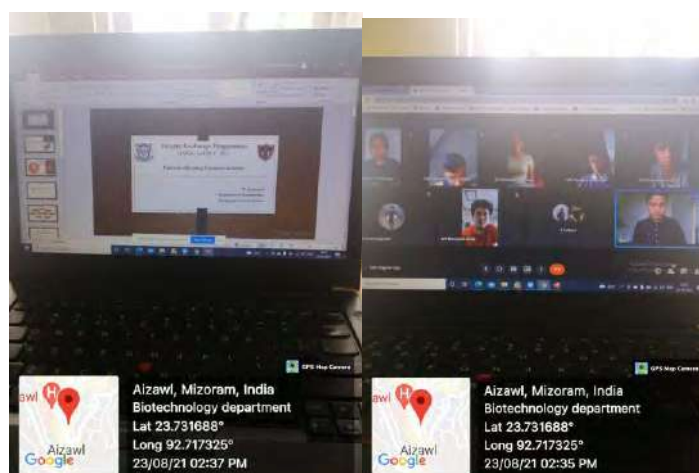




**Dr Punuri Jayashekar Babu from PUC delivered a lecture on “Cell type, organelles and their functions” on 17<sup>th</sup> August 2021**



**Ms K Zosangpuui from GZRSC delivered a lecture on “Cell membrane and membrane transport system” on 18<sup>th</sup> August 2021**



**Dr Zothanpuia from PUC delivered a lecture on “Factors effecting enzyme activity” on 20<sup>th</sup> August 2021**

*(Signature)*  
**(Dr. ZOTHANPUIA)**  
 Assistant Professor  
 Department of Biotechnology  
 Pachhunga University College  
 Aizawl, Mizoram



भारतीय अंतरिक्ष अनुसंधान संस्थान  
अंतरिक्ष विभाग  
भारतीय अंतरिक्ष अनुसंधान संस्थान  
अंतरिक्ष विभाग  
भारतीय अंतरिक्ष अनुसंधान संस्थान  
अंतरिक्ष विभाग  
भारतीय अंतरिक्ष अनुसंधान संस्थान  
अंतरिक्ष विभाग



Government of India  
Department of Space  
Indian Institute of Remote Sensing  
4 Kailash Road, PG No. 125  
Chhatrapati Shivaji Maharaj, India  
Telephone: +91-11-25743000  
Fax: +91-11-2741987, 2748001

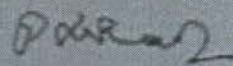
Prof. P.L.N. Raju  
Group Head, Program Planning and Evaluation Group &  
Project Manager, IIRS Outreach Program

Ref: EDUSAT/Coordinator/2015

Date: June 26, 2015

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that **Dr Kulendra Chandra Das**, Department of Environmental Science (PUC), Mizoram University, Aizawl. He coordinated the IIRS Satellite Based course on "Basics of RS, GIS & GNSS" during August 4 – November 14, 2014 conducted by this institute.

  
(P. L. N. Raju)

  
Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)



  
Principal  
Pachhunga University College  
Aizawl : Mizoram



Original Research Article

DOI: <https://dx.doi.org/10.18203/2394-6040.ijcmph20210842>

# Anxiety and panic buying during COVID-19 pandemic among the Mizo

Rinpari Ralte<sup>1</sup>, Arun Tipandjan<sup>2</sup>, Mary Ann L. Halliday<sup>3\*</sup>,  
C. Zothanmawia<sup>4</sup>, Ritu Modi<sup>5</sup>, Devi R. Nithiya<sup>6</sup>

<sup>1</sup>Department of Psychology, Mizoram University, Pachhunga University College Campus, Aizawl, Mizoram, India

<sup>2</sup>Department of Research, Cross-Cultural Psychologist, Research Psychologist, International centre for Psychological Counselling and Social Research, Puducherry, India

<sup>3</sup>Department of Psychology, St. Xavier's College, Lengpui, Mizoram, India

<sup>4</sup>Department of Psychology, Mizoram University, Tanhril, Mizoram, India

<sup>5</sup>Department of Psychology, University of Allahabad, Prayagraj, Uttar Pradesh, India

<sup>6</sup>Department of Physiology, Mahatma Gandhi Medical College and Research Institute, Sri Balaji, Vidyapeeth, Puducherry, India

Received: 14 January 2021

Accepted: 10 February 2021

**\*Correspondence:**

Dr. Mary Ann L Halliday,

E-mail: [maryann.lh@gmail.com](mailto:maryann.lh@gmail.com)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** Certain behaviours have been observed since the beginning of the COVID-19 pandemic, such as buying and storing a lot of basic food and necessities, or hours spent obsessing over the virus. This research aims to assess the impact of the COVID-19 pandemic on the lives of the people living in Mizoram, a small north-eastern state in India, regarding psychological factors such as coronavirus anxiety and panic buying.

**Methods:** A total of 300 samples aged 20-66 years (150 males and 150 females) participated in the online survey. Those who consented to participate filled the forms which included socio-demographic details, as well as the Corona Virus Anxiety Scale and the Panic Buying Scale.

**Results:** Correlation analysis revealed significant positive correlations ( $r=0.21$ ,  $p<0.000$ ) between Coronavirus Anxiety and Panic Buying. Socio-demographic variables such as age ( $r=-0.12$ ,  $p<0.05$ ) and spirituality ( $r=0.13$ ,  $p<0.05$ ) are significantly correlated with panic buying, whereas number of family members was found to be significantly correlated ( $r=0.14$ ,  $p<0.05$ ) with Coronavirus anxiety. Furthermore, females scored significantly higher than males in Coronavirus anxiety ( $p<0.002$ ) and Panic Buying ( $p<0.007$ ). Analysis also revealed that the number of hours spent in thinking about COVID-19 has a significant impact on Coronavirus Anxiety, and that growth in budget significantly influences Panic buying.

**Conclusions:** One vital policy implication of the present study is that during a pandemic the government and other responsible organizations should ensure delivery of only factual data about COVID-19 and also reassure people about the adequacy of essential commodities so that panic buying is not rampant.

**Keywords:** COVID -19, Coronavirus anxiety, Mizoram, Pandemic, Panic buying

## INTRODUCTION

The Coronavirus disease 2019 (COVID-19) has emerged as a public health crisis globally.<sup>1,2</sup> One phenomenon not seen in earlier outbreaks, is that of panic buying during the current COVID-19 pandemic, which has been linked to the perception of scarcity.<sup>3-6</sup> Amidst uncertainties when

crises occur, it is common for people to engage in purchasing as many basic needs as possible, to have a sense of control.<sup>7,8</sup> The reason for the phenomenon may be that of a remedial response to reduce fear and anxiety that may arise from losing control over the world around them.<sup>9</sup> It may be a method of preparation, caused by the primitive part of our brain, for survival.<sup>9,10</sup>



Over the last two decades, one very important effect that has been observed consistently is that infectious pandemics have on mental health and well-being, which is also being seen in the current COVID-19 pandemic.<sup>11-13</sup> Majority of the available literature has focused on common mental health problems such as depression, anxiety, stress, substance use, loneliness and its impact in general population as well as vulnerable groups such as frontline health care workers, homeless, elderly and pregnant women.<sup>12</sup>

A number of studies highlighted that depression, anxiety, and stress were prevalent among the Indian population during the COVID-19 lockdown.<sup>3,13,14</sup> As far as the COVID-19 pandemic is concerned, what is alarming is the heightened fear related to the coronavirus culminating in people committing suicides.<sup>15,16</sup>

The emergence and spread of COVID-19 worldwide, has been seen to cause confusion, anxiety and fear among the general public, which has often been observed to be the breeding ground for hatred and stigma.<sup>17</sup> A very distressing observation of the rise of social stigma and discrimination is that of certain populations (Indian north-east people) being targeted as the reason for the COVID-19 outbreak.<sup>18</sup>

A number of myths and fake news about the treatment of COVID-19 are spreading through social media platform, which can be disturbing for certain individuals. A certain degree of panic has been found in the public, which may be the result of living in a densely populated country with limited healthcare services, like India.<sup>18</sup>

Mizoram, a small north-east Indian state, saw its first case of COVID-19 on 24<sup>th</sup> March, 2020, at the start of complete lockdown throughout the whole country. The one positive case in the state was cured during the 3<sup>rd</sup> lockdown, and till the end of the fourth lockdown, Mizoram had no other positive cases. With a large number of Mizos who were stranded in different parts of the country coming home and preparing to come home during this time, the whole state prayed to have no new positive cases. With uncertainty of the future and tense waiting for further announcements of lockdowns by the Government, a sense of anxiety and panic buying was witnessed amongst the people of the state. Then, as the whole country started facing the 5<sup>th</sup> lockdown, the news of positive cases from the samples tested from those who had returned home from different states hit Mizoram on 2<sup>nd</sup> June, 2020. Since then, the number of positive cases rose every day, most of them being asymptomatic, all of them returnees from other states. As on 17<sup>th</sup> June, 2020, out of a total of 6035 samples tested, the number of positive cases had risen to 121, with only 1 cured and discharged case, but no deaths so far.<sup>19</sup> However, even as the fear of community transmission (if and when it would happen) loomed in the minds of the people, the pandemic has witnessed the collective contributions of different people in the community, to help each other and fight

against the disease which has caused so much disruption in their daily lives.

This study aims to assess the impact of the COVID-19 pandemic on the lives of the people living in Mizoram, a small north-eastern state in India, regarding psychological factors such as coronavirus anxiety and panic buying. So far, no research has been published on panic buying and coronavirus anxiety in Mizoram. With this background, the present study is carried out with the following objectives in mind:

To assess panic buying behaviour and coronavirus anxiety, and their socio-demographic correlates in the Mizo population during the COVID-19 outbreak.

To analyse the relationship between panic buying behaviour and coronavirus anxiety among the Mizo population.

To assess gender differences in panic buying behaviour and coronavirus anxiety among the Mizo population.

To examine the socio-demographic variables responsible for Coronavirus anxiety and panic buying among the people living in Mizoram.

## METHODS

### *Study design and participants*

The study was conducted from the 22<sup>nd</sup> of May 2020 to 17<sup>th</sup> June 2020, using convenience sampling technique. Data was collected through web-based online survey. The questionnaires were forwarded through Google forms, with a consent form appended to it. Those who consented to participate filled the forms which included socio-demographic details, as well as the Corona Virus Anxiety Scale and the Panic Buying Scale.

In total, 300 participants (150 males and 150 females), with the age range from 20-66 years took part in the online survey, completed the questionnaires and were included in the analysis.

### *Measures and tools*

#### *Demographics*

The socio-demographic variables included age, age group, gender, type of family, number of family members, religion, spirituality, education, employment status, occupation and monthly income, budget increase in grocery.

Respondents were also asked to respond to the following COVID-19 items: (i) time spent searching for information about COVID-19 on media in a day, and (ii) time spent



thinking about COVID-19 per week. Likert type of response choices were provided to these items.

#### Corona virus anxiety scale<sup>20</sup>

The Corona Virus Anxiety Scale (CAS) is a brief mental health screener to identify probable cases of dysfunctional anxiety associated with the COVID-19 crisis. This 5-item scale discriminates well between persons with and without dysfunctional anxiety using an optimized cut score of  $\geq 9$  (90% sensitivity and 85% specificity).

#### Panic buying scale<sup>21</sup>

Panic Buying Scale (PBS) during COVID-19 pandemic is a scale to measure Panic buying which occurs when fear and panic influence behaviour leading people to buy more things than usual. It contains variables such as (1) panic buying, (2) impulse buying, (3) temporal focus, (4) optimism, (5) risk perception, (6) need for cognition. PBS has seven items and for each statement, the respondent has to point out the degree of disagreement or agreement, considering [his/her recent behaviour during the new coronavirus pandemic] (1 = "strongly disagree" and 7 = "strongly agree").

#### Statistical analysis

Data was analysed with SPSS Version 19.0. First, descriptive analysis was used to illustrate the socio-demographic and other selected characteristics of the respondents. Next, Spearman's correlation method was used to assess the correlations between socio-demographic variables, coronavirus anxiety, and panic buying. In addition, a univariate analysis (Nonparametric test) was used to explore the significant associations between socio-demographic variables and coronavirus anxiety as well as panic buying during the assessment period. A two-tailed  $p < .05$  was considered statistically significant.

#### RESULTS

An online survey on coronavirus anxiety and panic buying was conducted in the Mizo population during the corona pandemic. A total of 300 respondents (150 males and 150 females) participated in the online survey, their age ranging between 20-66 years.

The socio-demographic characteristics of the respondents and the distribution of individual responses to coronavirus-related variables as well as the Mean and Standard Deviations are given in Table 1.

Table 1: Socio-demographic profile of respondents.

Variables	N	%	Mean	SD
<b>Gender</b>				
Male	150	50		
Female	150	50		
<b>Age</b>	300		38.64	8.94
Young adults (20-30 years)	164	54.7		
Middle adults (31-59 years)	131	43.7		
Old adults (above 60 years)	5	1.7		
<b>Family type</b>	300		1.42	0.57
Nuclear	185	61.7		
Joint	103	34.3		
Living alone	12	4.0		
<b>Religion</b>	300		1.03	0.315
Christian	296	98.7		
Hindu	1	0.3		
Lalnam	1	0.3		
Atheist	1	0.3		
Rather not say	1	0.3		
<b>Number of family members</b>	300		5.85	2.69
.00	2	.7		
1.00	6	2.0		
2.00	8	2.7		
3.00	32	10.7		
4.00	47	15.7		
5.00	56	18.7		
6.00	58	19.3		

Continued.



Variables	N	%	Mean	SD
7.00	32	10.7		
8.00	24	8.0		
9.00	10	3.3		
10.00	13	4.3		
11.00	6	2.0		
12.00	7	2.3		
13.00	1	0.3		
16.00	1	0.3		
17.00	1	0.3		
20.00	1	0.3		
<b>Education</b>	300			
Primary	2	0.7	4.21	0.97
High school	17	5.7		
Higher secondary school	36	12.0		
Graduate	121	40.3		
Post-graduate	108	36.0		
Mphil/PhD	16	5.3		
<b>Employment</b>	300			
Employed	240	80.0	1.33	0.72
Unemployed	29	9.7		
Housewife	24	8.0		
Retired	7	2.3		
<b>Occupation</b>	300			
Govt. Employed/ Private full-time employed	94	31.3	2.75	1.78
Business/ Self-employed	64	21.3		
Teacher	64	21.3		
Contract/ Part-time	31	10.3		
Housewife	20	6.7		
Retired	3	1.0		
Others	24	8.0		
<b>Monthly income</b>	300			
Rs.5000- Rs.20000	92	30.7	2.92	1.65
Rs.20001- Rs.35000	52	17.3		
Rs.35001- Rs.50000	36	12.0		
Rs.50001 - Rs.65000	29	9.7		
More than Rs.65000	91	30.3		
<b>Spirituality</b>	300			
- Totally disagree	11	3.7	8.91	2.30
1	1	0.3		
2	2	0.7		
3	1	0.3		
4	1	0.3		
5	10	3.3		
6	6	2.0		
7	5	1.7		
8	32	10.7		
9	26	8.7		
10 – Totally agree	205	68.3		
<b>Budget increase in grocery</b>	300			
No increase	105	35.0	1.75	0.63
Twice	166	55.3		
Thrice	28	9.3		
Four times	1	0.3		

Continued.

  
**Coordinator**  
 Internal Quality Assurance Cell  
 Pachhunga University College  
 (A constituent college of Pachhunga University)



  
**Principal**  
 Pachhunga University College  
 Aizawl : Mizoram



Variables	N	%	Mean	SD
<b>Time spent searching for information about COVID-19 on media in a day</b>	300		2.24	1.11
Less than 15minutes	97	32.3		
16-30 minutes	82	27.3		
31minutes- 1 hour	85	28.3		
1-2 hours	24	8.0		
<b>Time Spent thinking about COVID-19 per Week</b>	300		2.78	1.38
Less than 1 hour	62	20.7		
1-2 hours	75	25.0		
2-5 hours	80	26.7		
5-10 hours	47	15.7		
More than 10 hours	36	12.0		

Table 2: Spearman's correlation between socio-demographic variables, CAS and PBS and reliability coefficients for CAS and PBS.

Variables	CAS	PBS	Reliability (Cronbach Alpha)
Gender	0.18**	0.16**	
Age	-0.02	-0.12*	
Age Group	0.04	-0.05	
Type of Family	-0.09	-0.02	
Number of family members	-0.14*	-0.03	
Religion	0.02	-0.07	
Spirituality	-0.04	0.13*	
Employment	0.02	0.08	
Job	-0.01	0.07	
Education	-0.04	0.03	
Monthly Income	-0.01	0.03	
Budget increase in grocery	0.05	0.28**	
Time spent searching for information about COVID-19 on media in a day	0.08	0.04	
Time spent per week thinking about COVID-19	0.19**	0.15**	
CAS	x	0.21**	0.53
PBS	0.21**	x	0.90

(\*= $p < .05$ , \*\*= $p < .01$ )

More than half of the respondents (54.7%) were young adults, 43.7% middle adults and only 1.7% old adults. 61.7% of the respondents live in nuclear families, 34.3% live in joint families and 4% live alone. 98.7% of respondents are Christians. The highest percentage of participants are graduates (40.3%), and 36% post-graduates. 80% of the respondents are employed, among which the highest percentages are Government employed or full-time employed in the Private sector (31.3%). 30.7% of respondents have a monthly income between Rs.5,000-Rs.20,000 and 30.3% earn more than Rs.65,000 per month.

Participants were asked to rate their spirituality on a 0-10 rating scale (0 being totally disagree, 10 being totally agree) and their responses show that the highest percentages of participants (68.3%) consider themselves to be spiritual persons. Most respondents (56%) reported a two-fold increase, 9% reported a three-fold increase, while 35% reported no increase in budget for groceries

since the COVID-19 pandemic. With regards to the amount of time they spent each day in searching for information about COVID-19 on media, 87.9% of the participants reported spending less than 1 hour in searching for information about COVID-19, 8% reported spending about 1-2 hours each day, while 4% reported spending more than 2 hours per day for the same. 20.7% of participants reported spending less than 1 hour per week in thinking about COVID-19, 25% reported spending about 1-2 hours of their time per week, 26.7% reported spending about 2-5 hours per week, and 15.7% reported spending 5-10 hours while 12% reported spending more than 10 hours per week in thinking about COVID-19. (Table 1)

#### Correlation analysis

Correlation between the socio-demographic variables and the two scales was assessed using Spearman's Correlation and the reliability was estimated for each of the translated version of the tools used in the study i.e., CAS and PBS,

Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)





using Cronbach's coefficient alpha.<sup>22</sup> The results reveal that the reliability coefficient of the tests emerged to be satisfactory over the levels of analysis for the whole

sample, indicating the trust-worthiness of the tools used in the study.

**Table 3: Univariate analysis (Kruskal-Wallis test) of socio-demographic characteristics on Coronavirus anxiety and panic buying.**

Variables	N	CAS		P	PBS		P
		Mean Rank	Chi Square		Mean Rank	Chi Square	
<b>Gender</b>							
Male	150	139.75	9.36	0.00	136.97	7.31	0.01
Female	150	161.25			164.03		
<b>Time Spent thinking about COVID-19</b>							
Less than 1 hour	62	141.08	14.77	0.01	128.17	8.14	0.09
1-2 hours	75	140.03			144.07		
2-5 hours	80	147.41			159.11		
5-10 hours	47	160.99			171.14		
More than 10 hours	36	181.71			156.28		
<b>Budget Increase in Grocery</b>							
No increase	105	145.06	7.11	0.07	113.88	30.71	0.00
Twice	166	154.61			171.54		
Thrice	28	141.68			158.80		
Four times	1	285.50			271.50		
<b>Spirituality</b>							
.00	1	120.00	16.36	0.09		10.41	0.41
1.00	2	189.00					
2.00	1	258.00					
3.00	1	298.00					
4.00	10	151.35					
5.00	6	143.00					
6.00	5	183.20					
7.00	32	149.31					
8.00	26	171.50					
9.00	205	146.90					
10.00	11	132.55					

Gender was found to be significantly and positively correlated with CAS ( $r = 0.18, p < .01$ ) and PBS ( $r = 0.16, p < .01$ ). Age was found to be significantly and negatively correlated with PBS ( $r = -.12, p < .05$ ).

A significant negative correlation was also found between the number of family numbers and CAS ( $r = -.14, p < .05$ ). Spirituality and PBS were also found to be significantly and positively correlated ( $r = .13, p < .05$ ).

A significant positive correlation was also found between the budget increase for groceries and panic buying ( $r = .28, p < .01$ ).

The amount of time spent per week in thinking about COVID-19 was found to be significantly and positively correlated with both CAS ( $r = .19, p < .01$ ) and PBS ( $r = .15, p < .01$ ). CAS and PBS were also found to be significantly and positively correlated ( $r = .21, p < .01$ ). (Table 2)

#### Univariate analysis of respondents in coronavirus anxiety and panic buying

Gender differences in CAS and PBS were analysed using Kruskal-Wallis Test and the results revealed significant gender differences in both CAS ( $p < .01$ ) and PBS ( $p < .01$ ), with females scoring significantly higher in both CAS and PBS. Since correlation analysis indicated a significant and positive correlation between the amount of time spent per week in thinking about COVID-19 with both CAS ( $r = .19, p < .01$ ) and PBS ( $r = .15, p < .01$ ), differences in CAS and PBS based on time spent thinking about COVID-19 per week were analysed using Kruskal-Wallis test and the results are shown in Table 3. Significant differences were found in CAS ( $p < .01$ ), with participants who spent more than 10 hours a week in thinking about COVID-19 scoring the highest in coronavirus anxiety. However, no significant differences were found in Panic Buying.

Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)



Principal  
Pachhunga University College  
Aizawl : Mizoram



Since correlation analysis indicated a significant and positive correlation between Spirituality and PBS ( $r=.13$ ,  $p<.05$ ), between Budget increase in groceries and PBS ( $r=.28$ ,  $p<.01$ ), as well as the amount of time spent per week in thinking about COVID-19 with both CAS ( $r=.19$ ,  $p<.01$ ) and PBS ( $r=.15$ ,  $p<.01$ ), differences in CAS and PBS based on time spent thinking about COVID-19 per week were analysed using Kruskal-Wallis test and the results are shown in Tables 3.

No significant differences were found in CAS and PBS based on Spirituality. However, results showed a significant difference in Panic Buying based on differences in Budget Increase in groceries ( $p<.01$ ). Respondents reporting four times increase in budget tend to indulge in panic buying more than those having lesser increase in grocery budget (Table 3).

## DISCUSSION

This study was conducted to assess panic buying behaviour and coronavirus anxiety, and their socio-demographic correlates in the Mizo population during the COVID-19 outbreak. This is the first scientific literature that highlights the impact of COVID-19 crisis in a sample of the Mizo population. The findings of the study indicated that women have higher levels of coronavirus anxiety, and thus indulging in panic buying more than men. This could be because Mizo women, like their counterparts in various parts of the world, engage in multiple roles – being a mother, a wife, and a homemaker. Moreover, most Mizo women are bread winners of the family, working from dawn to dusk and the fact that they have to work even during the COVID-19 pandemic may have specifically contributed to the higher levels of coronavirus anxiety reported by them. This naturally incites them to indulge in panic buying to maintain a constant supply for their family. This finding is consistent with other studies in different parts of the world which have found females more likely to be anxious than males.<sup>23-26</sup>

Moreover, the findings of the present study highlight that the age of the participants is negatively associated with panic buying. Perhaps, for younger participants the fear of not being able to procure basic necessities may have aggravated the need to buy more items than the usual. Spirituality is also found to be positively associated with panic buying. The Mizo community in essence is built on spirituality and most of their behaviour is influenced to a certain extent by this. Those who reported themselves to be more spiritual may have a tendency to procure more items as a form of sustenance to take care of their families which according to them may have been a very spiritual act. Further, budget increase in grocery and the time spent thinking about COVID-19 per week are found to be significantly and positively associated with panic buying. Thus, increase in grocery budget and increase in time spent thinking about COVID-19 resulted in more panic buying.

Several explanations have been highlighted for panic buying.<sup>4</sup> Firstly, the desire to maintain regular routines versus uncertainty about the duration of the pandemic may lead to anxiety and panic buying. Secondly, trying to maintain stability through stocking of food and other basic necessities for the family may be a coping response. Such psychological responses may have aggravated due to the increase in social media and digital connectivity which has improved considerably since the earlier outbreaks of SARS/MERS, H1N1 pandemic.<sup>27</sup> Researchers have also suggested the need for the media to be more careful and responsible in their reports of panic buying, so as not to cause panic among the public.<sup>28</sup> Presenting information and data is important for the public to make informed decisions. In accordance with the social learning theory, too much information – both reading material and visuals – of empty shelves in supermarkets may lead to more panic buying.<sup>4,28</sup> Furthermore, it is often observed that the mistrust of public representatives and government that people in developing countries have, may lead to panic buying when rumours of the pandemic spread.<sup>29</sup>

Findings also manifested that the number of family members is negatively associated with coronavirus anxiety. Social support provided by members of a large family could lead to emotional strength in times of a crisis such as a pandemic, resulting in low anxiety. Furthermore, the time spent thinking about COVID-19 has a significant impact on the level of coronavirus anxiety the respondents experienced. The more the hours spent in thinking about COVID-19 per week (more than 10 hours) the higher the coronavirus anxiety. Continuous thinking about a particular topic may result in the desire to gain more information about that topic through media exposure for instance. The exposure to media, especially false information and false reports about COVID-19 have been linked to anxiety and depressive symptoms in the general public, which has been noted even in previous events such as the 9/11 terrorist attack, the Boston Marathon Bombings, and the 2014 Ebola epidemic.<sup>30-32</sup>

A survey conducted by the Indian Psychiatry Society during the beginning of lockdown indicates 20% rise in patients suffering from mental illness.<sup>33</sup> Researchers have found that the fear of infection during epidemics may result in anxiety, stress, depression, etc.<sup>34</sup> Studies in China and Spain have also reported severe psychological distress (anxiety, stress, and depression) during COVID-19.<sup>3,23,35</sup> Poor mental health status has also been linked to different causes of worry, such as inadequate supply of masks and not being able to work from home, for being infected by COVID-19 in Hong Kong.<sup>36</sup> High level of anxiety, preoccupation with thoughts of the COVID-19 pandemic, sleep difficulties, paranoia and distress related social media has also been reported in the Indian population.<sup>17</sup> A study indicated that people who do not have enough supplies to sustain the lockdown were most affected, and the prosperity of a family was found to be negatively correlated with stress, anxiety, and depression.<sup>14</sup>

Coordinator  
Internal Quality Assurance Cell  
Pachhunga University College  
(A constituent college of Mizoram University)



Principal  
Pachhunga University College  
Aizawl : Mizoram



**Limitations:** The current study has several limitations. Firstly, the sample chosen through convenience sampling may not represent the Mizo population. With regards to the data collection method, using online tools (Google Forms) may under represent older participants, as well as the underprivileged since they may not be technology savvy and may not have internet facility to participate in the study.

As mentioned, the study is limited to the people who had smartphones, e-mail IDs and the ability to read. This represents the educated population of the state, so the study findings in the present study might not be generalizable to other populations.

Moreover, all the responses were self-reported, and this could cause recall bias. Furthermore, pre-existing diagnoses of depression and anxiety could not be ascertained since the study was conducted online. So it was not possible to control them during the analysis

## CONCLUSION

In conclusion, the findings of the present study suggested that there is gender difference in coronavirus anxiety and panic buying behaviour among the Mizos. Furthermore, socio-demographic factors such as age, number of family members, spirituality, budget increase in grocery, times spent thinking about COVID-19 in a week are all associated with coronavirus anxiety and panic buying. One vital policy implication of the present study is that during a pandemic the government and other responsible organizations should make use of the digital platforms to deliver, in a timely manner, only factual data about COVID-19 and also reassure people about the adequacy of essential commodities so that panic buying is not rampant.

The promotion of positive psychosocial support to the citizens should be a chief concern during a pandemic. This can be done through media platforms, as well as supplying printed brochures and flyers about the nature and impact of COVID-19 on mental health. Increase in psychological distress is a common phenomenon during pandemics, and therefore awareness programs to address the mental and physical health concerns of people should be the main objective. Finally, to prevent unwanted occurrences of the phenomenon during public health emergencies, further empirical studies may be undertaken so that preventive measures are taken up. Responsible media reporting guidelines may be developed to reduce fear and panic among the readers as reports of panic buying could lead to panic buying and stockpiling of goods and commodities.

**Strengths of the study:** Empirical studies related to panic buying behaviour and coronavirus anxiety is scarce as far as the Mizo population is concerned. To the best of our knowledge, this study is the frontrunner in research about corona virus anxiety and panic buying in Mizoram. This study would contribute to existing literature and serve as a baseline research for future projects during pandemics.

## ACKNOWLEDGEMENTS

The authors would like to thank the International Centre for Psychological Counseling and Social Research, Puducherry, India for the opportunity to conduct the present study. The study would not have been possible without participants willing to take part in the online survey, and so we thank all the participants.

*Funding:* No funding sources

*Conflict of interest:* None declared

*Ethical approval:* Not required

## REFERENCES

1. WHO. Joint statement an unpredicted private sector call to action to tackle COVID-19. Available at: <https://www.who.int/news/item/16-03-2020-icc-who-joint-statement-an-unprecedented-private-sector-call-to-action-to-tackle-covid-19>. Accessed on 2 October 2020.
2. Worldometer, COVID-19 coronavirus pandemic. Available at: <https://www.worldometers.info/coronavirus/>. India confirms its first coronavirus case. <https://www.cnn.com/2020/01/30/india-confirms-first-case-of-the-coronavirus.html>. Accessed on 2 October 2020.
3. Verma S, Mishra A. Depression, anxiety, and stress and socio-demographic correlates among general Indian public during COVID-19. *International J Social Psychiatr*. 2020;1-7.
4. Sim K, Chua HC, Vieta E, Fernandez G. The anatomy of panic buying related to the current COVID-19 pandemic. *Psychiatry Research*. 2020.
5. Wilkens, J. Why We Hoard: Fear at Root of Panic-Buying, Psychologists Say. *The San Diego Union-Tribune*; 2020. Available at: <https://www.sandiegouniontribune.com/news/health/story/2020-03-22/hoard-fear-panic-buying-psychology>. Accessed on 2 October 2020.
6. Dholakia U. Why are we panic buying during the coronavirus pandemic? *Sci. Behind Behav*. 2020. Available at: <https://www.psychologytoday.com/sg/blog/the-science-behind-behavior/202003/why-are-we-panic-buying-during-the-coronavirus-pandemic>. Accessed on 2 October 2020.
7. Yap JA. Coronavirus: why people are panic buying loo roll and how to stop it. *Conversation [Online]*; 2020. Available at: <https://theconversation.com/coronavirus-why-people-are-panic-buying-loo-roll-and-how-to-stop-it-133115>. Accessed on 2 October 2020.
8. Hendrix C, Brinkman HJ. Food insecurity and conflict dynamics. *Causal Link. Complex Feedbacks*. Stab. 2013;2(2):e26.
9. Shou B, Xiong H, Shen XM. Consumer Panic Buying and Quota Policy under Supply Disruptions. City University of Hong Kong, Hong Kong Working paper; 2013.
10. Jennings LC, Monto AS, Chan PK, Szucs TD, Nicholson KG. Stockpiling prepandemic influenza vaccines: A new cornerstone of pandemic

Coordinator

Internal Quality Assurance Cell  
Pachhunga University College

(A constituent college of Mizoram University)



Principal

Pachhunga University College  
Aizawl : Mizoram



- preparedness plans. *The Lancet Infectious Diseases*. 2008;8(10):650-8.
11. Dodgson LA. Human behavior expert explains 4 psychological reasons why people are panic buying items in bulk during the coronavirus pandemic, Insider; 2020. Available at: <https://www.insider.com/why-people-are-panic-bulk-buying-during-the-coronaviruspandemic-2020-3>. Accessed on 2 October 2020.
  12. Kar SK, Arafat YSM, Kabir R, Sharma P, Saxena, SK. Coping with mental health challenges during COVID-19. In S. Saxena (Ed.). *Coronavirus disease 2019 (COVID-19). Medical virology: From pathogenesis to disease control*. Singapore: Springer; 2020.
  13. PTI. Goa: Coronavirus lockdown triggers rise in mental health issues; April 10, 2020. Available at: <https://www.deccanherald.com/national/west/goa-coronavirus-lockdown-triggers-rise-in-mental-health-issues-823707.html>. Accessed on 2 October 2020.
  14. Rehman U, Shahnawaz MG, Khan NH, Kharshiing KD, Khursheed M, Gupta K. Depression, Anxiety and Stress among Indians in Times of COVID 19 Lockdown. *Community Mental Health J*. 2020.
  15. Goyal K, Chauhan P, Chhikara K, Gupta P, Singh M. Fear of COVID 2019: First suicidal case in India! *Asian J Psychiatr*. 2020;49:101989.
  16. Mamun M, Griffiths M. First COVID-19 suicide case in Bangladesh due to fear of COVID-19 and xenophobia: Possible suicide prevention strategies. *Asian J Psychiatr*. 2020;51:102073.
  17. Roy D, Tripathy S, Kar SJ, Sharma N, Verma SK, Kaushal V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian J Psychiatr*. 2020;51:102083.
  18. WHO. Rolling Updates on Coronavirus Disease (COVID-19). (2020c) Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>. Accessed on 2 October 2020.
  19. Task Group on Media & Publicity Daily Bulletin Issue 65.pdf. Available at: <https://mcovid19.mizoram.gov.in/pages/post/192/showhttps://health.mizoram.gov.in/>. Accessed on 2 October 2020.
  20. Lee SA. Coronavirus Anxiety Scale: A brief mental health screener for COVID-19 related anxiety, *Death Studies*. 2020;44(7):393-401.
  21. Lins S, Aquino S. Development and initial psychometric properties of a panic buying scale during COVID-19 pandemic. *Heliyon*. 2020;6:e04746.
  22. Cronbach LJ. Coefficient alpha and the internal structure of tests. *Psychometrika*. 1951;16:297-334.
  23. Gonzalez-Sanguino C, Ausin B, Castellanos MA, Saiz J, Lopez-Gomez A, Ugidos C. Mental Health Consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. *Brain, Behavior and Immunity*. 2020;87:172-6.
  24. Haro JM, Palacin C, Vilagut G, Martínez M, Bernal M, Luque I. Prevalence of mental disorders and associated factors: results from the ESEMeD-Spain study. *Med. Clin. (Barc)*. 2006;126:445.
  25. Moghanibashi-Mansourieha A. Assessing the anxiety level of Iranian general population during COVID-19 outbreak. *Asian J Psychiatr*. 2020;51:102076.
  26. Gururaj G, Varghese M, Benegal V, Rao GN, Pathak K, Singh LK, et al. and NMHS Collaborators Group. *National Mental Health Survey of India, 2015-16: Prevalence, pattern and outcomes*. NIMHANS Publication; 2016.
  27. Depoux A, Martin S, Karafillakis E, Preet R, Wilder-Smith A, Larson H. The pandemic of social media panic travels faster than the COVID-19 outbreak, *J Travel Medic*. 2020;27(3):31.
  28. Arafat SMY, Kar SK, Marthoenis M, Sharma P, HoqueApu E, Kabir R. Psychological underpinning of panic buying during pandemic (COVID-19). *Psychiatr Res*. 2020;289.
  29. Hossain MS, Ferdous S, Siddiquee MH. Mass panic during COVID-19 outbreak- A perspective from Bangladesh as a high-risk country. *J Biomedic Analyt*. 2020;3(2):1-3.
  30. Xinhua. Bat soup, biolab, crazy numbers. Misinformation "infodemic" on novel coronavirus exposed. Available at: [https://www.xinhuanet.com/english/2020-02/04/c\\_138755586.htm](https://www.xinhuanet.com/english/2020-02/04/c_138755586.htm). Accessed 30 September 2020.
  31. Garfin DR, Silver RC, Holman EA. The novel coronavirus (COVID-2019) outbreak: amplification of public health consequences by media exposure. *Health Psychol*. 2020;39(5):355-7.
  32. Holman EA, Garfin DR, Silver RC. Media's role in broadcasting acute stress following the Boston Marathon bombings. *Proc Natl Acad Sci U S A*. 2014;111(1):93-8.
  33. Lolwal M. 20% increase in patients with mental illness since coronavirus outbreak: Survey. (2020, March 31). Available at: <https://www.indiatoday.in/india/story/20-per-cent-increase-in-patients-with-mental-illness-since-coronavirus-outbreaksurvey-1661584-2020-03-31>. Accessed on 2 October 2020.
  34. Hall R, Hall R, Chapman M. The 1995 Kikwit Ebola outbreak: Lessons hospitals and physicians can apply to future viral epidemics. *General Hospital Psychiatr*. 2008;30(5):446-52.
  35. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: Implications and policy recommendations. *General Psychiatr*. 2020;33(2):e100213.
  36. Choi EP, Hui BPH, Wan EYF. Depression and Anxiety in Hong Kong during COVID-19. *Int. J. Environ. Res. Public Health* 2020;17:3740.

Cite this article as: Ralte R, Tipandjan A, Halliday MAL, Zothanmawia C, Modi R, Nithiya DR. Anxiety and panic buying during COVID - 19 pandemic among the Mizo. *Int J Community Med Public Health* 2021;8:1445-53.

Coordinator

Internal Quality Assurance Cell  
Pachhunga University College

(A constituent college of Mizoram University)



Pachhunga University College  
Aizawl : Mizoram



# NATIONAL LOGISTICS

**DAILY SERVICE BY : AIR, RAIL & ROAD**

Head Office : 8, Tarachand Dutta Street, Kolkata - 700 073, West Bengal, Phone : (033) 4068 2145  
Mob : 9830360778, E-mail : national\_logistics8@yahoo.co.in, Website : www.nationallogisticsgroup.com

Date: 12-11-2021

## TO WHOMSOEVER IT MAY CONCERN

This is certify that Mr. Abhinav Sharma, studying in 05<sup>th</sup> Semester BBA at the Pachhunga University College, Mizoram University has successfully completed his internship from 01<sup>st</sup> July, 2021 to 31<sup>st</sup> August, 2021 assisting in Accounting & Operational work, drafting and Marketing work.

During the period of his internship, he completed extensive research pertaining to road transport and logistics industry, Curried day to day operations; he has completed all his tasks with good enthusiasm and openness to learning. He is capable and committed to her work.

I wish her all the very best for his future endeavors.

Date:

Place: Kolkata

NATIONAL LOGISTICS

Sunil Kumar Jais

(National Logistics) Proprietor





## CERTIFICATE OF COMPLETION

This is to certify that

*Angeli Ramengmazii*

has successfully completed an Internship program with  
Mission Organic Mizoram  
Agriculture Department, Government of Mizoram.

A handwritten signature in black ink, appearing to read 'R. Colney', written over a horizontal line.

**ROHMINGTHANGA COLNEY**  
Mission Director

A handwritten signature in black ink, appearing to read 'Lalhimngmiana', written over a horizontal line.

**LALHIMNGMIANA**  
State Coordinator



**TO WHOMSOEVER IT MAY CONCERN**

This is certify that Mr.C.Lalremruata, studying in 05<sup>th</sup> Semester BBA at the Pachhunga University College, Mizoram University has successfully completed his internship from 01<sup>st</sup> July, 2021 to 31<sup>th</sup> August , 2021 assisting in Operational work, drafting and Marketing work.

During the period of his internship, he has completed extensive research pertaining to life insurance industry, Curried day to day operations And Marketing activity under ASM Samar Bhowmik , Bajaj Allianz Life Insurance. he has completed all his tasks with good enthusiasm and openness to learning. He is capable and committed to his work.

I wish his all the very best for his future endeavors.

Date: 14/11-2021  
Place: Dharmanagar

Samar Bhowmik  
ASM BAJAJ ALLIANZ

*Samar Bhowmik*



## Tharthilthlentu Entrepreneurship & MSME Support

LTL Fela  
Chairman  
+91 8691045340  
fela.ltl@iiml.org

J Zoramsangkima  
Secretary  
+91 8787300401  
jsangkimas@gmail.com

Lalbiakngheta Ralte  
Treasurer  
+91 8730919935  
mzfocusproduction@gmail.com

### CERTIFICATE OF COMPLETION

This is to certify that Mr. C. Lalruatkima, a student of BBA, Pachhunga University College, College Veng, Aizawl, has successfully completed three months (from August to October ) of internship programme at *Tharthilthlentu - Entrepreneurship & MSME Support*.

During the period, he worked on Market Research and Impact analysis on 'Chengrang leh Ngenmu' where he was found punctual and his attitude towards his work was satisfactory.

We wish him success in life.



LTL Fela  
Chairman  
Tharthilthlentu

TILI Center  
2nd Floor, JL Building  
Mission Veng  
Aizawl, Mizoram  
796005

+91 9362538685  
tharthilthlentu@gmail.com

Bank Details  
HDFC Bank  
Ac no: 50200057930719  
IFSC: HDFC0005227





# CERTIFICATE OF COMPLETION

This is to certify that

*Caleba Lalchhandama*

has successfully completed an Internship program  
during September 2021 with Mission Organic Mizoram  
Agriculture Department, Government of Mizoram.

A handwritten signature in black ink, appearing to read 'R. Colney', written over a horizontal line.

**ROHMINGTHANGA COLNEY**  
Mission Director

A handwritten signature in black ink, appearing to read 'Lahmingmaana', written over a horizontal line.

**LAHMINGMAANA**  
State Coordinator

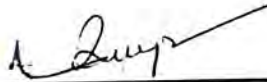


# CERTIFICATE OF COMPLETION

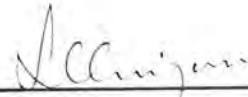
This is to certify that

*Carolyn Zomuanpuii*

has successfully completed an Internship program with  
Mission Organic Mizoram  
Agriculture Department, Government of Mizoram.



**ROHMINGTHANGA COLNEY**  
Mission Director



**LALHIMNGMIANA**  
State Coordinator





# CERTIFICATE OF COMPLETION

This is to certify that

*Ch. Lalramzauvi*

has successfully completed an Internship program with  
Mission Organic Mizoram  
Agriculture Department, Government of Mizoram.

A handwritten signature in black ink, appearing to read 'R. Colney', is written over a horizontal line.

**ROHMINGTHANGA COLNEY**  
Mission Director

A handwritten signature in black ink, appearing to read 'Lalmingmuana', is written over a horizontal line.

**LALHMINGMUANA**  
State Coordinator





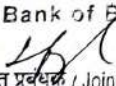
Branch : Aizwal Branch  
Email : Aizwal@bankofbaroda.com  
Web : www.bankofbaroda.com  
Phone : 0389-2306108  
Fax :

Date : 02.09.2021

### To Whom It May Concern

This is to certify that Mr. Frederick Lalremruata BBA Student of Pachhunga University College, Aizawl Mizoram has successfully completed his internship /project on "Performance Analysis of Mudra Loan Scheme of Bank of Baroda ( With special reference with the state of Mizoram )" from 01.07.2021 to 31.08.2021

During the period of his internship, he was sincere, hardworking and showed keen interest to learn. We wish him good for his future endeavours.

कृते बैंक ऑफ़ बड़ौदा  
For Bank of Baroda  
  
संयुक्त प्रबंधक / Joint Manager  
आइजोअल शाखा / Aizwal Branch  
**Lalfakzuala Kiangte**  
Assistant Manager  
Bank of Baroda, Aizawl Branch





**TiLi**

**TiLi Center**  
2nd Floor, JL Building  
Mission Veng  
Aizawl, Mizoram  
796005

+91 9362538685  
[tharthilthlentu@gmail.com](mailto:tharthilthlentu@gmail.com)

**Bank Details**  
HDFC Bank  
A/c no: 50200057930719  
IFSC: HDFC0005227

## **Tharthilthlentu Entrepreneurship & MSME Support**

LTL Fela  
Chairman  
+91 8691045340  
[fela.ltl@liml.org](mailto:fela.ltl@liml.org)

J Zoramsangkima  
Secretary  
+91 8787300401  
[jsangkimas@gmail.com](mailto:jsangkimas@gmail.com)

Lalbiakngheta Ralte  
Treasurer  
+91 8730919935  
[mzfocusproduction@gmail.com](mailto:mzfocusproduction@gmail.com)

### **CERTIFICATE OF COMPLETION**

This is to certify that Mr. Imanuel VL Hmingtanzela, a student of BBA, Pachhunga University College, College Veng, Aizawl, has successfully completed three months (from August to October ) of internship programme at *Tharthilthlentu - Entrepreneurship & MSME Support*.

During the period, he worked on concept building of 'Education & Carrier Platform' where his contribution and his attitude towards his work was satisfactory.

We wish him success in life.



LTL Fela  
Chairman  
Tharthilthlentu





## CERTIFICATE OF COMPLETION

This is to certify that

**JEREMY LALSAWMZUALA**

has completed an Internship program and his  
performance was excellent

A handwritten signature in blue ink, appearing to read "Zosangzeli", written over a horizontal line.

**ZOSANGZELI**

Managing Director, Zosangzeli Ltd.





## CERTIFICATE OF COMPLETION

This is to certify that

*John Malsawmsanga*

has successfully completed an Internship program with  
Mission Organic Mizoram  
Agriculture Department, Government of Mizoram.

A handwritten signature in blue ink, appearing to read 'R Colney', is written over a horizontal blue line.

**ROHMINGTHANGA COLNEY**  
Mission Director

A handwritten signature in blue ink, appearing to read 'L Lalmingthanga', is written over a horizontal blue line.

**LALMINGTHANGA**  
State Coordinator



# CERTIFICATE

OF COMPLETION


## JOHN VANLALHRUAIA

a student of

Bachelor of Business Administration (BBA) Pachhunga University College,  
Aizawl, Mizoram has successfully completed  
03 months (September - November 2021)


Internship programme at Angel Business Promoters of Mizoram.

During the period of his internship programme, he was found punctual,  
hardworking and inquisitive

 27/11/21

J. Zoramsangkima  
**Programme Officer**



 27/11/21

Mark Laldusaka  
**Chief Executive Officer**





# CERTIFICATE OF COMPLETION

This is to certify that

*Lalchungnunga*

has successfully completed an Internship program with  
Mission Organic Mizoram  
Agriculture Department, Government of Mizoram.

A handwritten signature in black ink, appearing to read 'R. Colney', is written over a horizontal line.

**ROHMINGTHANGA COLNEY**  
Mission Director

A handwritten signature in black ink, appearing to read 'Lalhimingthanga', is written over a horizontal line.

**LALHIMINGTHANGA**  
State Coordinator





# CERTIFICATE OF COMPLETION

This is to certify that

*Lalnunfela Varte*

has successfully completed an Internship program with  
Mission Organic Mizoram  
Agriculture Department, Government of Mizoram.

A handwritten signature in blue ink, appearing to read 'R. Colney', is written over a horizontal line.

**ROHMINGTHANGA COLNEY**  
Mission Director

A handwritten signature in blue ink, appearing to read 'L. Lalhimngmiana', is written over a horizontal line.

**LALHIMNGMIANA**  
State Coordinator



**TO WHOMSOEVER IT MAY CONCERN**

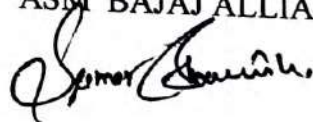
This is certify that Mr. Lalrinawma, studying in 05<sup>th</sup> Semester BBA at the Pachhunga University College, Mizoram University has successfully completed his internship from 01<sup>st</sup> July, 2021 to 31<sup>th</sup> August, 2021 assisting in Operational work, drafting and Marketing work.

During the period of his internship, he has completed extensive research pertaining to life insurance industry, Curried day to day operations And Marketing activity under ASM Samar Bhowmik , Bajaj Allianz Life Insurance. he has completed all his tasks with good enthusiasm and openness to learning. He is capable and committed to his work.

I wish his all the very best for his future endeavors.

Date: 14/11/2021  
Place: Dharmanagar

Samar Bhowmik  
ASM BAJAJ ALLIANZ







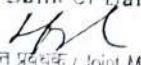
Branch : Aizwal Branch  
Email : Aizwal@bankofbaroda.com  
Web : www.bankofbaroda.com  
Phone : 0389 2306108  
Fax :

Date : 02.09.2021

### To Whom It May Concern

This is to certify that Mr. Lalsangpuia Sailo BBA Student of Pachhunga University College, Aizawl Mizoram has successfully completed his internship /project on "Performance Analysis of Prime Minister's Employment Generation Programme- PMEGP of Bank of Baroda ( With special reference with the state of Mizoram )" from 01.07.2021 to 31.08.2021

During the period of his internship, he was sincere, hardworking and showed keen interest to learn. We wish him good for his future endeavours.

कृते बैंक ऑफ बड़ौदा  
For Bank of Baroda  
  
संयुक्त प्रबंधक / Joint Manager  
आइजवाल शाखा / Aizwal Branch

Lalfakzuala Khiantge  
Assistant Manager  
Bank of Baroda, Aizawl Branch

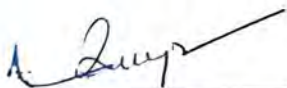


# **CERTIFICATE OF COMPLETION**

This is to certify that

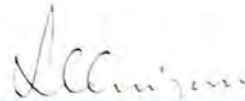
*Lalthachungnunga*

has successfully completed an Internship program with  
Mission Organic Mizoram  
Agriculture Department, Government of Mizoram.



---

**ROHMINGTHANGA COLNEY**  
Mission Director



---

**LALTHACHUNGNUMA**  
State Coordinator





# HLDL SOLUTIONS PRIVATE LIMITED

Regn. Office: A-48, Sector -I, Char No. Road,  
Tuikual 'A', Aizawl Municipal Council Aizawl,  
Mizoram. MZ 796001 IN.

Phone No.: 9774708151, 8415098997

Email: [hldlsolutions@gmail.com](mailto:hldlsolutions@gmail.com)

2nd November 2021

To,

**Ms. Laltlanhlui**

Subject: Certificate of Experience

This letter is to certify that Ms. Laltlanhlui has successfully completed her internship program for a period of **1 month 15 days** with our organization. This internship tenure was from **16th August to 1st October 2021**. The said intern was working with MizRun and was actively, diligently and sincerely involved in the projects and tasks assigned.

During this internship, we found the intern to be punctual and hardworking person.

A handwritten signature in black ink, appearing to read 'C. Lalthantluangi', written over a horizontal line.

**(C. LALTHANTLUANGI)**

**Human Resource Manager**



# LUSHAI ORGANICS

Reiek, Mamit District

Mizoram - 796501

email : lushalorganics84@gmail.com



## Internship Certificate

*This is to certify that*

**MS Dawngzela**

*a student of the Department of Management,  
Pachhunga University College, Aizawl, Mizoram  
has successfully completed Internship at Lushai Organics  
from 1<sup>st</sup> September, 2021 to 31<sup>st</sup> October, 2021.*

*During the period of her/his Internship programme with us,  
she/he had been exposed to different processes and  
was found diligent, hard working and inquisitive.*

(H. LALCHHANHIMA)  
Chief Executive Officer

Date 15<sup>th</sup> November, 2021

**TO WHOMSOEVER IT MAY CONCERN**

This is certify that Miss. **Mary Lalnunsiami**, studying in 05<sup>th</sup> Semester BBA at the Pachhunga University College, Mizoram University has successfully completed her internship from 01<sup>st</sup> July, 2021 to 31<sup>th</sup> August , 2021 assisting in Operational work, drafting and Marketing work.

During the period of her internship, She has completed extensive research pertaining to life insurance industry, Curried day to day operations And Marketing activity under BDM Saikat Majumder, Bajaj Allianz Life Insurance. She has completed all her tasks with good enthusiasm and openness to learning. She is capable and committed to her work.

I wish her all the very best for her future endeavors.

Date: 14/11/2021

Place: Dharmanagar



Saikat Majumder  
BDM BAJAJ ALLIANZ



# CERTIFICATE OF COMPLETION

This is to certify that

*R. Malsawmsanga*

has successfully completed an Internship program with  
Mission Organic Mizoram  
Agriculture Department, Government of Mizoram.



---

**ROHMINGTHANGA COLNEY**  
Mission Director



---

**LALHIMINGMUANA**  
State Coordinator



**TO WHOMSOEVER IT MAY CONCERN**

This is certify that Miss.**R.Vanlalruatkimi**, studying in 05<sup>th</sup> Semester BBA at the Pachhunga University College, Mizoram University has successfully completed her internship from 01<sup>st</sup> July, 2021 to 31<sup>th</sup> August , 2021 assisting in Operational work, drafting and Marketing work.

During the period of her internship, She has completed extensive research pertaining to life insurance industry, Curried day to day operations And Marketing activity under BDM Saikat Majumder, Bajaj Allianz Life Insurance. She has completed all her tasks with good enthusiasm and openness to learning. She is capable and committed to her work.

I wish her all the very best for her future endeavors.

Date: 14/11/2021  
Place: Dharmanagar



Saikat Majumder  
BDM BAJAJ ALLIANZ



# LUSHAI ORGANICS

Reiek, Mamit District

Mizoram - 796501

email : lushaiorganics84@gmail.com



## Internship Certificate

*This is to certify that*

**Shirley Zosangpuii Pautu**

*a student of the Department of Management,  
Pachhunga University College, Aizawl, Mizoram  
has successfully completed Internship at Lushai Organics  
from 1<sup>st</sup> September, 2021 to 31<sup>st</sup> October, 2021.*

*During the period of her/his Internship programme with us,  
she/he had been exposed to different processes and  
was found diligent, hard working and inquisitive.*

A handwritten signature in black ink, appearing to read 'H. Lalchhanhima', is written over a horizontal line.

(H. LALCHHANHIMA)  
Chief Executive Officer

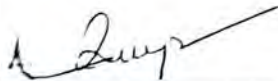
Date 15<sup>th</sup> November, 2021

## CERTIFICATE OF COMPLETION

This is to certify that

*Sunita Sharma*

has successfully completed an Internship program with  
Mission Organic Mizoram  
Agriculture Department, Government of Mizoram.



**ROHMINGTHANGA COLNEY**  
Mission Director



**LALHIMINGTHANA**  
State Coordinator



# MIZORAM RURAL BANK

Sairang, Aizawl District

Mizoram – 796410



## INTERNSHIP CERTIFICATE

This is to certify that

**SUNITA LALLAWMZUALI**

A student of the Department of Management Pachhunga University College, Aizawl, Mizoram  
has successfully completed Internship at Mizoram Rural Bank: Sairang Branch  
from 1<sup>st</sup> July, 2021 to 31<sup>st</sup> August, 2021.

During the period of her/his Internship programme with us, she/he had been exposed to different processes and was found diligent, hard working and inquisitive.

Date 23<sup>th</sup> November, 2021

For Mizoram Rural Bank  
(MARGARET VANRAMNGHAKI)

Branch Manager  
Sairang Branch

**TO WHOMSOEVER IT MAY CONCERN**

This is certify that Mr. T H Birajit Singh, studying in 05<sup>th</sup> Semester BBA at the Pachhunga University College, Mizoram University has successfully completed his internship from 01<sup>st</sup> July, 2021 to 31<sup>st</sup> August, 2021 assisting in Operational work, drafting and Marketing work.

During the period of his internship, he has completed extensive research pertaining to life insurance industry, Curried day to day operations And Marketing activity under BDM Saikat Majumder , Bajaj Allianz Life Insurance. he has completed all his tasks with good enthusiasm and openness to learning. He is capable and committed to his work.

I wish his all the very best for his future endeavors.

Date: 14/11/2021  
Place: Dharmanagar

  
Saikat Majumder  
BDM BAJAJ ALLIANZ



# LUSHAI ORGANICS

Relek, Mamit District

Mizoram - 796501

email : lushaiorganics84@gmail.com



## Internship Certificate

*This is to certify that*

**Vanlalnunkima**

*a student of the Department of Management,  
Pachhunga University College, Aizawl, Mizoram  
has successfully completed Internship at Lushai Organics  
from 1<sup>st</sup> September, 2021 to 31<sup>st</sup> October, 2021.*

*During the period of her/his Internship programme with us,  
she/he had been exposed to different processes and  
was found diligent, hard working and inquisitive.*

(H. LALCHHANHIMA)  
Chief Executive Officer

Date 15<sup>th</sup> November, 2021

### TO WHOMSOEVER IT MAY CONCERN

This is certify that Kumari.Zonunmawii, studying in 05<sup>th</sup> Semester BBA at the Pachhunga University College, Mizoram University has successfully completed her internship from 01<sup>st</sup> July, 2021 to 31<sup>th</sup> August , 2021 assisting in Operational work, drafting and Marketing work.

During the period of her internship, She has completed extensive research pertaining to life insurance industry, Curried day to day operations And Marketing activity under ASM Samar Bhowmik , Bajaj Allianz Life Insurance. She has completed all her tasks with good enthusiasm and openness to learning. She is capable and committed to her work.

I wish her all the very best for her future endeavors.

Date: 14/11-2021  
Place: Dharmanagar

Samar Bhowmik  
ASM BAJAJ ALLIANZ

*Samar Bhowmik*



### TO WHOMSOEVER IT MAY CONCERN

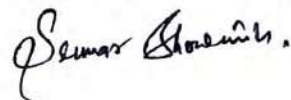
This is certify that Miss.Zoremmawii, studying in 05<sup>th</sup> Semester BBA at the Pachhunga University College, Mizoram University has successfully completed her internship from 01<sup>st</sup> July, 2021 to 31<sup>th</sup> August , 2021 assisting in Operational work, drafting and Marketing work.

During the period of her internship, She has completed extensive research pertaining to life insurance industry, Curried day to day operations And Marketing activity under ASM Samar Bhowmik , Bajaj Allianz Life Insurance. She has completed all her tasks with good enthusiasm and openness to learning. She is capable and committed to her work.

I wish her all the very best for her future endeavors.

Date: 14/11-2021  
Place: Dharmanagar

Samar Bhowmik  
ASM BAJAJ ALLIANZ



# CERTIFICATE

OF COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENT TO

**ZOSANGZUALA**

a student of

Bachelor of Business Administration (BBA) Pachhunga University College, Aizawl,  
Mizoram has successfully completed

03 months (September – November 2021)


Internship programme at One Organic Partnership.

During the period of his internship programme, he was found punctual, hardworking  
and inquisitive.

 21/11/21

J. ZORAMSANGKIMA  
PROGRAMME OFFICER

 **One  
Organic**

 21/11/21

MARK LALDUHSAKA  
EXECUTIVE DIRECTOR



## Tharthilthlentu Entrepreneurship & MSME Support

LTL Fela  
Chairman  
+91 8691045340  
fela.ltl@iiml.org

J Zoramsangkima  
Secretary  
+91 8787300401  
jsangkimas@gmail.com

Lalbiakngheta Ralte  
Treasurer  
+91 8730919935  
mzfocusproduction@gmail.com

### CERTIFICATE OF COMPLETION

This is to certify that Mr. David Lalrinnunga, a student of BBA, Pachhunga University College, College Veng, Aizawl, has successfully completed three months (from August to October ) of internship programme at *Tharthilthlentu - Entrepreneurship & MSME Support*.

During the period he worked on Market Research and Social Media Marketing roles where he was found punctual, hardworking and inquisitive.

We wish him success in life.



LTL Fela  
Chairman  
Tharthilthlentu



**TiLi Center**  
2nd Floor, JL Building  
Mission Veng  
Aizawl, Mizoram  
796005

+91 9362538685  
[tharthilthlentu@gmail.com](mailto:tharthilthlentu@gmail.com)

**Bank Details**  
HDFC Bank  
A/c no: 50200057930719  
IFSC: HDFC0005227

# LUSHAI ORGANICS

Reiek, Mamit District

Mizoram - 796501

email : lushaiorganics84@gmail.com



## Internship Certificate

*This is to certify that*

**Lalremchhunga**

*a student of the Department of Management,  
Pachhunga University College, Aizawl, Mizoram  
has successfully completed Internship at Lushai Organics  
from 1<sup>st</sup> September, 2021 to 31<sup>st</sup> October, 2021.*

*During the period of her/his Internship programme with us,  
she/he had been exposed to different processes and  
was found diligent, hard working and inquisitive.*

(H. LALCHHANHIMA)  
Chief Executive Officer

Date 15<sup>th</sup> November, 2021



# NATIONAL LOGISTICS

DAILY SERVICE BY AIR, RAIL & ROAD

Head Office : B. Tarachand Bhattacharya, Kolkata - 700 021, West Bengal. Phone : (033) 4068 2145  
Mob : 9830360778 E-Mail : nationallogistics@yahoo.co.in Website : [www.nationallogisticsgroup.com](http://www.nationallogisticsgroup.com)

Date: 12-11-2021

## TO WHOMSOEVER IT MAY CONCERN

This is certify that Mr ZD Emmanuel Lalthanzauva, studying in 05<sup>th</sup> Semester BBA at the Pochhunga University College, Mizoram University has successfully completed his internship from 01<sup>st</sup> July, 2021 to 31<sup>st</sup> August, 2021 assisting in Accounting & Operational work, drafting and Marketing work.

During the period of his internship, he completed extensive research pertaining to road transport and logistics industry. Carried day to day operations, he has completed all his tasks with good enthusiasm and openness to learning. He is capable and committed to her work.

Wish her all the very best for his future endeavors.

Yours,

Kolkata

**NATIONAL LOGISTICS**

*S. V. S.*

National Logistics

Proprietor