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A Biannual Multidisciplinary Refereed Journal

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Institute for Excellence in Higher Education

Kolar Road, Kaliyasot Dam, Bhopal - 462 016 Madhya Pradesh, India

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Comparative study of Rectangular Microstrip Patch Antenna with different materials for UWB Applications

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Abstract

This research paper, presents a comparative study of rectangular microstrip patch antenna with 3 different substrate such as FR-4, CEM-1 and G-10 with a fed through coaxial probe. The antenna with dimension 3.2×3.2 cm (L×W) is fabricated on different substrate materials with substrate height of 0.16 cm is designed and analysed with different parameters. The main goal is to obtain which materials have high directivity with better gain and reduce losses. The results of antenna parameters like VSWR, return loss, gain, and radiation pattern are analyzed on different frequency bands. Simulation is done using SONNET Software.

Keywords - Microstrip patch antenna; Substrate Material; VSWR; Directivity; Return Loss; SONNET.

Introduction

In today's world, where the communication has become the necessity, more rightly to be said the antennas are become the essential part of the world because of their undeniable place in the technology of communication systems, the microstrip patch antennas have been the fastest developments in the miniaturization era [1]-[3]. In the past years, the microstrip patch antenna has acquired the popularity in the wireless communication because of its applicable characteristics like small, inexpensive, narrow bandwidth and easy fabrication process. Generally, a microstrip patch antenna consists a patch, substrate, ground plane and feedline [4]. The 8 element microstrip patch antenna array for the 10 GHz with three different kind of materials viz. FR-4, GML 1000 and RT/Duroid 5880, this kind of antenna also shows the good results in comparison to the desirable results and it is very useful for the small area country which required to cover by emission of the microwave beams through the satellite [5]. FR-4, it is a composite material which is composed of woven fibre glass cloth with an epoxy resin binder and it is called flame resistant. FR-4 is mainly used as an electrical insulator which possessing the considerable mechanical strength [6].

Microstrip patch antennas posses many advantages over the standard antennas like lower volume, low price, light weight, low profile, small dimensions, easy fabrication and conformity [7]. The benefits of the UWB (Ultra-Wide Band) technology are less interference, cheap price, high data rate, minimum complexity and protected. The disadvantage of this technology is the requirement for exact time synchronization at the receiver side since the pulse duration in time domain is fraction of nanosecond. It is utilized in many applications such as military communication, radar and imaging in medicine [8].

In this paper we have focused on the performance of the antenna with different material and analysed to select the best on for the UWB applications. We have designed the rectangular shaped

antenna and studied the antennas to see the variation in the antenna properties with the different materials.

Methodology

Microstrip patch antenna has a patch which serves as radiating element; dielectric layer as substrate and ground plane for providing isolation between electromagnetic waves [9]. Structural Microstrip Patch Antenna is shown in figure 1.

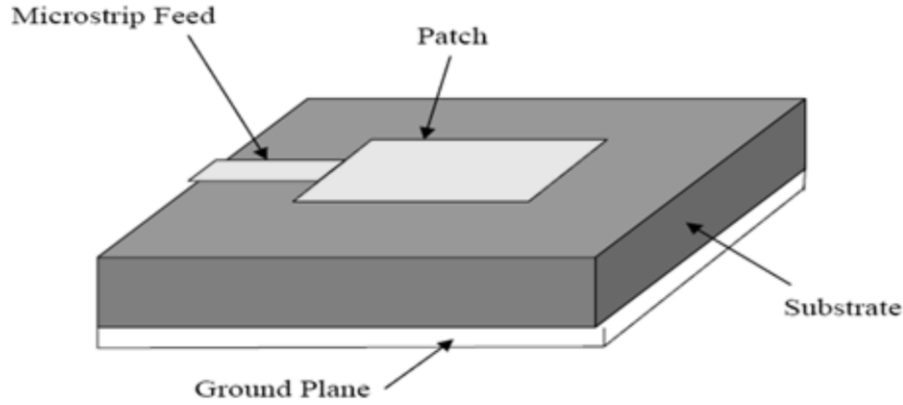


Fig. 1 - Basic Structure of Microstrip Patch Antenna

The proposed Microstrip patch antenna is designed using microstrip line inset feeding technique, because this technique provides a smooth surface to the antenna. The operating frequency to design different antennas is taken as 3.48 GHz, 3.62 GHz and 3.98 GHz simultaneously. SONNET software is utilized to model the proposed antenna. The operating specifications of patch antenna under considerations are its width (W), Length (L), Effective Length (L_{eff}), Patch Extension length (ΔL) and Effective Dielectric Constant (ϵ_{eff}). These values are calculated using below given equations.

Width:

$$W = \frac{c}{2fr\sqrt{\frac{\epsilon_r + 1}{2}}}$$

Length:

$$L = L_{eff} - 2\Delta L$$

Patch Length Extension:

$$\Delta L = 0.412h \frac{(\epsilon_{eff} + 0.3)\left(\frac{W}{h} + 0.264\right)}{(\epsilon_{eff} + 0.258)\left(\frac{W}{h} + 0.8\right)}$$

Effective Length:

$$L_{eff} = \frac{c}{2fr\sqrt{\epsilon_{eff}}}$$

Effective Dielectric Constant:

$$\epsilon_{\text{reff}} = \frac{\epsilon_r + 1}{2} + \frac{\epsilon_r - 1}{2} \left[1 + 12 \frac{h}{w} \right]^{-1} \frac{1}{2}$$

In above equations, resonant frequency of the structure is f_r , ϵ_r is the dielectric constant of the substrate material, h is the height and w is the width.

Designing of an Antenna using SONNET

We used the same box dimensions for all the antennas (32×32) mm. Dielectric thickness is 1.6 mm, also the air is 70 cm is same for all the antennas. Design specifications of an Antenna and design parameters for different substrate materials are shown in Table 1 and Table 2 respectively.

Table 1: Design specification of the Antenna

Parameters	Rectangular (mm)
Length	19.4
Width	18.5
Substrate Height	0.07
Width of Feedline	6
Height of Feedline	11
Input Impedance	50 Ω
Dielectric Thickness	1.6

Table 2: Design Parameters for different Substrate Material

Design Parameters	Substrate Material		
	FR-4	CEM-1	G-10
Loss Tangent	0.025	0.025	0.025
Dielectric Constant	4.9	4.5	4.8

Geometry of a **Rectangular Microstrip** Antenna is shown in Figure 2. The Patch Antenna is excited using a voltage source connected across the metal patch and the bottom metallic plane of the substrate.

This structure provides maximum radiation in a direction perpendicular to substrate (i.e. broadside) direction and structure under consideration has ideally no radiation in the plane of substrate (i.e. end-fire) direction. The dimensions of the antenna are selected in such a way that it resonates at the operating frequency with a production of real input impedance. In above designed rectangular microstrip patch antenna the length L is to be nearly half of wavelength in the used dielectric medium, width W determines the value of input impedance.



Fig. 2 - Geometry of Rectangular Antenna

Results and Discussion

When the designed antenna is simulated by using the SONNET, the comparison of return loss and VSWR is shown in the figure 3 and 4. From the results obtained the resonating frequency and return loss is different for different materials. The proposed antenna can cover the UWB applications.

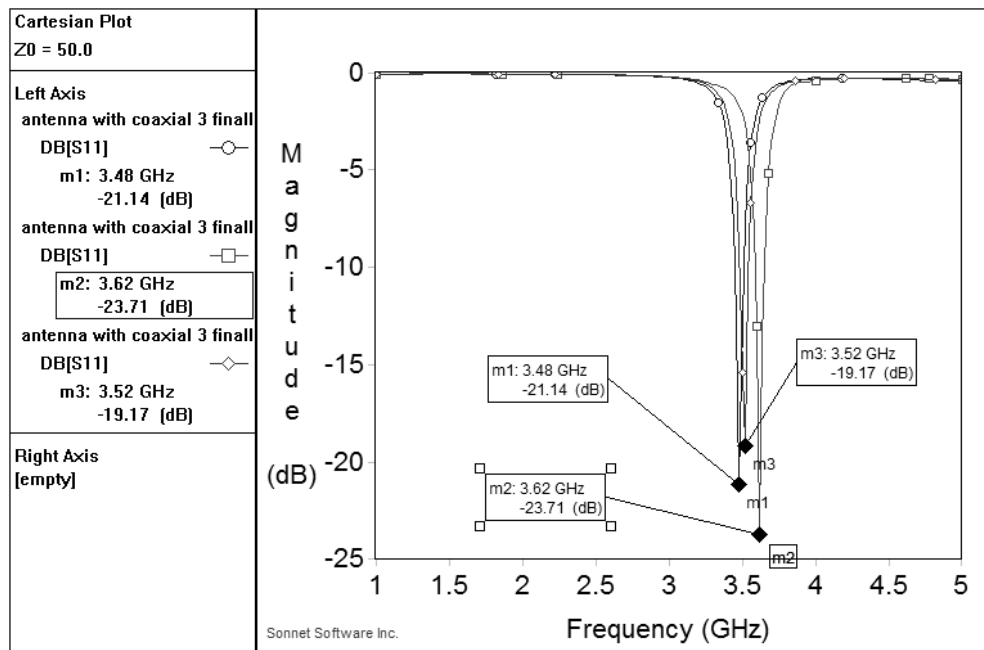


Fig. 3 - Comparison Return loss of Different Materials

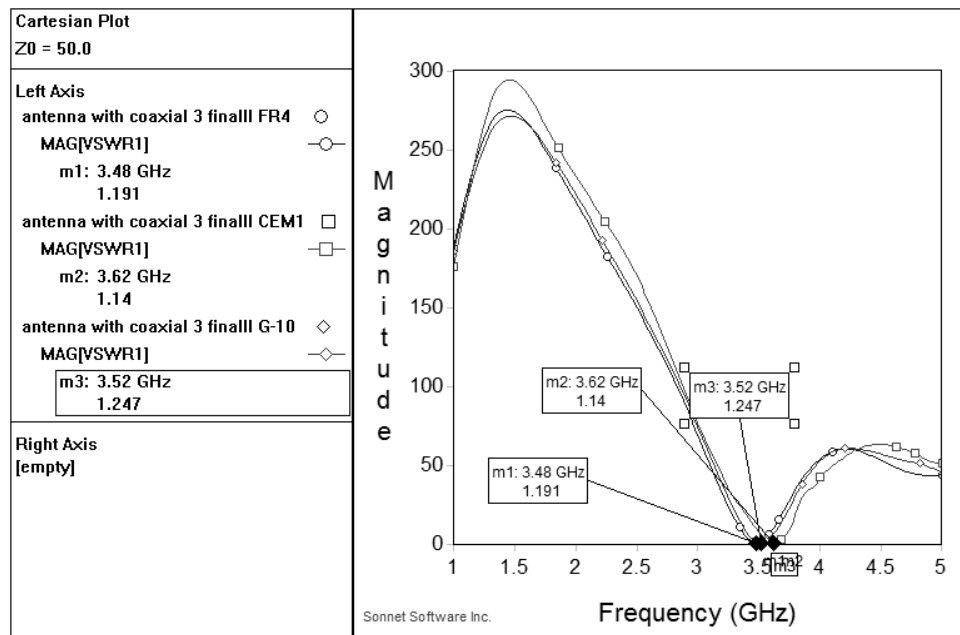


Fig. 4 - VSWR comparison with different materials

Figure 5 shows the Smith chart comparison of FR-4, CEM-1 and G-10 material.

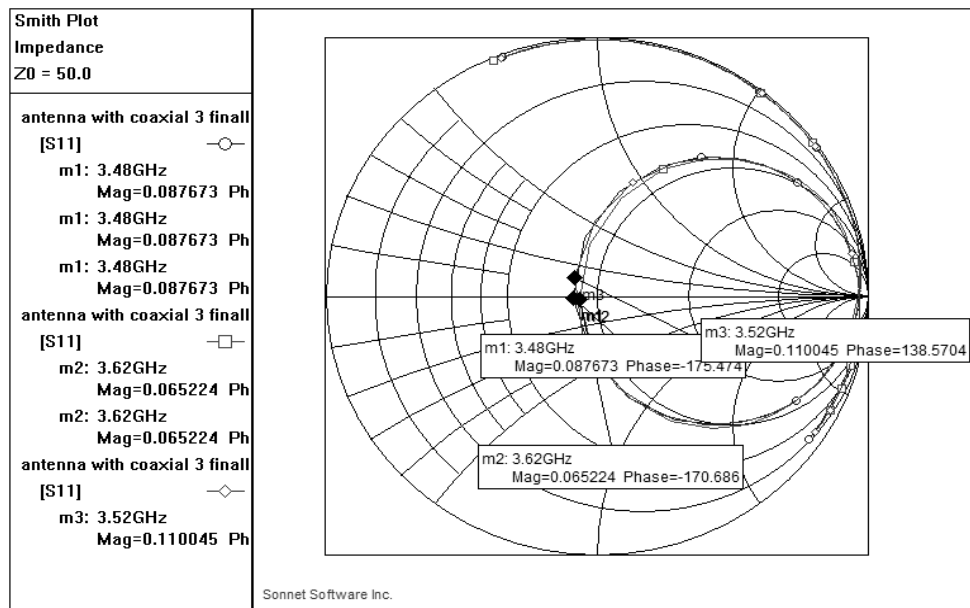


Fig. 5 - Smith Chart comparison with different materials

Figure 6 and 7 shows the current distribution of the proposed rectangular antenna which shows the distribution of the current and far field distribution of the antenna.

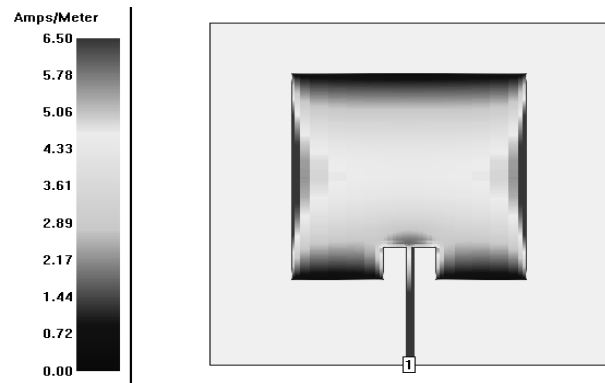


Fig. 6 - Current Distribution of Rectangular Shape Antenna

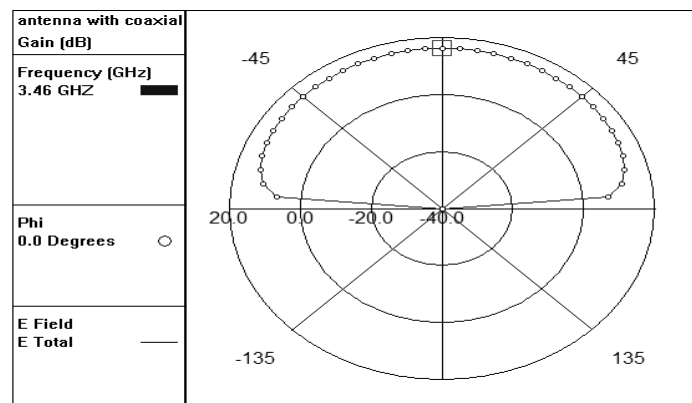


Fig. 7 - Far Field Distribution of Rectangular Shape Antenna

Table 3 shows the comparison of various parameters of antenna for FR-4, CEM-1 and G-10 substrate materials.

Table 3: Comparison of performance parameters

Antenna Parameters	Substrate Material		
	FR-4	CEM-1	G-10
Frequency	3.48 GHz	3.62 GHz	3.52 GHz
Return loss	-21.16 dB	-23.71 dB	-19.16 dB
VSWR	1.191	1.14	1.247
Gain	3.789 dB	3.472 dB	3.304 dB

Conclusion

Observation of the results gained by the simulation of the rectangular antenna can help us to draw some conclusions regarding the design parameters. Table 3 shows the comparison of return loss, gain and VSWR of 3 substrate materials. The materials which have been taken with the different dielectric material. It has been found from the above simulation that the CEM-1 has the good results among the all substrate material for this particular design which is suitable for the UWB applications.

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Amalgamation of Synchronous & Asynchronous Learning Tool for Blended Pedagogy

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Abstract

The National Education Policy is undeniably student centric, wherein the students are the key stakeholders and the system acts as a medium to cater to their dreams and aspirations. This approach allows a number of teaching-learning modalities to adopt that include face-to-face learning, online learning, and learning through distance or virtual mode. It also endorses the use of vocational courses, multidisciplinary courses and multi-modal approaches, founding a blended pedagogy.

With this pedagogical approach, one can make learning processes more effective and student-friendly by integrating synchronous and asynchronous learning tools into face-to-face and online activities. Students and teachers, both can make physical presence at the same place and control the pace of learning and actual take-ways through digital devices. In the flipped classroom program, students can be encouraged to access digital learning materials, through a cloud-based learning platform, during their time off.

Keywords - Pedagogy, Blended Teaching, Learning tool, Synchronous Learning, Asynchronous Learning.

Introduction

Pedagogy is an art and its journey from the past has witnessed many ups and downs. Presently, student-centered teaching is getting more importance as compared to teacher-centered teaching. As per the present concept, by encouraging increased student exposure, students are encouraged to student-centered learning and can be encouraged through various means like, by making teaching a creative activity, by providing more control over one's own learning, with more autonomy to choose learning practices etc. Pedagogy has been changing rapidly in the past few years. In order to develop best practices in academia, it is important to adapt to the changing needs of students in the process of teaching by adapting the use of proactive learning strategies to the development of innovative pedagogical formats.

An important model in these models is the blended approach to learning, correspondingly blended education. A mixed approach to learning is not new. Initially, along with teaching, the students were facilitated in their own reading skills; from reference books, online textual materials, blackboards to interactive whiteboards, downloadable materials to supplementary reading lists, to supplementary reading lists, technological change has led to constant innovation in teaching and learning, allowing students to discuss material, motivated and given the right to study at his own place. There has always been an element of 'mixed learning' for some courses, where different methods of information delivery are used. The traditional face-to-face curriculum consists of some on-campus lectures and tutorials, independent study through textbooks and readings, library research, and other activities.

But nowadays the term 'blended learning' mainly refers to integrating the use of technology in curriculum design and delivery. Blended learning is an instructional method, a teaching and learning approach that combines face-to-face classroom methods with computer mediated activities to deliver instruction. This pedagogical approach means a mix of face-to-face and online activities and integration of synchronous and asynchronous learning tools; it is a holistic educational approach that combines individual learning with technology to empower students to take responsibility for their own learning and support combination of teaching methodology. It offers optimum potential for a proactive, transmission approach to teaching and learning for arranging effective learning processes. In this research paper, on the basis of review, the study of blended education has been discussed keeping in view the previous study and the present scenario like Corona period, national education policy, new teaching method etc.

Objectives of the study

Present study was carried out with the objectives of analysis of blended education to understand the pedagogy of blended education; to study the different models of Blended Education; to explore the benefits and challenges of blended learning based on a review and to suggest measures for pedagogical enhancement in blended learning.

Research methodology

Entire study undertaken is based on secondary data and the present study is descriptive in nature. The paper specifically focuses on previous studies and tries to discuss the blended learning/teaching in present context.

Observations and Discussion

COVID-19 might have a devastating impact on humanity, but it has opened avenues for innovation in education. It has paved ways for widespread adoption of online teaching - learning pedagogy and has established thousands of virtual schools around the world (Dhawan, 2020; Wang, 2021). This has provided a unique opportunity to redefine the digital technologies and instructional approaches employed by teachers during the lockdown.

Over the past two to three decades, the development of digital technologies has a significant impact on the approach of interaction and communication among one other. Initially the impact of digital technologies in the educational sector was relatively trivial (Cuba, 2001), but over time, digital technologies have been progressively designed to make classrooms more useful - such as presentation software, learning management systems (LMS), Student Response System (SRS) and Game-Based Learning Platform (GBLP) (Moorhouse & Beaumont, 2020; Tay et al, 2017). Teachers no longer need to take students to computer labs or use expensive laptops during their classes; rather, they can use Internet-ready handheld devices, such as mobiles or tablets, in their classrooms through hot-spot or Wi-Fi connectivity (Hockley & Dudeney, 2018). This has resulted in the evolution of flipped classrooms and blended learning.

During COVID it was often observed that the use of LMS was widespread. Most faculty used a platform, such as Google Classroom or other institution-based platform. The platform remained popular as a central point for teachers and students to engage in teaching and learning. Marking on LMS could be done automatically. The results could also be analyzed. Simultaneously, the performance of the students could be evaluated. LMS became effective because students and

teachers clearly needed a familiar digital space to interact asynchronously and conduct various learning activities, such as uploading worksheets and materials, or submit an assignment.

Teachers also made full use of asynchronous instructional processing to provide online input, tailor-made presentations and videos featuring content for students. To create presentations, a number of content-creation tools or presentation programs were used, including Microsoft PowerPoint, Screencastify, OBS Studio, iMovie, and Annotate Everything. Presentation programs were also used by some faculty members to make teaching videos with voice over narration. So that students could record and watch these presentations or videos whenever and wherever they were, regardless of the speed of the connection. This brought flexibility to both students and teachers. Hosting sites such as EdPuzzle and YouTube were used to upload the videos.

Of late, it has become quite common to use asynchronous instructional resource tools such as Kahoot, Quizlet, NearPod, and Google Forms by the faculty. Survey administration software (SAS), such as Google Forms, have proved as effective platforms for designing and assigning exercises because they can generate analysis on student participation and accuracy. Apart from this, SAS is also a good and systematic method of assessing learning. The spreadsheet it creates, has made it very easy to evaluate the performance of students.

Various VCS platforms, including Zoom, Google Meets, Microsoft Teams and Webex, are also used to conduct simultaneous online classes. The platforms allow a scheduling function and a chatbox for conversations, a raised-hand icon, and a voice function; share screen and whiteboard. VCS serves to combine other tools, such as SRS and production tools; VCS can be used by other tools, such as production tools (such as Google Slides), game-based quiz platforms (such as Kahoot!). There are recording functions, also, for uploading lesson recordings for self-study or for security reasons, and a breakout room function, which allows teachers to assign students to small groups for discussions. Breakout rooms are seen as a useful tool, as larger classes can be broken up into smaller groups and students have more opportunities for discussion.

As many physical classes have been converted to temporary virtual classrooms overnight due to COVID-19, a host of teachers feel sick of online instructional practices (Morgan, 2020; Wang, 2021). In such a backdrop, the use of VCS to teach synchronously to online learners can become a possibility (Peachy, 2017). Technology scholars have begun to read teachers' changing mindset, classroom exigencies and impending adaptation to online learning due to the circumstances arising out of COVID-19 (Cheung, 2021). They have introduced several innovations for synchronous online learning, allowing students to become familiar with the technology, using the various features of VCS like share screen, gallery view and learning sequence.

In synchronous online learning, teachers using VCS teach live real-time lessons to their learners. It also offers the possibility to include a blend of asynchronous and synchronous online modes. Synchronizing online learning obviously brings additional challenges for teachers. Educators need to teach and communicate effectively on a single screen, manage multiple digital technologies simultaneously, maintain a sense of presence, facilitate real-time interactions and troubleshoot technical bottlenecks (Rehn et al, 2018). Despite these challenges, synchronous online learning allows teachers and learners to connect with each other in real time. They provide space for teacher-student and student-student interactions, engage learners in group activities, respond quickly to student concerns and issues, and make students feel supported to perform any asynchronous tasks. These advances provide online teachers with more options for instructional approaches than what is assigned to them (González-Loret, 2020). However, online teachers need

an awareness of technical tools and online instructional approaches if they are to teach effectively in online mode (Cleveland-Innes & Garrison, 2012).

The use of shared screens, along with the option to interact orally and in writing, means that teachers have the opportunity to collect data on student performance and share information with the entire class, in groups (in the breakout room), or individually. There are several ways to provide feedback.

COVID-19 has stressed the need for teachers to find alternative ways to continue teaching their learners. While the approaches and strategies required for online teaching differ from individual instruction (Servatka, 2002), teachers need to be prepared to adopt asynchronous and/or synchronous digital technologies and instructional approaches to create emergency virtual schools.

Conclusion

Developing an active learning strategy using blended formats can be challenging, but it can play a vital role in student-centered learning. It is a process of incorporating technology in classrooms to create best practices in the education world to make the teaching process innovative and creative. During practice sessions with students or professional development courses for faculty, when faculty members reflect "on-board" along with technology-integrated face-to-face teaching, create a good understanding between curriculum and pedagogy which is reflected in expanded learning spaces and opportunities, improved support curriculum management activities like communication, assessment submission, marking and feedback, increased availability and richness of information and resources for students, and beneficiary interactivity for collaboration. So blended learning is an interdependent combination of face-to-face and online learning that complement each other. Effective blended learning occurs when online and face-to-face modalities are used in a student-centered and student-directed manner for optimal learning.

Key features of blended learning pedagogy include instructional processing, assessment and communication. Asynchronous instructional resources provide a way for teachers to manage and create learning materials for students. Synchronous technologies can provide ample opportunities for real-time interaction and regular communication between students and teachers. Teachers can schedule synchronous online courses through VCS to interact in real time. Thus, both the teaching modalities have their own merits.

However, from the foregoing account, it is evident that neither asynchronous nor synchronous - only the teaching methods are sufficient to effectively instruct, evaluate, and communicate with learners. Further, a virtual blended approach actually arms the teachers with the necessary tools. Therefore, there is a need to emphasize a new model, the Blended Online Instructional Sequence, which enables the teachers to integrate asynchronous and synchronous online practices, as a possible way to instruct, assess and communicate and have effective distant learning.

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Systematic documentation of mutations in the exon-2 region of beta-globin gene among tribe/caste population of Madhya Pradesh using Molecular genetic approach

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Abstract

The present work aimed to determine the type and site of mutations in Exon 2 region of HBB gene on tribe/caste population from three different districts of Madhya Pradesh region viz, Betul, Mandala and Sagar respectively using molecular genetic techniques as well as various bioinformatics tools for identification and confirmation of mutations. DNA genomes were extracted from FTA card loed with sample (4 discs), 10 pmol of forward and reverse primers and 16 µl for total 25 µl reaction mixtures. The annealing temperature was 52°C for 15 seconds which is best suited to documenting mutations in Indian conditions.

The study suggested that the alignment was observed from nucleotide of Exon 2 region. Mixed level similarities of conserved regions were observed among the studied samples of Gond, Raj-Gond Kunbi, Basod. Four types of SNP variation were identified in exon- 2 as C>T mostly observed in tribal population (Kunbi and Basoad).T>C*T>, A>T distributed among all the studied subject sequences.

Key Words - *β-Globin Chains, HBB gene, β-Thalassemia, mutation, molecular genetics.*

Introduction

Hemoglobinopathies are a group of single gene disorder of primary structure of globin encountered universally. Beta-thalassemia is a highly prevalent autosomal recessive disorder a type of hemoglobinopathie in which structural variation in β-globin gene is observed. It is characterized by the reduced or absent expression of the β-globin gene, most often due to the substitution of a single amino acid, resulting from abnormalities in the formation of the beta-globin moiety (19). Several hundred mutations have been reported that are produced in and around the globin gene, some of the variants exist at a polymorphic level in some populations while others are rare (12). Extensive studied have been carried for several years on molecular genetic polymorphism of the β-globin gene cluster in human populations. A large number of beta-globin gene mutations have been characterized so far approximately 300. Commonly observed mutations causing the beta-thalassemia are point mutations, small deletions or insertions within the coding regions and at the exon-intron junctions. High levels of linkage disequilibrium was exhibited by the 5' gene region of the β-globin gene cluster that harbors fetal and embryonic genes (14,9). The types of the mutation are specific to certain populations which are not easily to recognized. (16,7) In the Mediterranean region, over ~50 β-thalassemia mutations have been characterized so far ,in which IVS-I-110 (G→A) has high frequencies in the eastern part of the Mediterranean, while the mutation at codon 39 (C→T) is very frequent in western Mediterranean countries (6).

Some *HBB* alleles with deletion mutations can be common in certain ethnic groups[e.g., the 619-bp deletion in Asian Indians, commonly found *HBB* mutations in Indian population are [COD 8/9(+G), COD 15(G-A), IVS 1:1(G-T), IVS 1:5(G-C), COD 30(G-C), IVS 1:1(GA), COD 41/42 (-TCTT) & (COD 26(G-A)](13). Mutations in the *HBB* can be detected by sequence analysis. Deletion or duplication analysis detects variable extent of the *HBB* gene or of the beta-globin gene mutations that result in β -thalassemia (11). To make a clear diagnosis of beta-globin gene mutations various DNA analysis techniques such as dot blot analysis, reverse dot blot, allele specific amplification using amplification refractory mutation system (ARMS) or direct DNA sequencing have been widely used (5). In the present study, we report results of a study of the genetic diversity of the β -globin gene cluster in an ethnically well-defined population. The central Indian state Madhya Pradesh is often called as 'heart of India'. There are less detailed genetic studies on the populations inhabited in this region. Therefore, this study is an attempt for extensive characterization of mutation of two tribal and two cast populations, inhabiting this region (12). Once the DNA sequence is known it would be easier to detect various types of mutations in the genome of an individual that give rise to different genetic and complex disease. Sequence analysis through Bioinformatics approaches shows the mutations in *HBB* gene. A large number of such genetic studies on the tribal /caste populations are required to bring as many as tribes and caste of the state on genetic map of India. Such type of study would be helpful in future not only in revealing as well as forming the foundation to understand the genetic basis of complex diseases found in tribes/caste population.

Material and method

2.1 Subjects

The study was exclusively conducted in Bhopal, MP. All the subjects and controls are native of MP, although the caste and tribe population belonged to remote villages in districts of Madhya Pradesh, i.e. Gond, Raj-Gond, Basod and Kunbi tribes from three different districts of Madhya Pradesh viz, Betul, Mandala and Sagar respectively. The process of sample collection was done in accordance with the ethical standards of Institutional Ethical Committee, following ICMR guidelines. For the present study about 2-5 ml of blood sample was collected from healthy as well as patients of the studying. Using 5ml disposable syringes in vials containing EDTA as anticoagulant and incidentally put away in to the refrigerator (4°C) and immediately handled for further examination.

2.2 DNA extraction

Extraction of DNA samples was done using Whatman FTA classic cards. The methodology used is an advanced & more efficient technique for DNA isolation and PCR amplification. It is an alternate and advanced method of DNA isolation best suitable for population genetic study (8).

2.3 Amplification of exon 2 region

Amplification of β -globin gene exon 2 region was conducted with Polymerase Chain Reaction (PCR) using primers Forward primer 5'GAAGACTCTTGGGTTTCTGA3', Reverse primer, 5'TCATTCG TCTGTTTCCCATTCTA3'(1). PCR mix was made with a total volume of 25 mL, consisting of master mix (16 mL), 10 pmol forward and reverse primers (1 μ L each), DNA template 4 FTA discs and nuclease free water. The amplification conditions are -45 cycles with 2 holds initiation at 95°C for 10 minutes, first hold denaturation at 95°C for 15 sec, annealing at 52°C for 15 sec, extension at 72°C for 15sec second hold, final extension at 72°C for 1 min, 4°C infinity.

2.4 Electrophoresis

The amplified products of exon 2 region of HBB gene were electrophoresed at 120 V in 0.8% agarose gel. The gel was visualized under ultraviolet light of UV trans-illuminator and the images are grabbed in the Gel Documentation system (BioEra) (17).

2.5 DNA Sequencing

DNA sequencing was performed by using the Sanger (dideoxynucleotide chain terminator) method with both forward and reverse primer has been done. Sequencing was done with the help of **Scigenome lab Pvt. Ltd. Cochin.**

2.6 Data analysis

Dataset: Sequencing data were analyzed with software ChromasPro software (version .2.1.8) Sequences of HBB gene were sequenced with reference sequence of gene The reference sequence for human beta-globin gene (*HBB*) Accession number >NG_000007.3(15), obtained from NCBI RefSeq database (<http://www.ncbi.nlm.nih.gov/refseq/>).

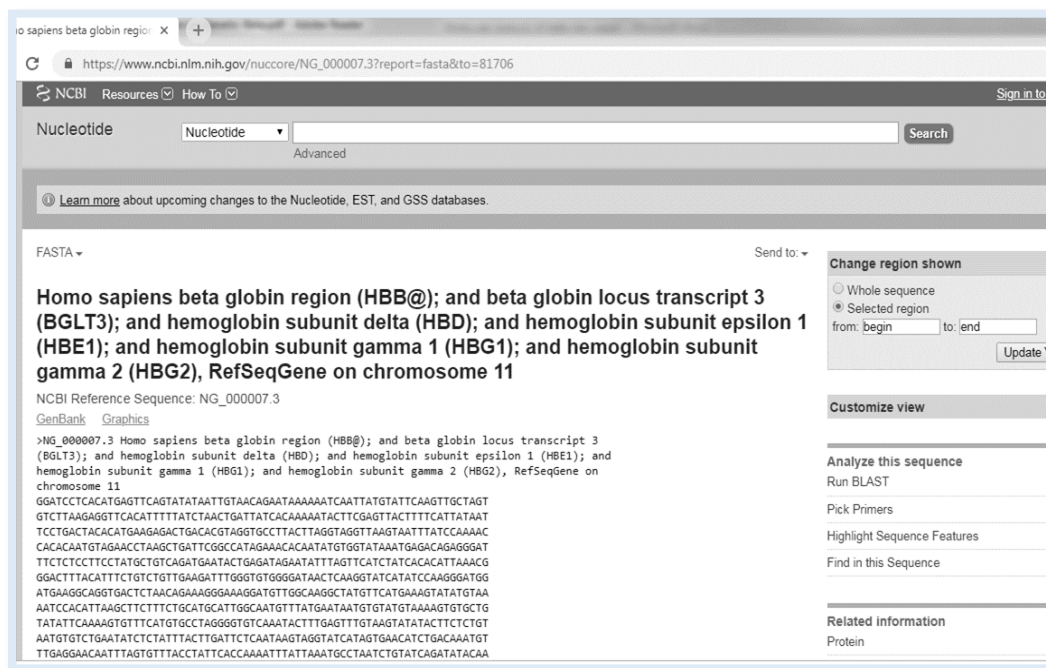


Fig.1 - Reference sequence retrieved from NCBI

Sequence Alignment: Multiple sequence alignment of nucleotide sequence of HBB gene as well as studied sequences of patients was carried out by the clustalW tool by using the MEGA6 software (version.06), (4, 16).and further alignment was visualized with help of BioEdit V7.1.9 (18) software to observe the presence of deletions and synonymous mutations. The sequence containing these mutations were detected for further using Blast N tool for presence of mutations.

Results & Discussion

The study was reviewed and approved in accordance with the ethical standards of Institutional Ethical Committee, following ICMR guidelines. Informed consent was demonstrated among the study participants while ensuring confidentiality of the collected samples.12 samples from caste as

well tribe population have been amplified with both forward and reverse primers of Exon 2 region of HBB gene. On obtaining a single band devoid of any primer-dimer bands the PCR products were proceeded for sequencing.

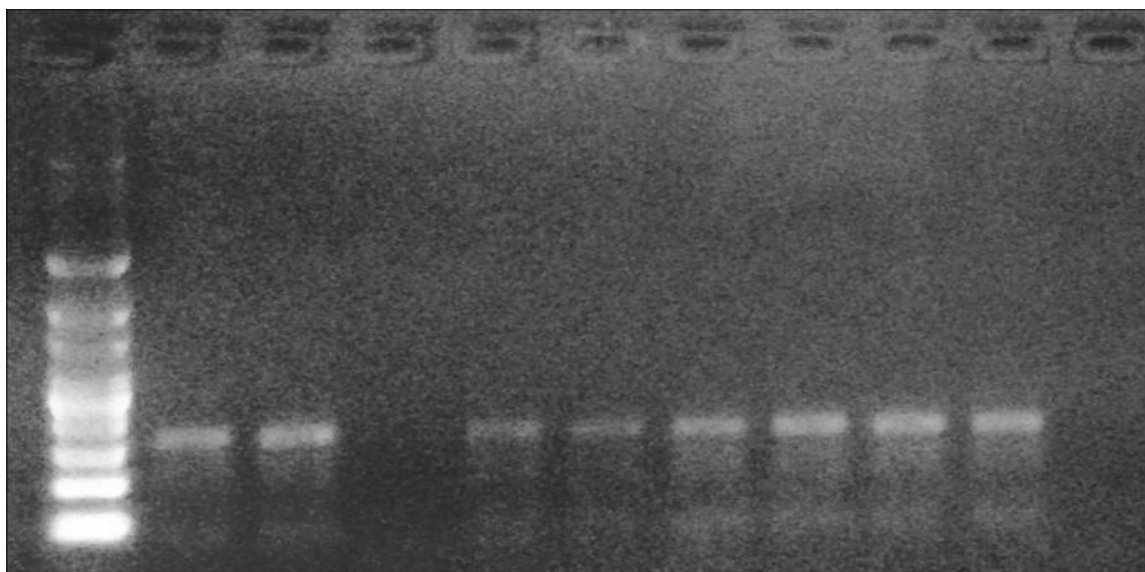


Fig. 2 - Electropherogram of exon- 2 *HBB* gene: using 0.8% Agarose

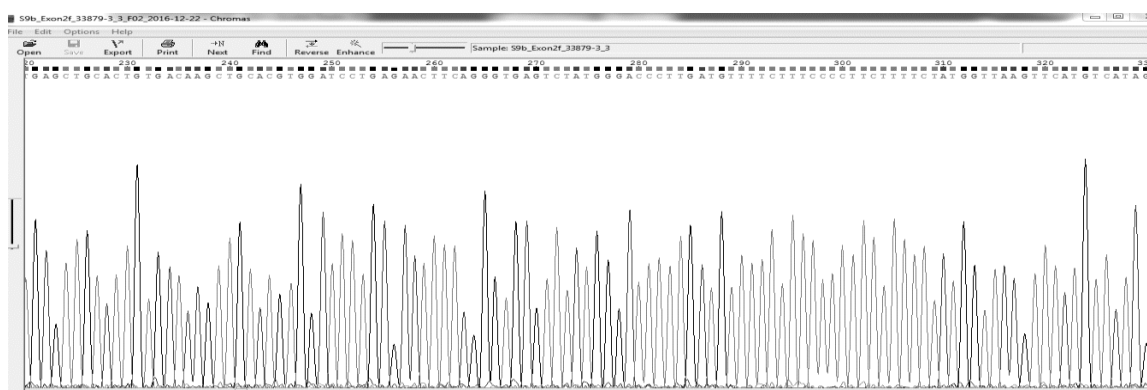


Fig.3 - Electropherogram showing sequence of exon 2 region of HBB gene

Clean and sharp peaks without any noise shown in electropherogram confirmed that the PCR product is of good quality and the read length of DNA sequence is good and long which indicate that the DNA template is present in sufficient conc. and possible mutations can be analyzed by converting electropherogram in fasta format using available bioinformatics tools. In the present study it is done by using Chromas Pro software.

Observed mutations in exon 2 region of HBB gene

Total 12 sequences of *HBB* gene Exon2region were aligned with Reference Sequence HBB gene>NG_000007.3.About 35 sites in HBB 2 region were detected as variants. The alignment was observed from nucleotide of (Exon2 region).Mixed level similarities of conserved regions were observed among the studied samples of Gond, Raj-Gond Kunbi, Basod. Four types of SNP variation were identified in exon-2 as C>T (allelic form rs7946748),T>C (allelic form rs713040),T>G (allelic form rs: 7480526) A>T(allelic form rs: 369101035) (11,14).Mutation were confirmed from BLAST (BLASTN) analyses.

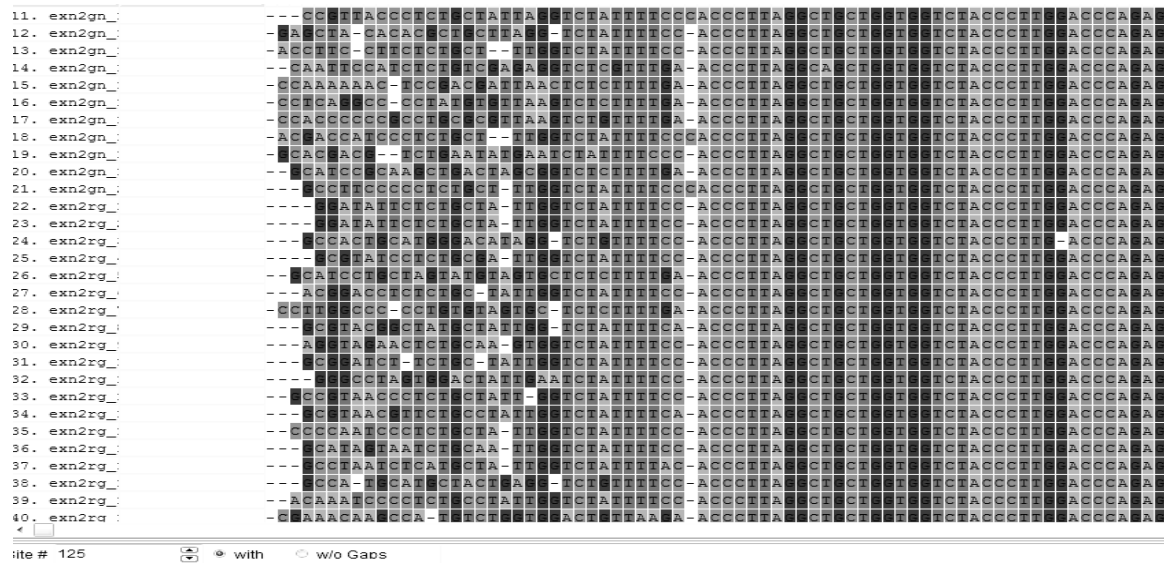


Fig. 4 - Multiple Sequence Alignment of nucleotide sequence of HBB gene as well as studied sequences of patients.

Conclusion

This work concludes that the methodology used in this study is sufficiently good to analyze a large number of samples. This genetic study has helped in the estimation of polymorphism and genetic variation as well as in the assessment of genetic similarities and dissimilarities among four scheduled tribes and caste community viz, Gond, Raj-Gond, Bansod, and Kunbi of Madhya Pradesh. Studies suggested that there is need to maintain a primary prevention program to analyse mutation, sequence variations at molecular level, it can help to overcome many genetic disorders.

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Screening of mutation in *BRCA1*, 11.2 in Ovarian Cancer patients

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Abstract

Two different critical mutations of *BRCA1* ovarian cancer susceptibility genes were identified in 30 women from Madhya Pradesh, India. By using standard protocol, Collection of blood Sample, Isolation of DNA through FTA, DNA Amplification and Direct Sequencing of exon 11.2 of *BRCA1* gene was done. Sequences were analyzed for presence of mutations through various Bioinformatics tools. Mutations were predicted as frameshift deletions (1189delA/1190A>G,) and missense type (1252G>T) Mutations were found to be 1.11% in all population except one was 2.22%. The two mutations were found as novel; thus, this study emphasizes the significance of screening of mutation in ovarian cancers and the conceivable implication of such observations in preventing therapy and genetic counseling.

Keywords - FTA, DNA Amplification, Direct Sequencing, Frameshift Mutation

Introduction

A molecular marker is a trademark that is estimated as a sign of pathogenic or biological cycles (Mishra and Verma, 2010). Despite the greater part of these markers is protein, pattern of gene expression and DNA alteration in cancer tissue have likewise accepted conspicuousness as markers (Ventura and Meraiver, 2008). Cancer of Breast and Ovaries are a standout amongst the most extensively seen malignancies influencing females all over the world. Changes in two autosomal predominant genes, *BRCA1* and *BRCA2*, have been associated with breast and ovary malignancies. With the purpose of screening breast and ovarian mutations in *BRCA1* gene, different exon specific gene markers have been utilized in order to find out base pair change in the DNA via DNA Sequencing. More than 200 distinct transformations in *BRCA1* and *BRCA2* have been portrayed (Shattuck-Eiden *et al.*, 1997; Breast Cancer Information Core, BIC). *BRCA1* encodes 1863 amino corrosive nuclear protein. Confirm involves a part for *BRCA1* in the control of gene expression, maybe at the level of transcription. A number of perceptions have connected *BRCA1* to DNA damage response pathways. In any case, the finding that the changes in *BRCA1* are connected with inherited breast tumor is valuable information. Hereditary testing could possibly offer diverse administration choices for the *BRCA1* change conveying high- risk individuals.

Methods and Materials

Patients and Control Selection

All the patients have taken for the study were treated at the Cancer Hospital, Gwalior, Madhya Pradesh, India. Total 30 number of ovarian cancers were recruited for the study. The age distribution

of all patients ranged from 18 to 80 years with a mean of 41 years. Ten ages matched healthy donor without a family history of cancer, collected their blood sample for use as normal control. This study was initiated by approval of ethical standards of Institutional Ethical Committee. All study participants gave their informed written consent including the information on Clinico-epidermiological characteristics.

Blood Collection

Blood sample was collected from patients as well as healthy donors by using disposable EDTA vials and kept in to the refrigerator (4°C) and immediately handled for further examination. FTA (Flinders Technology Associates) classic card (Whatman Inc, Clifton, NJ) have been used for the storage of samples at room temperature.

DNA Isolation

By standard phenol - chloroform protocol following Sambrook *et al.*, (1989) Genomic DNA was extracted from all the blood samples. For DNA preservation, isolation and PCR amplification, extraction of DNA was done using commercial Fast Technology of Analysis (FTA), (Chaudhary *et al.*, 2013)

Molecular Analysis

The extracted DNA was measured by the Spectrophotometer (OD260/OD280, 1.8 to 2.0) method followed by checking in 0.8% agarose gel. Amplification was done for the two sets of primers (forward and reverse) of exon 11.2 of *BRCA1* gene. *BRCA1* forward primer (5'-ACAGCCTGGCTTAGCAAGGAG) for exon 11.2 and *BRCA1* reverse primer (5'-ATGAGGATCACTGGCCAGTAAGTC) for exon11.2 (Lakhotia, 2003). Using 40ng of DNA template in 200µl of thin-walled tube, PCR amplification was carried out. The reaction mixture was prepared in a 1.5 ml of tube containing, 10X PCR buffer, 10p mol of each exon specific primer, 25mM MgCl₂, 200µM dNTPs and 1U Taq polymerase. The amplification conditions were as follows: 94°C for 5 minutes, 35 cycles (94°C for 1 minutes, 58°C for 1 minutes, 72°C for 30 seconds, 72°C for 10 minutes and 4°C forever for *BRCA1* (Kumar, 2002; Vaidyanathan, 2009). Electrophoresis done at 120V in 0.8% agarose gel for amplified products. Products of PCR were visualized under UV light in transilluminator. Sequencing was done for the PCR product to get a single band without any primer-dimer bands. Medox easy spin column PCR cleanup minipreps kit was used for purification of DNA fragments. Purified PCR products were sequenced by Capillary sequencing from Samved Biotech Pvt. Ltd, Ahmedabad using the selected primers (forward or reverse) of *BRCA1* (Sigma). Sequences of DNA were collected in the form of FASTA and ABI files. Direct sequencing of the amplified product was carried out in a 96 well plate Sequencing machine (ABI 3730XL), with 4pmol of primer (forward or reverse separately), 100ng of PCR product, 1.8µl of Big Dye Terminator reaction kit (Applied Biosystems, Foster City, CA) and 1.1µl of doubled distilled water to make up the final volume to 5µl. The conditions of sequencing were as follows: 30 cycles at 96°C for 10 seconds, 55°C for 5 seconds, and 60°C for 4 minutes and 4°C forever.

Software Analysis

Various computational algorithms and software tools are developed for sequence analysis and specific pattern detection. Pairwise sequence alignment extended to Multiple Sequence alignment, visualization of alignment and electropherogram, online homology searching of query sequences

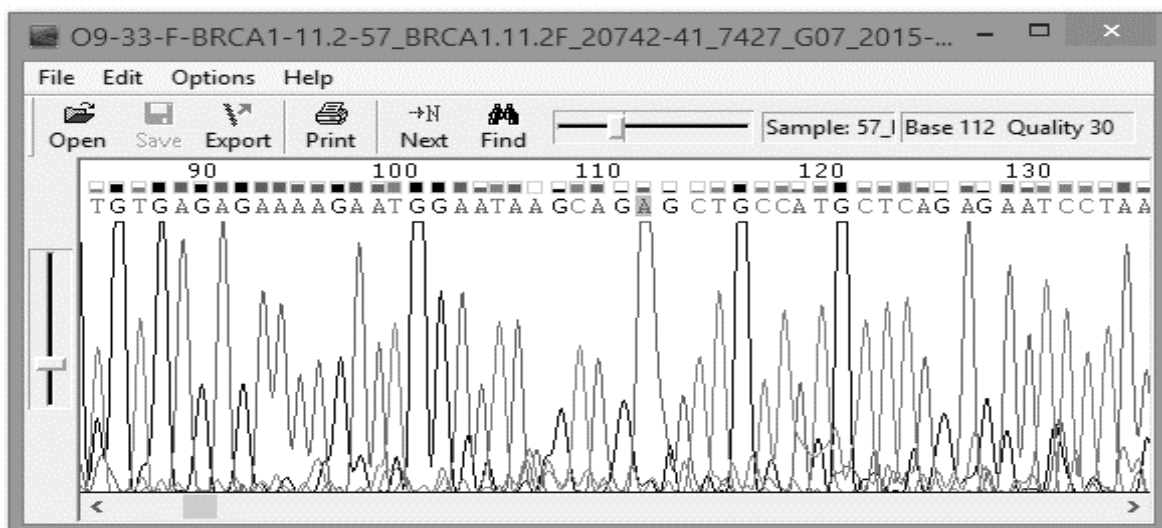
against Reference sequence, SNP detection, phylogenetic relationship and diversity analysis etc all these computational methods are part of Bioinformatics analysis, which were used to analyze the sequences exon 11.2 regions of *BRCA1* gene. The data of sequencing was obtained from the Samved Biotech, Ahmedabad in the form of FASTA (Lipman and Pearson, 1985) and AB1 (Applied BioSystem, Inc, USA) format. Exonic sequences *BRCA1* and *BRCA2* in FASTA format were analyzed by the software Clustal Omega (Sievers *et al.*, 1994) for multiple sequence alignment and BioEdit (Hall, 1999) for visualization; for SNP detection and validation BLASTN, BLASTX, BLAST (Altschul *et al.*, 1990), PolyPhen-2 (Ramensky *et al.*, 2002), Align-GVGD (Goldgar *et al.*, 2008; 2010) and HOPE server (Venselaar *et al.*, 2010). CHROMOS LITE1 (Technelysium Pvt Ltd. Copyright 1998-2012) software was used for visualization of AB1 file electropherogram of DNA sequence.

Results and Discussion

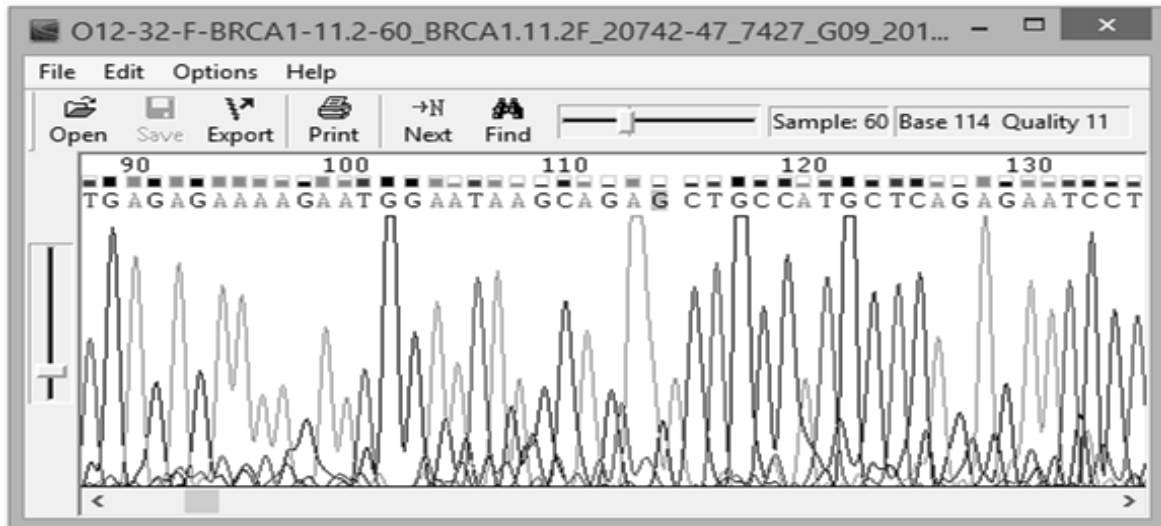
Frameshift Mutation in *BRCA1* exon 11.2

Box-1: Mutation: FKe11.2c357aaK (c.1189delA, c.1190A>G)

1182AAG	CAG	[1188A c.1189delA c.1190A>G]	C TG	C CA1196 T
355Lys Gln	p.357Lys>Ser		p.358Leu>Cys	p.359Pro>His



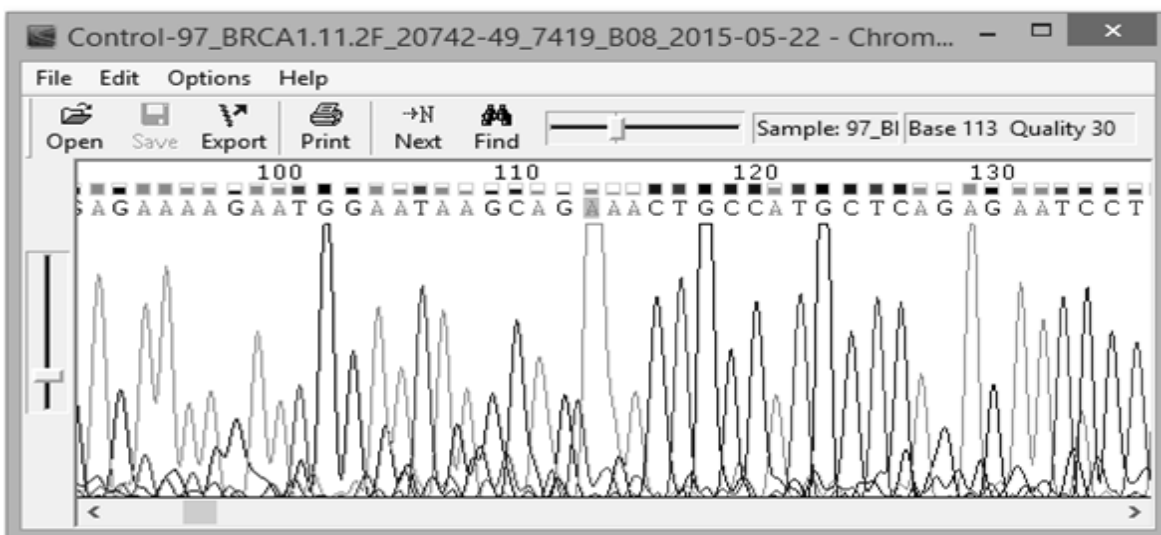
A) Mutant (O9-33-F-*BRCA1*-11.2)



B) Mutant (O12-32-F-BRCA1-11.2)

c.1189delA

Mutation in codon 357 AAG due to deletion of nucleotide 1189A (codon 357) (Box-1) has shifted the coding frame by a nucleotide to forward direction that causes the change in respective amino acids as, p.357Lys>Ser, p.358Leu>Cys, p.359Pro>His and so on. Two ovarian samples O9 (aged 33) and O12 (aged 32) were observed to be containing these mutations, as three stop codons are inserted due to two nucleotide deletion. The deletion of one nucleotide in codon 357 have generated three stop codons at positions as, 373 ATA=>TAA, 375 CTA=>TAA and 393 TTA=>TAG. The deleted nucleotide A in codon 357, is visualized in electropherogram images in Fig.1 (A, B) at position 113 of mutant. The mutations were observed to be homozygous.



C) Normal (C1-27-F-BRCA1-11.2)

Missense Mutation in *BRCA1* exon 11.2

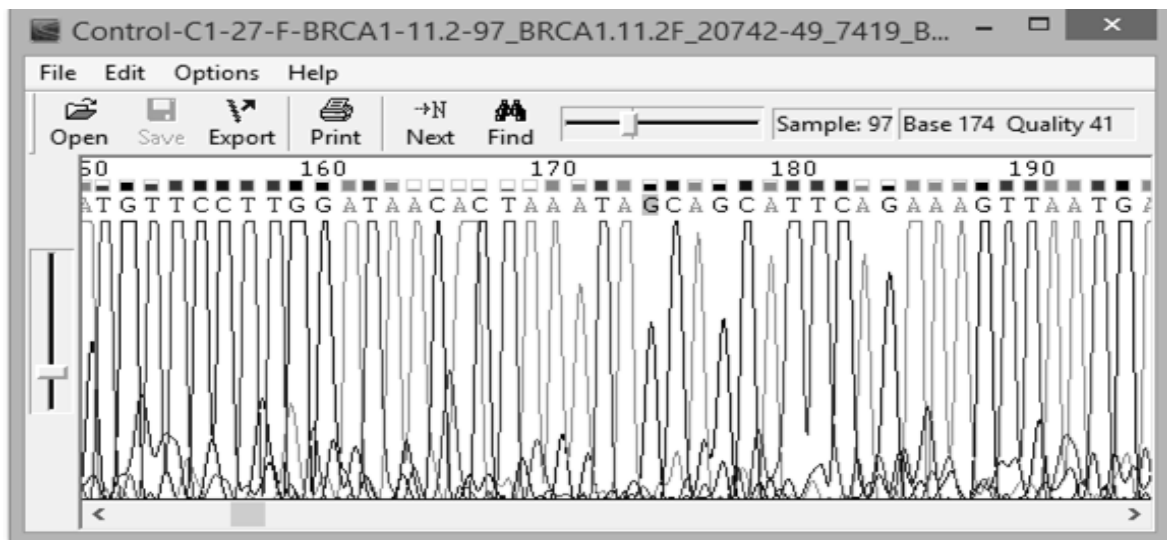
Fig.1 (A, B, C) - Electropherogram of mutant showing mutation type 'c.1189delA, c.1190A>G' at position 111 and 112 with normal subject.

c.1252G>T

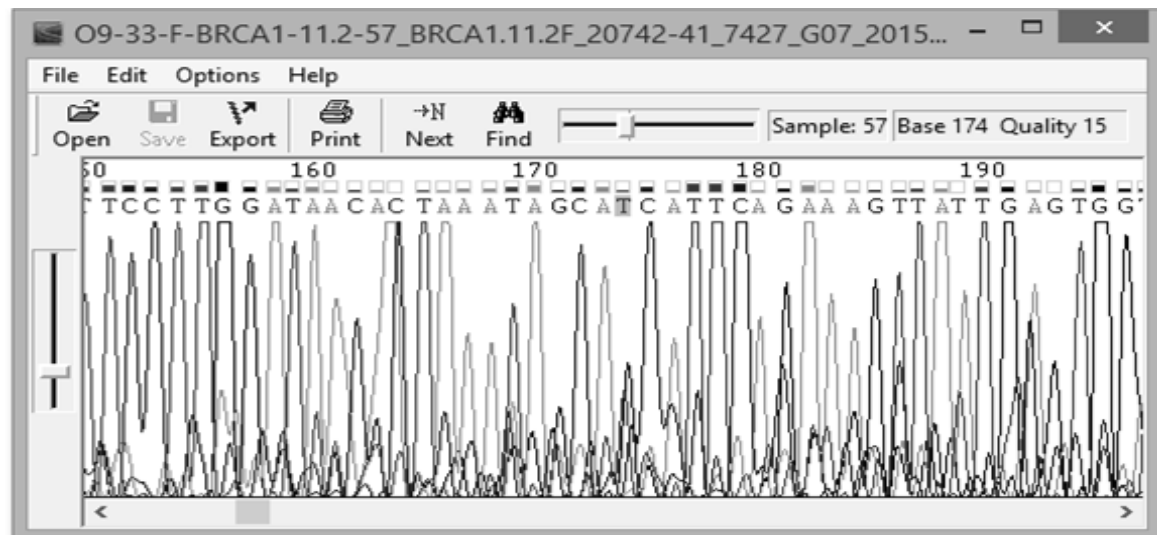
One of the ovarian sample O9 (aged 33) has shown this mutation. Protein sequence was obtained for this gene in mutant form and analysed on two SNP analysis servers. Fig. 2-C and Box-2 shows the missense mutation of replacement of 1252Gly>Thr converting codon 378 AGC to ATC coding for amino acid Isoleucine. Fig. 2 (A, B) indicates the heterozygous nature of mutation because of presence of signal of G, beside T in weak strength in case of mutant as compared to normal.

Box-2: Mutation: FKe11.2c378aaS (c.1252G>T)

1245AAT	AGC	[A (1252G>T) C]	ATT1256
376Asn Ser	p.378Ser>Ile		379Ile



A) Mutant (O9-33-F-BRCA1-11.2)



B) Normal (C1-27-F-BRCA1-11.2)

Fig. 2 (A, B) - Electropherogram of mutant showing mutation type 'c.1252G>T' at position 174 and normal subject

This high value of Align-GVGD grade (C25) indicates weak probability of pathogenicity from damage to the protein sequence. Missense mutational pathogenicity analysis by PolyPhen-2 server

have revealed that the mutation p.378Ser>Ile is damaging protein function with high probability. HOPE sever analysis predicted 56% of disorder as the mutation is in the Serine rich domain of *BRCA1* protein. Reason may be the difference in size and hydrophobicity of wild (Ser) and mutant (Ile) amino acids. Isoleucine is hydrophobic, may increase the hydrophobicity of pocket, resulting into loss of H-bonding patterns and hence affecting protein folding (Venselaar *et al.*, 2010).

Conclusion

The results of this study suggest that the mutational spectrum in exon 11.2 of *BRCA1* gene in ovarian cancer patients may differ from what has been seen in other Indian populations. Both found mutation of *BRCA1*, 11.2 region were predicted to be as pathogenic and observed to be incorporating in-frame stop codon in coding region resulting into incomplete protein synthesis. A missense mutation was found as deleterious from the score, 50% - 80% on HOPE server, >0.8 probability score on PolyPhen-2 server and C0-C25 A-GVGD grade score. Frequency of mutation in *BRCA1*, 11.2 region is observed in the range 1.1% - 2.2%.

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Gond Population Genetic Database on Four STR loci

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Abstract

Allelic scattering of four Short Tandem Repeats loci, CSF1P0, TPOX, TH01 and FGA was studied in Gond populations of the Madhya Pradesh, India. The forty seven blood samples studied for the present work. For this research samples was collected from Betul. Tribal populations are culturally homogenous were generally tribes practices endogamy. The average homozygosity values for Gond are 0.28. All four STR loci chase Hardy-Weinberg equilibrium except TPOX. STR loci used in this research are very informative and discriminating with Power of discrimination values of all tested loci was above 80%. Highest PD values were obtained by FGA locus in all studied populations about 95%.

Keywords - CSF1P0, TPOX, TH01, FGA, homozygosity and Hardy-Weinberg equilibrium.

Introduction

Short tandem repeats (STR) are highly polymorphic repeat sequences of nucleotides, which are plentiful in eukaryotic DNA (Weber and May 1989)^[1], (Edwards *et al* 1992)^[2]. Indian populations represent a distinct population structure based on the caste system. The most distinctive and elementary character of the Indian population structure is the existence of endogamous sub-castes within many of these castes within any region or linguistic region. The tribal populations are generally marked by high degree of isolation, small effective population size, and high degree of inbreeding, the conditions that are both good and prerequisite for the process of rapid micro-differentiation. They mark that, in most cases, these sub-castes may have developed from the common parental stock, involving different processes of fission (Basu 1969; Malhotra 1978 a, b)^[3,4,5]. The caste structure is about 3000 years older (Thapar 1977)^[6], the growing history of these subpopulations might have been relatively short even if it is at this level of Mendelian units that the forces of progression mostly operate (Reddy *et al.*, 2001)^[7]. There are currently about 530 tribal groups in India (Census of India 2011). Madhya Pradesh (MP) is the second richest Indian state by area, is located in the central part and is homeland of several caste and tribal groups. The tribal groups of are mainly trapper, labours and agronomist. STR locus are normally used in forensic, anthropological and medical research.

Methods

Sampling

The population sample consisted of forty seven healthy, unrelated individuals from Betul. All blood samples were collected after written consent of all subjects.

DNA Isolation

A 1.2 mm punch from a dried sample spot on FTA paper was taken in a PCR tube. 200 µl of FTA purification reagent were added to PCR tube, incubated for 5 minutes at room temperature and then continuously agitated by using a pipette. This process was repeated three times with FTA purification reagent and two times with 100 µl TE-buffer. Finally the entire left TE buffer was removed and discarded. FTA discs were allowed to dry at normal temperature for overnight and were directly used for PCR amplification.

PCR amplification

Multiplexed PCR amplifications of the 5 STR loci: CSF1PO, TH01, TPOX, FGA and Amelogenin was performed using AmpFISTR® MiniFiler™ PCR amplification kit (Applied Biosystem, Foster city, CA, USA). The PCR reagents have been standardized in the laboratory for uniformity of results. PCR was performed by taking the $\frac{1}{2}$ reaction volume of the manufacturer's recommended protocol (Shrivastava et.al 2013) ^[8] by using 9700 thermal cycler (Applied Biosystems, USA). For one 1.2 mm washed punch of FTA paper the PCR mix was comprised of Reaction Buffer - 5.0 µL, Primers - 2.5 µL, MQ water - 5.0 µL to make final volume 12.5 µL.

Genotyping of amplified fragments

The Polymerase chain reaction products were genotyped using multicapillary electrophoresis with POP-4 polymer in ABI Prism Avant 3100 Genetic Analyzer (Applied Biosystem, Foster city, CA, USA) according to the manufacturer's protocol provided with the kit and the data was analyzed using Gene Mapper Software v3.5 (Applied Biosystem, Foster city, CA, USA) to designate alleles by comparison with the allelic ladder supplied with the kit. Peak detection threshold was set to 50 RFUs for allele designation. All steps were followed according to protocol of respective kit.

Analysis of data

Allele frequency of the 4 STR loci was calculated by GenAlEx 6.5 software (Peakall and Smouse 2006) ^[9]. Several forensic parameters, i.e., polymorphism information content (PIC), power of discrimination (PD), power of exclusion (PE), matching probability (Pm) and paternity index (PI) was calculated using the PowerStatsV1.2 worksheet program (Tereba 1999) ^[10]. Observed heterozygosity (Hobs), Expected Heterozygosity (Hexp) and Hardy–Weinberg equilibrium (HWE) using exact test was calculated using Arlequin v3.5 (Excoffier et al. 2007) ^[11].

Results and Discussion

The allele frequency distribution observed in studied autosomal STR loci for the Gond population is summarized in Table-1. A total of 27 alleles were observed in Gond population. The range of allele frequency is from 0.020 to 0.390 (Table 1) in which CSF1PO locus from 0.020 to 0.530, for locus TH01 from 0.010 to 0.480, for locus TPOX from 0.010 to 0.210 for locus and for FGA locus from 0.010 to 0.030. TH01 showed maximum allele frequency with allele 9 (0.530) and FGA showed minimum allele frequency at allele 23 (0.210) in Gond population. Forensic parameters including Matching Probability (PM), Power of Discrimination (PD) and Polymorphism Information Content (PIC) for the STR loci CSF1PO, TH01, TPOx and FGA were show in Table-1. All the four STR loci show high degree of PIC value (above 0.5). The high PIC value of selected loci confirmed their usefulness for genetic polymorphism (Imad Hadi *et al.* 2014) ^[12].

The population wise average H_o/H_e ratio at four STR loci of studied population was calculated as 0.976 for Gond. Eaaswarkhanth *et al.*, 2009^[13] reported lower observed heterozygosity values than the expected heterozygosity for Shia, Sunni Muslims of Uttar Pradesh. This observation was predominantly noticeable for FGA locus, which departed from Hardy-Weinberg expectations with H_o/H_e ratios of 0.70 for Shia and 0.79 for Sunni Muslims, respectively. This indicates the scientific fact that homozygosity at genetic loci increases distinctly in populations practicing consanguinity seems to be reflected in the form of comparatively low observed heterozygosity values for most of the STR Loci and the departure from HWE detected in the Shia and Sunni Muslim population is also due to an excess of homozygous over heterozygous as a result high consanguinity rates reported for these populations (Afzal.1984; Bittle & Hussain, 2000)^[14,15]

Table 1: An allele frequency distribution for 4 autosomal STR Loci investigated in a Gond population of M.P.

Allele/n	CSF1PO	TH01	TPOX	FGA
N	50	50	50	50
6		0.180		
7		0.080		
8		0.190	0.260	
9	0.030	0.530	0.170	
10	0.210	0.020	0.080	
11	0.270		0.480	
12	0.390		0.010	
13	0.080			
14	0.020			
18				0.030
19				0.030
20				0.120
21				0.150
22				0.110
23				0.210
24				0.160
25				0.130
26				0.040
27				0.010
28				0.010
PM	0.136	0.116	0.186	0.045
PD	0.864	0.884	0.814	0.814
PIC	0.680	0.700	0.610	0.860
PE	0.428	0.460	0.342	0.755
Ho	0.700	0.660	0.640	0.860
He	0.730	0.650	0.640	0.860
P-value	0.268	0.379	0.003	0.427

Conclusion

In conclusion, a population database has been established for the Gond population of Madhya Pradesh for the four STR loci CSF1PO, TH01, TPOX and FGA. High combined power of discrimination for these loci shows their usefulness for forensic purposes.

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Covid -19 and its Impact on the Financial Status of Individuals with Special Reference to Bhopal

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Abstract

The literature on impact of covid-19 on financial status of individual is still somewhere unfilled so the study put efforts with few attempts to synchronize the findings of present studies. The study aims to compile the contributions connected with the financial conditions of the individuals. In this study papers that are related with the financial and economic status of the individual and economy are accessed to classify the parameters i.e., spending behavior, responsibilities, job status, education level are affected by the pandemic and may continue to be affected in future. Further the findings of the study are used to develop the directions for future studies. Furthermore, this study provides the base to identify the factors related to the financial status of the individual and also provide some suggestions to improve the financial status of the individual affected by the pandemic.

Key words - Financial status, Job status, Spending behavior, Education level, Responsibilities

Introduction

As we all know that India is among the one of the largest economies of the world. It is the fastest growing economy in the world. Despite facing many challenges it is found that India scored seventh position in terms of the largest economy and third position in terms of purchasing power parity. But due to covid-19 pandemic India has suffered a lot not in terms of economy but also lost lots of lives which adversely affected the financial status of the individuals.

The pandemic changed the lives of individuals in each and every aspect as some lost their jobs due to which their life style has changed. So, this study focuses to examine the impact of covid-19 on financial status of individuals with special reference to Bhopal. It also focuses to find out the measures that can help the individuals to become financially stable.

Literature Review

1. Ömer Açıkgoz , Asli Günay (April-2020) “*The early impact of the Covid-19 pandemic on the global and Turkish economy*” Turk J Med SCI 2020 Apr 21; 50(SI-1):520-526. doi: 10.3906/sag-2004-6.

The study is based on the early impact of covid-19 pandemic and especially Turkish economy. It focused on summarizing the recent report about the economic conditions due to the pandemic and tried to find out some results out of them. It was found that customers, supply chains and financial markets have negative impact which led to the global economic recession.

2. S. Mahendra, Dev, Rajeswari Sengupta (April 2020): “*Impact of Covid-19 on the Indian Economy: An Interim Assessment*” JEL Code: E2, E5, E6, G2

This particular study focuses on the Indian economy as many sectors of the Indian economy have adversely affected by pandemic. The informal sector which was already struggling has been affected, the banking sector and corporate sector experienced high level of nonperforming assets and domestic violence against women also increased.

3. Byomakesh Debata, Pooja Patnaik, Abhisek Mishra (September 2020): “COVID-19 pandemic! Its impact on people, economy, and environment” 02 September 2020
<https://doi.org/10.1002/pa.2372> Citations: 8

The paper took into consideration the following factors i.e. knowledge on corona virus disease, policy responses on it, impact on the people, economic activities and environment of India. It was focused that the pandemic has shrunk the economy as export declined by 34.6% and import by 28.7%. Pandemic also affected environment as use of plastic decreased but it has certain positive impact also i.e. quality of river water improved.

Objectives

- To identify the changes in job status of individuals during pandemic.
- To identify the changes in monthly income of individuals.
- To examine the increase or decrease in the responsibilities during pandemic.
- To analyze the change in the buying behavior of individuals.

Methodology

The descriptive study using structured questionnaire through Google form was conducted to know the effect of pandemic on the financial status of individuals with special reference to Bhopal. Participants were recruited by random sampling technique.

Initially a core group of 10 members were selected including different classes that are business class, private sector, and niche group and government sector. Furthermore, the study was extended to other respondents also to collect the information on different parameters that are responsibilities, spending behavior, job status, education level and data was collected from 106 respondents. The core group was selected to contemplate the heterogeneity/ diversity of research study, for example age, gender, educational level and occupation throughout the city.

A structured questionnaire was prepared based on validated tools and piloted on business class, private sector, and niche and government sector before data collection.

Measurements

1. Which sector do you work in?

The chart shows the different sectors in which the respondents were engaged. Out of the 106 respondents 50.9% work in private sector, 10.6% engaged in government sector, 25% are self-employed and 13.5% are employed in niche.

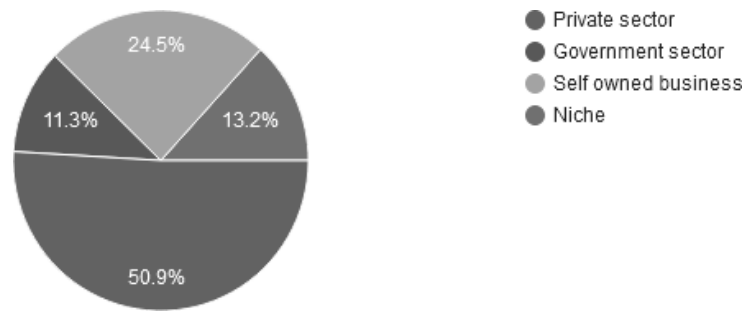


Figure 1

2. Has there been any change in your income during pandemic?

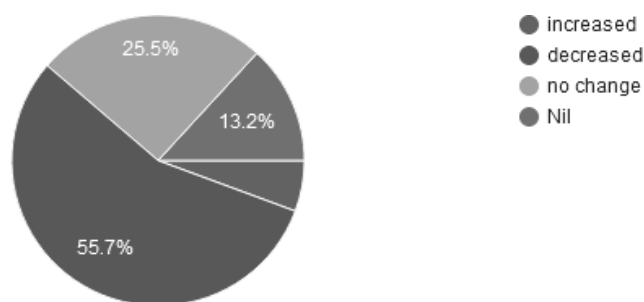


Figure 2

This chart shows the change in income of the respondents during pandemic. It was analyzed that 55.7% of the respondent's income decreased during pandemic, 25.7% experienced no change in their income, 13.3% respondent's income became nil.

3. Did your responsibilities change during pandemic? If yes, then how much?

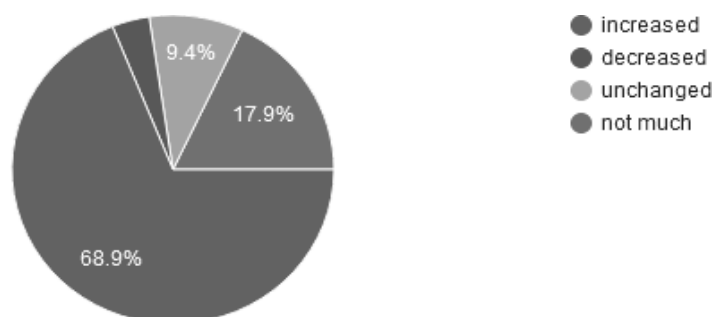


Figure 3

This particular chart is related with the change responsibilities during pandemic. It was found that 68.9% voted towards increase in their responsibilities, 17.9% voted for “not much” change in their responsibilities.

4. Did pandemic influence your buying behavior?

This chart depicts the change in buying behavior of the respondents due to pandemic. 62.3% voted for “yes” means their buying behavior changed 15.1% experienced no influence in their buying behavior as many preferred to buy only essential products.

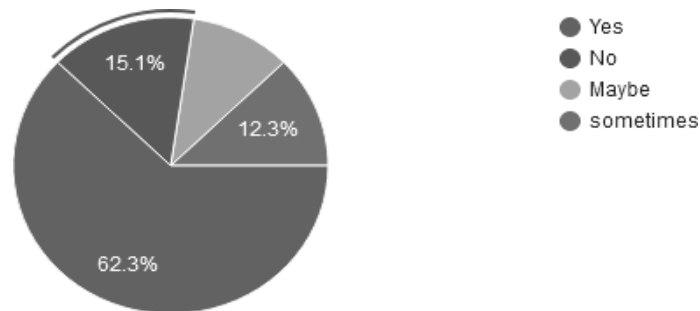


Figure 4

Findings and Results

- The study included 13.2% of the respondents between age group of 21years to 23 years of age, 9.4% between age group of 25- 27 years.
- Out of 106 responses, 56.6% does not lose their job but 30.2% lost their employment 75% were not stable toward their job.
- Most of the respondents i.e., 80.2% focused only to buy essential products during or post pandemic time, only 9.4% preferred to buy convenient product.
- More than 50% of the respondent's surrounding situation affected the way of spending as some of them stopped going out due to fear of virus.
- 43.4% respondents responded towards the “not much” change in their purchasing power and 24.5% responded towards the “much” change in purchasing power.
- 17.2% respondents were “fired” from their job, 30.2% experienced “no effect” on their income, 26.4% have to work at the “reduced working hours”, and some have to work “overtime”.
- 36.8% respondents focused on “maintaining their health, hygiene and fitness”, 21.7% have “different sources of income”, 19.8% have “to take responsibilities”.
- Many responded towards the use of saving in order to manage their financial status due to change in their job status during pandemic, many reduced their unnecessary expenses.
- When the job status of the respondents changed during pandemic, 26.4% responded towards “responsibilities increased”, 16% opted for “expenses increased” 31.1% voted for “stress increased” and 26.4% for “no change”.
- In case of the priorities during the pandemic, 63.2% voted for “yes” means their priorities changed and 9.4% opted “no”.
- When the respondents were asked about their responsibilities in future many of the answered about maintaining hygiene, taking care of the family's health, increase saving, and should have multiple sources of income.

- 49.1% respondents choose “deterioration “in their or their children’s education level, 36.8% thought “nothing” about their education, 10.5% experienced improvement in the education status.
- When the respondents were asked about their career in future during pandemic many answered about struggling, less explored, would be focused towards government job.
- Most of the respondent appreciated maintaining health and hygiene, spending quality time with family, became creative, less polluted environment, digitalization etc.

Suggestions

- Many suggested to improved Skills and be creative.
- More savings and less spending on unnecessary items is also the best option to deal in pandemic.
- Developing the ability to work in different situations
- Government should promote some SHGs so as to help the weaker section of the society during such pandemic.
- Make a budget, manage your finances, spend in insurance, don't stress and have different ways of investing.
- By providing them little help from others or giving them some work
- Revive intense Demand side glitch
- People should focus on work more, invest more, shop less and cheap products.
- Improve your skills and grab the opportunity
- Have a medical insurance and choose best substitute
- Should start in investing to improve the skills in digital marketing
- Should be a conscious consumer so as to take right decision to reduce unnecessary expenses.
- Spend money where it is needed and try to start different source of income.
- Keep Saving/Investing your Surplus funds/Part of your income in a systematic manner to deal with such financial problems.
- Government should provide general awareness regarding different types of diseases so as to deal with such pandemics properly.

Conclusion

As this pandemic has deeply affected the financial status of the economy and individual every person need to be aware of the surrounding, have multiple sources of income, maintain health and hygiene, try to invest and grab the opportunities so as to tackle such types of problem efficiently.

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Work Life Balance: An Approach towards Stable Economic Development in India

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Abstract

With the arrival of 2020 new goals, new opportunities, new path & new passion is also taking birth in our mind & heart which is indeed necessary to feel the change & energy in our lives. Economy of India falls under developing economy which is consist of activities like production, consumption & trade of goods & service by which people get their living. These people act as an important & inseparable part to improve the well-being & quality of life in a nation. But when these people face conflict between work & life it will affect adversely on the productivity of an individual which finally results as a particular cause of weaker economy. As work life balance has mostly been discussed in reference to satisfaction & happiness of an individual. But in this paper an attempt is made to explore the need of WLB as an important tool for attaining economic growth & development in long run. Through this paper it will become clear that use of work force in a balanced way will lead to achieve stable development with minimizing and avoiding the future uncertainties.

Keywords: *Economy, opportunity, satisfaction, passion, uncertainties, production.*

Introduction

In current scenario work life balance is trending as a buzz concept about which everyone wants to talk, but don't want to accept the need of balance in their own life. In simple words work life balance dealt with the measures or objective of attaining balance between the personal or social responsibilities and work or occupation. As the concept is talking about the balances in life of human force and the same work force are having involvements in the activities like production, trade, business, and services etc. which include the various aspects of the economy. Thus if we are talking about the growth and development of overall economy we can't ignore the role of individuals or humans as a inseparable and important live ware which contributes towards the improvement of economy. But in India workers are depressed overstressed and facing many health disorders, thus through this kind of labor force we can't imagine progress or any kind of development in an economy.

Therefore there is need to infuse balance in workers life and work. With regards to nations, India is the most disheartened nation on the planet, as indicated by the World Health Organization, trailed by China and the USA. India, China and the US are the most influenced nations by tension, schizophrenia and bipolar issue, as indicated by WHO. A research announced in WHO, directed for the NCMH (National Care Of Medical Health), expresses that at any rate 6.5 percent of the Indian populace experiences some type of the genuine mental issue, with no noticeable country urban

contrasts. In spite of the fact that there are compelling measures and medicines, there is an extraordinary lack of emotional wellness laborers like health analysts, specialists, and specialists. As announced most recent in 2014, it was as low as "one out of 100,000 individuals". The normal suicide rate in India is 10.9 for each lakh individuals and most of individuals who end it all are beneath 44 years old. Research demonstrates that ladies are twice as liable to create normal mental issue, for example, tension and sorrow, when contrasted with men.

As per the **World Health Organization** (WHO), ladies are likewise bound to encounter injury, frequently because of rape or misuse, and thusly will in general experience the ill effects of Post-Traumatic Stress Disorder (PTSD). Research has additionally demonstrated that 20 percent of Indian moms are probably going to be influenced by post birth anxiety. As indicated by further research by WHO, economic loss in India because of psychological well-being conditions will add up to an expected \$1.3 trillion somewhere in the range of 2012 and 2030.

Objectives

- To study the role of balance in work and life towards economic development.
- To find out the reasons for weak economy in India.
- To show the current condition of Indians at their work.
- To identify the measures for workers which results in economic growth

Data analysis and interpretation

Work-life balance in India is similar to a dream that has never appeared true. In the metro cities of our country, where people repeatedly end up commuting for 6 hours a day and then work for further 8-9 hours, work connections are more advantaged than families. The stress to perform above standard ends up taking extra hours of workforce every day, without receiving any extra incentives or benefits for the same. According to a survey of 100 cities around the earth conducted by an Amsterdam-based consultancy Arcadis, following are the five major cities of India which ranked low in reference to work life balance. They are:

- Bengaluru
- Chennai
- Kolkata
- Mumbai
- New Delhi

Bengaluru, Chennai and Kolkata stands in the 70s while Mumbai was at 86th rank with New Delhi were at 87th. According to the survey, Indians worked for approximately 2,195 hours on an average every year, whereas in Hamburg, citizens worked for around 1,473 hours each year, which is amongst the peak three scores. In a research conducted by EY in 2015, 30% of India's working respondents have exposed that managing job, relations and individual responsibilities had become more difficult in the last 5 years.

On paper, a few firms in India also have begun offering paternity leaves for new dads. Also, the maternity leave can be reached out for around a half year. Notwithstanding, truly, the things aren't so smooth particularly for working ladies. This is on the grounds that most working ladies battle with a weight of performing at the working environment while taking most extreme consideration of the youngsters, family and family unit with little assistance from any other individual. This makes an enormous detour in the method for accomplishing work-life balance.

The greater part of Indian working experts rate their present work-life balance normal to awful says the 'Understanding Work Life Balance' overview of 2,000 working experts by Monster.com. Altogether, as much as 45% of the respondents were from non-metros urban areas where work-life balance is as far as anyone knows a lesser issue.

By and large, 67% of India's working experts at times, frequently or consistently consider work when not grinding away. About portion of the respondents seeing someone as of now, admitted that the absence of work-life balance makes them or their accomplices fractious or crotchety. Absence of rest (17%), sadness (16%), nervousness and fractiousness (9%), hypertension (4.5%) came up as the top business related diseases. Back torment (15%), visit cerebral pains and weariness (14%), and heftiness (5%) came up as different pressure related physical ailments

Instead of the conviction that innovation is a facilitator, 33% of the youthful experts discover innovation (workstations and cell phones) an impediment in overseeing family with work duties. This gets huge as 54% of the respondents were single. Other two obstacles that developed were gatherings, calls and trainings after available time (18%); and negative demeanor of bosses towards work-life balance regardless of the arrangement (11%).

When asked, what work-life signifies, 'adaptable work hours' came as the main reaction at 41%. This was trailed by going home on time. This was trailed by going home on schedule and not bringing work home at 39%. The other critical reaction that originated from near 40% respondents was to get time to seek after their pastimes and enthusiasm. 22% feel that getting some much needed rest routinely is the way they characterize work-life balance. 60% of respondents go through one to two hours to head out to work; about 70% respondents might want to telecommute to stay away from the day by day drive. In associations where there is a work-life balance arrangement, the main three arrangements offered were adaptable work hours (62%), occasion (46%), and seeking after side interest/enthusiasm (25%).

Surveys and research on Asia's basis showing weak work life balance (Analysis and interpretation):

Three Asian urban communities - Mumbai, New Delhi and Hanoi - figure among the main five urban communities of the world that work the hardest. This below given survey will help us out to find the cities with weaker work life balance that is the increased number of working hours will lead to weak work life balance or dissatisfaction towards job which ultimately affect the economy through irregular or stressed work force.

India's business capital Mumbai has topped a worldwide graph of individuals who work the hardest. Mumbai workers check in a yearly normal of 3,315 hours. Hanoi came in 2nd while New Delhi came in 4th. The overview – led in 71 urban areas of the world – was discharged by Swiss Bank UBS recently. The overview uncovers that in India there is no restriction for most extreme working hours and no ensured least yearly leave. It additionally harped on the distinctions in occasion privilege over the world. The dedicated Mumbai populaces were among the individuals who took minimal downtime, at just 10.4 long stretches of get-away every year.

The individuals who lean toward an all the more restful break should go to Riyadh, which found the middle value of 37 days out of each year, or Russia. Laborers in Moscow and St Petersburg get 33.3 and 32.3 days yearly occasion separately, the World Financial Gathering said in a report cited in the study. The site incorporated data on the greatest, most significant urban areas comprehensively, at that point positioned them by the normal absolute hours worked every year,

utilizing information from Swiss financial gathering UBS. Right now, Kong laborers checked in the most extreme hours, trailed by Mumbai.

Laborers in Jakarta checked in 40.4 hours – 9.99% a greater number of hours than the worldwide normal and took just 12 days occasion a year. Laborers in Taipei did 41.2 hours – that is 11.6% higher than the worldwide normal. Laborers in Bangkok put in 42.1 hours. New Delhi timed 42.6 hours – 14.56% longer hours than the normal around the globe. The report, cited by the World Financial Gathering, additionally referenced South Korea where following "a low birth rate and easing back efficiency, President Moon Jae-in has driven a push to decrease the nation's working hours and give laborers the "option to rest".

Shockingly, in spite of having a term to portray demise by exhaust, the normal Japanese specialist completes 1,713 hours out of every year – underneath the OECD normal, the report brought up. By chance, Mumbai has additionally been recorded as the twelfth most extravagant city on the planet – in front of Toronto and Paris. Mumbai's all out riches is US\$950 billion, while Toronto's riches is US\$944 billion and Paris' US\$860 billion at fourteenth and fifteenth spot individually, the Monetary Express revealed. Mumbai is additionally one of the most costly land urban areas – leasing an office in a tall structure in Mumbai could cost you more than Dubai, or even Los Angeles.

Economic development and work life balance

From the above given surveys and research it become very clear that we the Indians always focus on working hours, enhanced profit & market share, increase in goodwill & targets leaving behind all the important aspects of achieving this materialistic reality that is work force or human resources without whom it is not possible. While fulfilling the needs of organization we can't avoid the condition of work force who worked hard as foundation for all working.

Heather Boushey, financial expert and writer of the new book "Discovering Time: The Economics of Work-Life Conflict," clarifies how liberal work-life balance arrangements advantage everybody, including representatives, organizations, and the economy in general.

At the point when we think about the economy, we need to think about the entire economy. In the event that you think about both market interests, just as generally speaking profitability, tending to work-life trouble influences overall economy too.

On the off chance that families and laborers experience significant levels of contention between thinking about their families and holding down work - and carrying out that responsibility as well as could be expected - this influences work supply. For instance, we realize that when new moms approach paid family leave, they are significantly more prone to come back to their occupations. That is, work supply is being supported by a strategy that tends to work-life struggle.

There are likewise genuine ways that tending to work-life struggle at the firm level improves profitability. This is a long-standing contention that we've heard on numerous occasions. Arrangements that make it feasible for laborers to concentrate on their occupations without agonizing over their youngsters - in light of the fact that they have a timetable that works for them and their family (or possibly an anticipated calendar) or on the grounds that they realize they can take a paid day off when they need to - all improve profitability.

Research methodology & data collection

The current research study is based on secondary data which is taken from various secondary sources of information, surveys and researches based on primary data. After reviewing the various surveys, books and research studies it become very obvious to interpretate the result of present study that economic development in long run can easily be achieved with the help of maintaining balance in the life's of workers, individuals or peoples who are working day night continuously and contributing their important part towards economic growth and avoiding the workforce will lead to the weak economy.

Findings and suggestions

- Work life balance can be adopted by providing flexible hours, quality time with family, healthy relationship etc through which labor supply will become stable in an organizations for increased productivity.
- Work life balance policies can affect the whole economy therefore its importance and applicability should be taken very seriously.
- Indians who are working under pressure, stress and long working hours with all these aspects we can't imagine healthy economy.
- Government should take some healthy measures for infusing genuine balance in the lives of work force for making them more confident, skillful and satisfied because strong economy will survive only with healthy and energetic individual.
- Organizations and institutions whether it is public or private should adopt some effective regulations or strategies to provide comfort, better ambience, family care & safety benefits to the workers which will help in improving the overall efficiency and happiness index of an organization and society.
- There is a greater scope of making further study.

Conclusion

Work life balance of a particular individual or people of India if taken collectively will result in development of an economy if it is balanced or we say if they are satisfied from their work or life on the other hand if they are stressed or overburdened with lot of work or guidelines it will result in imbalances in life which ultimately affect the work too and indirectly to the economic condition of the country too by reducing the number of skilled work force, reduced productivity, reduced innovativeness etc. Therefore government should think about some measures through which the opportunities, technologies, methods, strategies or services which actually government is adopting for making economy more strong and developed will become more effective, worthy and can be implemented in the right way. Thus from this research we have seen that Indians who are the real asset of the country are working under imbalanced life style which is now needed to be changed so that these work force can work as continuous fuel to take our economy on right path.

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A CHAID Analysis on Financial Challenges to Micro Enterprises of Bhopal Region with Reference to COVID-19

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Abstract

Micro enterprises play an important role at the individual and national level, their contribution to the social, political and economic development of the country has been widely recognised. However in spite of the indispensable role played by the micro enterprises in the growth of any economy they face various challenges in form of lack of funds, low level of general and financial literacy, insufficient documents to avail credit and various others. The present study investigates these challenges and digs deeper into the nature of these challenging factors in determining the banking experience induced satisfaction of micro enterprise customers. For the purpose of the study the primary data was collected from the 75 micro entrepreneurs around the Bhopal region for the duration coinciding with the post COVID-19(second wave) period. The data was then analysed with the help of CHAID Decision Tree Analysis. The results revealed that number of sources from which credit has been availed and Registration with Urban Local Bodies have significant impact on the satisfying experience of micro entrepreneurs. The study finally makes suggestion for improving the general level of literacy, increasing credit allocation and avenues from where it can be availed and registration with Urban Local Bodies to overcome these challenges and further enhance the policy driven bank supported financial experience of the micro entrepreneurs.

Key Words - Document Requirement, Financial Literacy, General Literacy

Introduction

Micro Enterprises is the most vibrant and rapidly growing sector of the economy that is playing an indispensable role in the equitable distribution of resources and sustainable growth. It is one of the most common form of enterprise in most of the developing countries.

They provide great opportunities for providing low price goods, efficient services, income support and employment generation to the needy population of the country (Harvie). However in spite of the indispensable role played by the micro enterprises in the growth of any economy the face various challenges namely lack of funds, low financial literacy, low general literacy and various others all of which have a compounding effect on the overall financial crises faced by them.

As per the recent notification by Indian government a micro enterprise is an establishment where the investment in plant and machinery or equipment does not exceed one crore rupees and turnover does not exceed 5 crore rupees. As per the MS Semi Annual Report 2020-21 the number of micro enterprises in India are 630.5 2lakhs out of which 36% of them are engaged in trading activity, 31 % in manufacturing activity. Their share in the Gross Value Added (GVA) and contribution to the all India GDP for the year 2018-19 was 33.5 and 30.2 7% respectively. Acknowledging their contribution government is giving policy push and devising various scheme and interventions that help in the development and growth of these micro enterprises, which are ATI scheme, Coir Vikas

Yojana, SFURTI SI, Prime Minister Employment generation programme, Entrepreneurship and Skill Development Programme and various others.

Review of literature

Here is a literature review based on various their experience in developing countries and particularly in Indian scenario.

Prohorovs and Beizitere studies the changes in amount and structure of the micro enterprises financing in Latvia with regard to the three main sources of bank loans, leasing and factoring.

Chimucheka et al. investigates the challenges that are faced by the entrepreneurs in the Eastern Cape province of South Africa and identifies the inherent problem. The challenges identified were lack of networking opportunities, lack of access to finance and inadequate government support.

Kamunge et al. assesses the factors affecting the performance of micro enterprises in the Kenya. It concludes that among other key factors found to be affecting the business of these enterprises the access to business information, required infrastructure and the strong government policy support and regulations were significant in the growth and development of these enterprises.

Nair et al. provides an insight into the credit allocation of the micro enterprises and the way it has gone with the objective of their development. The study finds that the lack of credit has served as a chronic bottle neck for the microenterprise growth.

Jahanshahi examines the role of government policies and their impact on the growth of entrepreneurial intent and capabilities of the micro enterprises. It affirms that the various entrepreneurship development programmes by the government have a nullifying effect on the challenges faced by these enterprises.

Mor et al. investigates the sustainability of micro enterprises given the various challenges they faced in form of capital constraints, low level of literacy, lack of government policies support and various others.

Research Gap

From the extensive review of literature discussed above and various others it has been found that much of the work done on micro enterprises relates to the various forms of challenges. However, there is a dearth of literature on the investigation into the nature and extent of these challenges in affecting the banking experience induced satisfaction of these enterprises.

Objectives

The study is conducted with the objectives of:

1. To study the various issues determining the extent of financial challenges faced by Micro Enterprises.
2. To identify the determining factors in the banking experience induced satisfaction of micro enterprises.

Research Design

For the study the sample have been taken from the urban micro entrepreneur population in the selected areas of Bhopal region, particularly urban poor clusters. The duration of the data collection coincided with the Post COVID 19 (second wave) period. The sample size was 75 micro entrepreneurs.

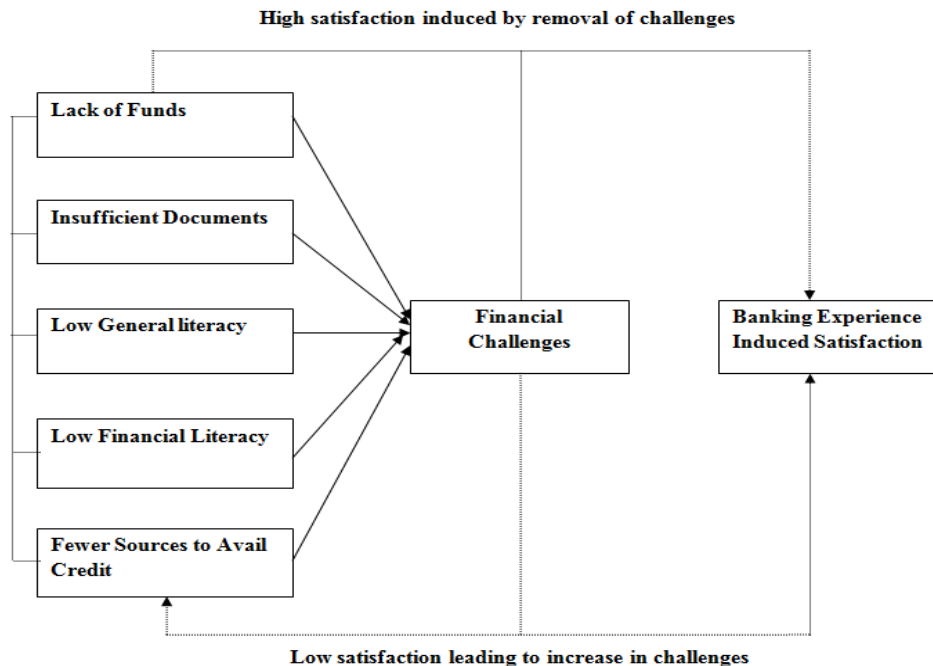


Figure 1: Diagrammatic Representation of Framework of the Study (based on literature) Source: Author's Own Compilation

Based on the literature surveyed framework for the study was prepared as shown below. The financial challenges faced by the micro enterprises are determined by the various challenges namely lack of funds, insufficient documents, low general literacy, low financial literacy and fewer resources to avail credit. These challenges in turn affect each other and are responsible for the overall credit crunch faced by the micro enterprises. Removal of these bottlenecks have a nullifying effect on the financial challenges and lead to high banking experience induced satisfaction of the micro enterprises (Chimucheka et al.). However low banking experience induced satisfaction of the customers lead to further increase in these challenges and vice versa (Naeem et al.; Fort et al.; Bhabha et al.).

Financial Challenges of Micro Enterprises

1.1 General Level of Literacy

General level of literacy was found to have and huge impact on the financial management capabilities, organisational efficiency and overall health and strength of the micro enterprises (Inan and Bititci). The study has tried to understand the impact of the education on the average monthly income which is used as a gauge for measuring the efficiency of the micro Enterprises. The research revealed that those who have higher education level were having higher average monthly income. Female micro entrepreneurs have lesser education and average monthly income than males.

Table 1: Education and Sex wise Distribution of Average Monthly Income:

			Education					
			No Education	Upto 5	Upto 8	Upto 9	Upto 10	Upto 12
			Mean	Mean	Mean	Mean	Mean	Mean
Sex	F	Average Monthly Income	4500.0	8000.0	8000.0	.	8000.0	.
	M	Average Monthly Income	8000.0	9600.0	10684.2	8000.0	.	11187.5

1.2 Lack of Funds and Number of Sources for Availing Credit

Government and banks provide funds to the micro enterprises for their development through various schemes and policy initiatives. But due to the interaction of the challenges that have been highlighted by this study and various others, micro entrepreneurs are unable to avail credit from the formal sources and thus face lack of funds. During the data collection the most popular sources of availing credit in the knowledge of respondents were bank loans, microfinance loans and loans under any scheme provided by the government. As can be seen from the chart below that 64% of the respondents have not availed any loan from above specified sources of credit. There are about 28 % of the respondents who have availed loan from two sources and most of these were microfinance and bank loans.

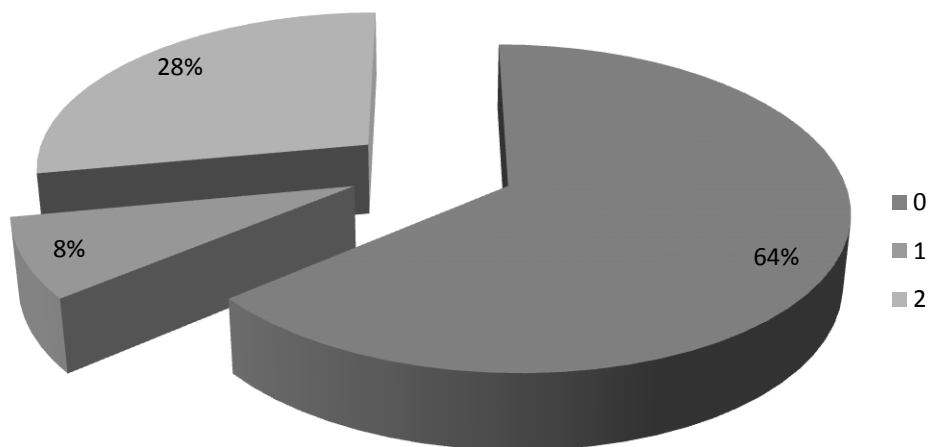


Figure 2: Percentage distribution of Number of Sources for availing Credit

1.3 Low Financial Literacy

Financial literacy has directly association with his ability to avail loan from various sources (Madhulata; Grohmann et al.; Berry and Chandan; Radipere and Dhliwayo). It is greatly affected by general level of literacy and in turn affects the number of documents in possession. Government as well as banks promote financial literacy through various initiatives of the form of "may I help you" counter, financial literacy camps organised by the banks, information dissemination through leveraging different digital platforms and various others. In a study the financial literacy score was

calculated through the weighted sum of scores on various knowledge parameters. It was found that most of the respondents were having a good financial score of 11.

$$Y = [(1 * \Sigma x_1) + (2 * \Sigma x_2) + (3 * \Sigma x_3)]$$

Where, Y = Financial Literacy Score, x_1 = knowledge of routine banking operation, x_2 = Knowledge of insurance and credit availing process and x_3 = knowledge of digital transactions

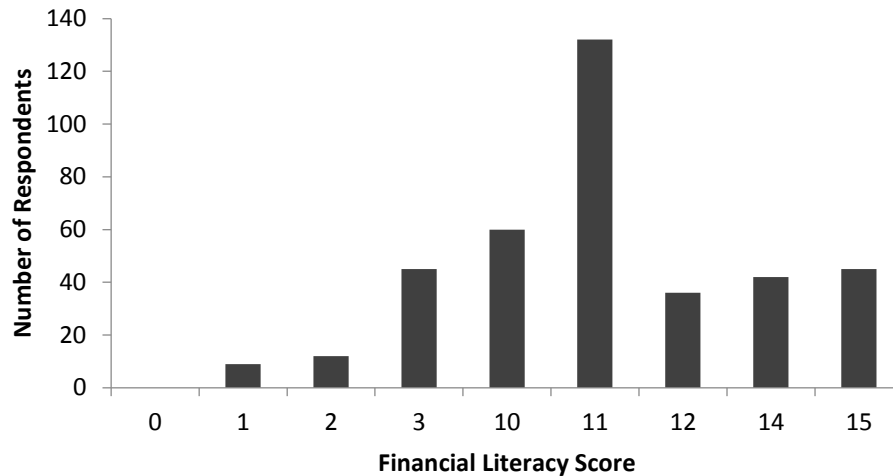


Figure 3: Distribution of Financial Literacy

1.4 Insufficient Documents

One of the important determinants that ensure the availing of loan through a smooth and easy process is the number of documents in the possession of a person (Allen et al.; David-west). Most of the loan process requires the document ranging from 3 to 4 in number. Many of the loan applications are rejected citing and reason of insufficient documents attached with loan quotation. However in this study we found that most of the respondents have 3 or more documents in their possession.

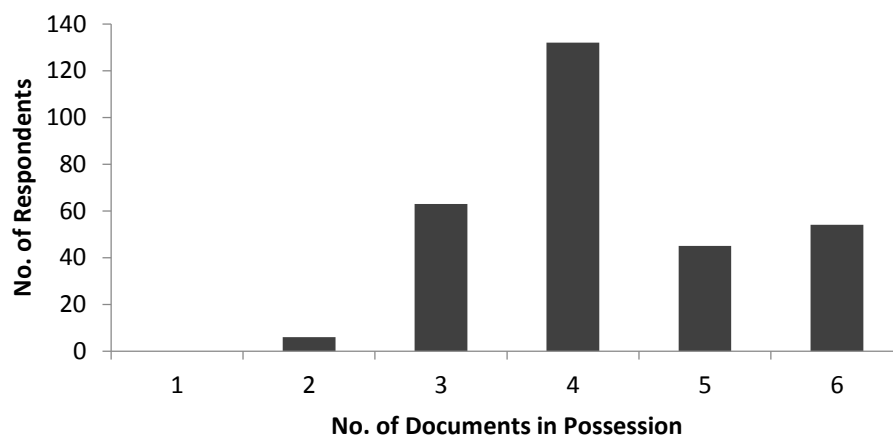


Figure 4: Distribution of Number of Documents in Possession

2 CHAID Decision Tree Analysis of Banking Experience Induced Satisfaction

Various challenges discussed above have an impact on the satisfaction that micro entrepreneurs derive from their banking experience. Their banking experience induced satisfaction has been studied with respect to their experience from financial products, financial services and grievance redressal.

To find out the determining factors in case of banking experience induced satisfaction, the study makes use of CHAID decision tree analysis which is one of the most important statistical analysis tool that helps identify the key variables for predicting the values of categorical outcomes from the number of predictor variables (Tatli; Horner et al.). It makes no assumption of normality, linearity and homogeneity of variables.

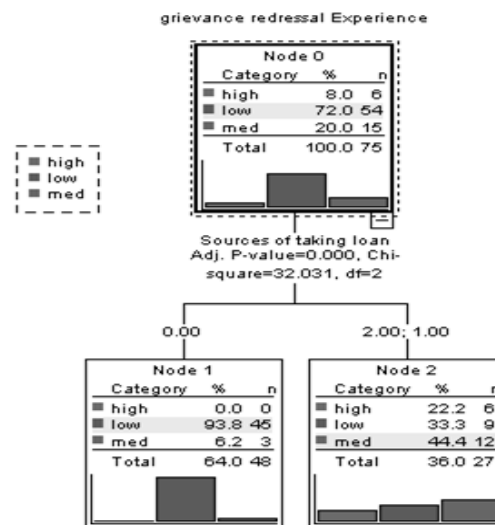


Figure 5: CHAID Decision Tree Analysis of Grievance Redressal Experience

In case of grievance redressal experience sources of taking loan was found to be the best predictor variable ($\chi^2 = 32.031, p < 0.05$) that significantly affected the experience of the customer whether he has low Medium or High level of satisfaction from the grievance redressal services of the banks.

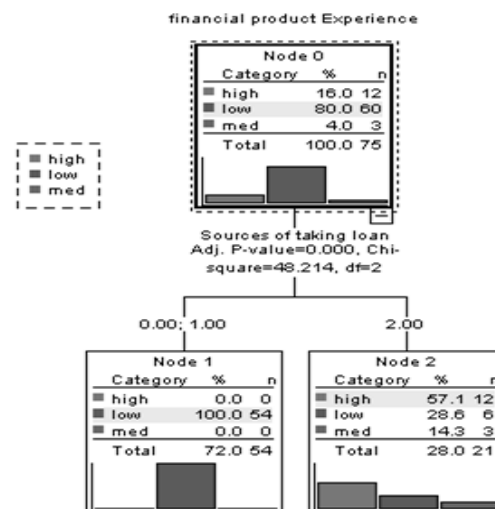


Figure 6: CHAID Decision Tree Analysis of Financial Product Experience

Those who have taken loan from 1 or 2 sources were having higher experience of satisfaction than those with no credit taken from any source.

In case of financial product experience again the number of sources of taking loan was found to be the best predictor variable ($\chi^2 = 48.214$, $p < 0.05$) that significantly affected the experience of the customer whether he has low, Medium or High level of satisfaction from the financial products offered by the banks. Those who have taken loan from 1 or 2 sources were having higher experience of satisfaction than those with no credit taken from any source.

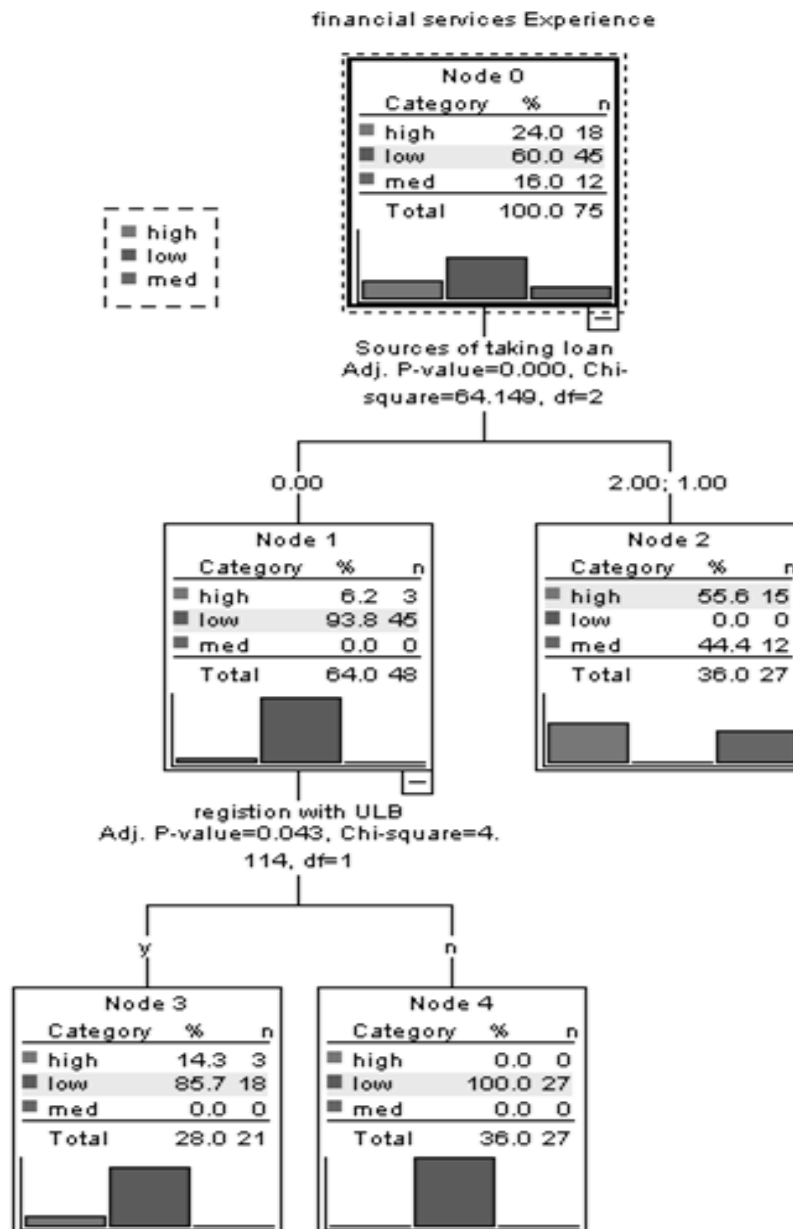


Figure 7: CHAID Decision Tree Analysis of Financial Service Experience

In case of financial Service experience again the number of sources of taking loan was found to be the best predictor variable ($\chi^2 = 64.149$, $p < 0.05$) that significantly affected the experience of the customer whether he has low, Medium or High level of satisfaction from the financial services

offered by the banks. Those who have taken loan from 1 or 2 sources were having higher experience of satisfaction than those with no credit taken from any source. The experience of the respondents with no source for loan availed was further affected by registration with any Urban Local Body. For those who were registered with any urban local body 14.3 had higher experience of satisfaction.

Findings

On studying the results of the above CHAID decision tree analysis in the context of various financial challenges faced by the micro enterprises it has been revealed that:

1. General level of literacy was found to have a huge impact on the entrepreneurial efficiency of the micro enterprises particularly those that are headed by the females.
2. Most of the enterprises were not even able to avail loan from the popular sources of credit that were reported in the data. There was very low penetration of credit through various schemes of the government.
3. Low financial literacy was one of the potent cause of lack of funds with the micro enterprises this is also one of the important reason behind insufficient documents to avail credit.
4. The experience of the satisfaction towards the grievance redressal, financial services and financial products of the banks by the micro enterprises are all affected by the number of sources from which they had taken credit.
5. In case of the decision tree analysis of financial services, for those who have not taken any credit from various sources their experiences was inturn affected by whether they were registered with ULB or not.

Suggestions

The identification of determining factors from the data analysis and the consequent findings lead us to make the following suggestions:

1. The banking experience of the micro enterprises is affected by the their general level of literacy so there is a need to give push to increase the literacy rate which will increase the financial literacy of the needy population.
2. There is a need for the wider information dissemination for the various sources from where the credit is disbursed to the needy micro entrepreneurs, so an integrated platform involving use of both physical and digital mode is required.
3. There is a need for the universal registration of the micro enterprises with their concerned government, quasi government and non government organisations.
4. The credit disbursal process must be easy requiring less number of documents and minimum paper work this will enhance the banking experience induced satisfaction of the micro enterprises.

Conclusion

The study provides an investigation on the various challenges faced by the micro enterprises and their effect on their overall financial challenges. The study reveals that micro enterprises being the most important source of employment generation and income distribution are facing fund crunch because of the low satisfaction induced by their banking experience which is prominently driven

by the number of sources of credit they have availed loan from. The study suggests that there is a need for giving push to general and financial literacy and a easy credit disbursal process along with more information dissemination on various sources of credit. This will truly make micro enterprises an engine of sustainable growth and inclusive development

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भारतीय संविधान में धर्म और राज्य के सम्बन्धों का स्वरूप

साधना पाण्डेय

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शोध सारांश

भारत जैसे विशाल एवं विविधतापूर्ण देश में राष्ट्रीय एकता को बनाये रखने के लिये धर्मनिरपेक्षता का आदर्श ही सर्वोत्तम है, यह तथ्य भारतीय संविधान निर्माताओं के मन में स्पष्ट था। इसी तथ्य को ध्यान में रखकर संविधान के विविध उपबन्धों में इस आदर्श को व्यवहारिक रूप भी प्रदान किया गया। 1976 में हुये बयालिसवें संविधान संशोधन द्वारा इसे भारतीय संविधान की प्रस्तावना में जोड़कर संविधान के मूल ढाँचे का भाग भी बनाया गया। धर्मनिरपेक्षता से आशय किसी भी प्रकार के धार्मिक विरोध से नहीं है बल्कि यह सभी धर्मों के मध्य समभाव स्थापित करने का दर्शन है। सभी धर्मों को समान अवसर व महत्व देकर धर्मों के मध्य सद्भाव स्थापित करने व राष्ट्रीय एकता को सुदृढ़ करने का दर्शन है।

यह एक महत्वपूर्ण तथ्य है कि धर्मनिरपेक्षता और प्रजातंत्र की समान सांस्कृतिक जड़ें हैं। स्वतंत्रता, समानता तथा भ्रातृत्व प्रजातंत्र के सर्वमान्य मूल्य हैं। स्वतंत्रता का सही उपयोग भी वही व्यक्ति कर सकता है जो कि आत्मनिर्भर हो, स्वतंत्र मस्तिष्क वाला हो तथा अपने विवेक पर विश्वास करता हो। केवल एक धर्मनिरपेक्ष व्यक्ति ही वास्तव में लोकतांत्रिक तथा एक लोकतांत्रिक व्यक्ति ही वास्तव में धर्मनिरपेक्ष भी हो सकता है। भारत में सदैव से ही धर्म का विशेष महत्व रहा है किन्तु कालान्तर में धर्म के संकुचित रूप का प्रचलन हो गया और धर्म के नाम पर अनेक मत मतान्तर प्रचलित हो गये जिनके परिणाम स्वरूप समाज विभिन्न वर्गों में विभाजित हो गया जिससे राष्ट्रीय एकता को आघात पहुँचा। धार्मिक मत-मतान्तरों के इन दुष्परिणामों को देखते हुये भारतीय संविधान निर्माताओं ने धर्म निरपेक्षता के आदर्श को अपनाया। धर्म के आधार पर किसी के साथ कोई भेदभाव नहीं किया जायेगा यह इस देश की एक परम्परा भी रही है और स्वतंत्रता आन्दोलन के नेताओं ने स्वतंत्रता प्राप्ति के पूर्व भी इस सिद्धान्त की ही वकालत की थी। संविधान सभा में ही यह बात भी स्पष्ट कर दी गयी थी कि धर्मनिरपेक्षता से तात्पर्य धर्म विरोध से नहीं है तथा राज्य एक धर्म विरोधी राज्य न होकर नैतिकता, आध्यात्मिकता और मानवधर्म पर आधारित एक वास्तविक धार्मिक राज्य होगा। यहाँ इस बात को रेखांकित कर देना भी आवश्यक है कि संविधान के मूल प्रस्ताव में धर्म निरपेक्ष एवं समाजवाद शब्दों का अलग से समावेश नहीं किया गया था किन्तु उसकी भावना को पूरा स्थान दिया गया था। “1976 में किये गये बयालिसवें संशोधन द्वारा धर्म निरपेक्षता एवं समाजवाद शब्दों को संविधान

की प्रस्तावना में ही जोड़ा गया”¹। यह सत्य है कि धर्म निरपेक्षता के सिद्धान्त को स्वीकार कर संविधान निर्मात्री सभा ने एक शानदार कार्य किया।

उदारवादी लोकतंत्र के विकास के साथ ही धर्म निरपेक्षता की अवधारणा का विकास हुआ। समानता एवं स्वतंत्रता के अधिकारों का उपयोग तभी सम्भव है जब बिना किसी धार्मिक संकीर्णता के उनका वितरण एवं संरक्षण हो। वस्तुतः धर्म निरपेक्षता की प्रक्रिया हमारे राष्ट्रीय जीवन का ताना बाना है क्योंकि यह मात्र एक अमूर्त सिद्धान्त, दार्शनिक मत अथवा सांस्कृतिक विलास नहीं है, बल्कि यह हमारी मिली जुली विरासत के सूक्ष्म तंतुओं का प्राण है।

धर्म निरपेक्षता सामाजिक न्याय का आधार है। धर्म निरपेक्षता (जिसके अन्तर्गत ही समानता तथा स्वतंत्रता के अधिकारों का सही एवं निष्पक्ष उपयोग सम्भव है) के आदर्श को प्राप्त करने के लिये भारतीय संविधान के अन्तर्गत अनेक व्यवस्थाएं की गयी हैं। संविधान की प्रस्तावना, मौलिक अधिकारों तथा नीति निर्देशक सिद्धान्तों के अध्यायों में भारत की कानून व्यवस्था के सर्वोपरि तत्वों के रूप में धर्म निरपेक्ष मानवतावाद और सामाजिक न्याय को रेखांकित किया गया है। संविधान सभा के एक सदस्य पंडित लक्ष्मीकांत मैत्रा ने संविधान में निहित धर्मनिरपेक्ष राज्य की सम्पूर्ण धारणा की बड़ी स्पष्ट तौर पर व्याख्या की। उन्होंने 8 दिसम्बर 1948 को कहा कि “धर्मनिरपेक्ष राज्य से मेरा आशय यह है कि राज्य किसी व्यक्ति के प्रति, जो किसी विशेष प्रकार का धार्मिक विश्वास रखता हो, केवल धर्म या सम्प्रदाय के आधार पर विभेद नहीं करेगा”²। सार रूप में इसका यह अर्थ है कि राज्य किसी विशेष धर्म को प्रश्रय नहीं देगा। राज्य किसी धर्म की उपेक्षा नहीं करेगा या दूसरे धर्मों की तुलना में किसी धर्म को स्थापित, संरक्षित व पोषित नहीं करेगा। राज्य में किसी नागरिक को न तो उच्चता प्रदान की जायेगी और न उसके प्रति इस आधार पर कोई विभेद किया जायेगा कि यह किसी विशेष धर्म का पालन करता है। दूसरे शब्दों में यह कह सकते हैं कि राज्य के कार्यों में किसी धर्म विशेष का अनुपालन लेशमात्र भी विचारणीय नहीं होगा। मैं इसे धर्म निरपेक्ष राज्य का सार समझता हूँ। साथ ही हमको इस दृष्टि के प्रति भी सजग रहना चाहिये कि हमारे देश में किसी विशेष धर्म के पालन व आचरण के अधिकार से ही नहीं वरन् किसी भी धर्म का प्रचार करने के अधिकार से कोई संचित न होने पाये इसलिये संविधान में इसका केवल अधिकार के रूप में नहीं वरन् मौलिक अधिकार के रूप में प्रावधान किया गया है।

इस प्रकार यह स्पष्ट है कि समान सामाजिक आर्थिक और राजनीतिक न्याय, भाईचारा और व्यक्ति की गरिमा, धर्म, विश्वास और पूजा के मामले में स्वतंत्रता व धर्मनिरपेक्षतावाद की सकारात्मक घोषणा हमारे संविधान की प्रस्तावना में है। “हमारे गतिशील संविधान में सकारात्मक और निषेधात्मक दोनों प्रकार का धर्मनिरपेक्षवाद है। कानून में भेदभाव का निषेध है और सबको समान संरक्षण देने की वचनबद्धता है”³।

जब कोई नागरिक अपने किसी अधिकार को अदालत सरकार या विधानमण्डल में लागू करना चाहे तो कोई यह नहीं पूछ सकता कि वह किस धर्म का है। इसी प्रकार मूलभूत दायित्व समान रूप से

हिन्दू मुसलमान तथा अन्य सभी नागरिकों पर लागू होते हैं”⁴। इन बुनियादी राष्ट्रीय दायित्वों का स्वरूप धर्म निरपेक्षता के मूल्य को मजबूत करता है। उदाहरण स्वरूप - प्रत्येक नागरिक पर चाहे वह किसी भी धर्म का हो, यह दायित्व सौंपा गया है कि धर्म से ऊपर उठकर सभी नागरिकों के बीच सद्भाव और भाईचारे की भावना को

बढ़ाये। वह दूसरे के प्रति सहानुभूति का भाव, वैज्ञानिक दृष्टि, मानवतावाद, जिज्ञासा और सुधार की भावना अपने में उत्पन्न करें।

इसके अतिरिक्त अनुच्छेद 38 में उल्लेखित न्यायपूर्ण सामाजिक व्यवस्था गतिशील धर्मनिरपेक्षवाद है तो सारे समाज पर लागू होता है जो धर्म, जाति, विश्वास की किसी पूर्वाग्रह पूर्ण तथा विभाजक कसौटी को नहीं मानता और सभी मनुष्यों के मध्य एकता, उनके कल्याण तथा आर्थिक न्याय पर जोर देता है।

अनुच्छेद 38 (1) में धर्म निरपेक्ष गणतंत्र के संवैधानिक सारतत्व को अपने अर्थपूर्ण उद्देश्य के साथ इस प्रकार व्यक्त किया है "राज्य सभी नागरिकों के कल्याण को बढ़ावा देने के उद्देश्य से ऐसी सामाजिक व्यवस्था का यथासंभव रक्षण संरक्षण करेगा जिसमें राष्ट्रीय जीवन की सभी संस्थाओं में नागरिकों को सामाजिक, आर्थिक और राजनैतिक न्याय मिले"⁵।

राजकीय नीति- निर्देशक सिद्धान्तों में, जिसमें सशक्त समाजवादी पुट हैं, राज्य को आदेश दिया गया है कि वह समाजवादी और धर्मनिरपेक्ष नीतियां अपनाये और मानवीय न्याय की बातों पर बल दें"⁶। अतः यह कहना अनुचित नहीं होगा कि धर्म निरपेक्षता के मूल्य राज्य की सभी गतिविधियों में नागरिक के संबंध में लागू होते हैं, भले ही उनके धर्म, विश्वास जो भी हों।

समानता धर्मनिरपेक्ष लोकतंत्र का बुनियादी आधार स्तम्भ है और भारतीय संविधान में इस समानता को निम्न रूपों में रेखांकित किया गया है। संविधान के अनुच्छेद 14 से 18 के अन्तर्गत समानता के सिद्धान्त को संरक्षित किया गया है।

भारतीय संवैधानिक प्रणाली की यह प्रमुख विशेषता कही जानी चाहिये कि इसमें अल्पसंख्यकों के हितों के संरक्षण का विशेष प्रावधान किया गया है, साथ ही साथ वे बहुसंख्यक समुदाय के समान विभिन्न सामाजिक, राजनीतिक व आर्थिक अधिकारों का उपयोग करते हैं। संविधान के द्वारा यह व्यवस्था की गयी है कि "नागरिकों के प्रत्येक वर्ग को अपनी पृथक भाषा, लिपि या संस्कृति को सुरक्षित रखने का अधिकार है"⁷। केवल धर्म, वंश, जाति, भाषा या इनमें से किसी एक आधार पर राजकीय या राजकीय सहायता प्राप्त किसी भी शिक्षण संस्था में किसी नागरिक को प्रवेश से रोका नहीं जा सकता है। इसको अपर्याप्त समझते हुये तीसवें अनुच्छेद द्वारा यह भी जोड़ा गया है कि "धर्म व भाषा पर आधारित सभी अल्पसंख्यक वर्गों को अपनी रुचि की शिक्षण संस्थाओं की स्थापना व उनके संचालन का अधिकार होगा तथा शिक्षा संस्थाओं को अनुदान देने में राज्य इस आधार पर कोई भेदभाव नहीं करेगा कि वे किसी धर्म व भाषा पर आधारित अल्पसंख्यक वर्ग के अधीन है"⁸।

अल्पसंख्यकों के बारे में ये प्रावधान संविधान के अनुच्छेद 29 एवं 30 के द्वारा केवल स्पष्ट रूप से वर्णित ही नहीं हैं, वरन् विभिन्न प्रमुख विवादों में दिये गये न्यायिक निर्णयों द्वारा भारत में अल्पसंख्यकों की स्थिति को अधिक स्पष्ट भी किया गया है जिससे उन्हें इस देश में अपने हितों के बारे में कोई आशंका न रहे। अतः भारत ने जान स्टुअर्ट मिल जैसे महान प्रजातांत्रिक के इस प्रसिद्ध नियम को उचित सम्मान दिया है कि "यह पूर्णतया

निश्चित है कि अल्पसंख्यकों का वास्तविक निष्कासन स्वतंत्रता के लिये न तो आवश्यक है और न उसका आवश्यक परिणाम है। बल्कि यह प्रजातंत्र के मूल सिद्धान्तों के पूर्णतया विपरीत है”।

वास्तव में संविधान के तृतीय भाग में महत्वपूर्ण अधिकार जोड़ते समय हमारे संविधान निर्माताओं के ध्यान में यह महत्वपूर्ण तथ्य अवश्य था कि उन अल्पसंख्यकों की स्थिति को कैसे सुरक्षित किया जाये जो बहुसंख्यकों के सम्भावित निरंकुश शासन से अपने को असहाय समझते थे तथा असुरक्षा के कारण भयभीत रहते थे। वे यह भी जानते थे कि “स्वतंत्र लोकतंत्र में अल्पसंख्यकों की संस्कृति, धर्म व अन्य हितों का संरक्षण अनिवार्य है और वह केवल व्यक्ति के लिये लिखित अधिकारों को प्रत्याभूत करने से ही सम्भव हो सकता है”।

वास्तव में अल्पसंख्यकों का अपनी इच्छानुसार शिक्षण संस्थाओं की स्थापना व प्रशासन करने का अधिकार अपनी भाषा, लिपि या संस्कृति को संरक्षित करने के अधिकारों का स्वाभाविक परिणाम है जिसे सर्वोच्च न्यायालय ने ‘एक आवश्यक समयोग’ बताया। यह सुविधा केवल संविधान लागू होने के बाद स्थापित शैक्षणिक संस्थाओं के लिये ही सीमित नहीं है। यह संविधान पूर्व व संविधान के बाद स्थापित होने वाली संस्थाओं के लिये भी लागू होती है।

इस संदर्भ में संविधान के प्रावधानों और सर्वोच्च न्यायालय के निर्णयों को इस रूप में नहीं लिया जा सकता कि अल्पसंख्यकों के उपर्युक्त अधिकार प्रतिबन्धों से परे हैं। राज्य राष्ट्रीय या लोकहित में उन पर औचित्यपूर्ण प्रतिबंध लगा सकता है। यहाँ यह भी स्पष्ट करना जरूरी है कि जो संस्थाएं अनुच्छेद 30 के अनुसार संरक्षण का दावा करती हैं, उन्हें राज्य द्वारा नहीं बल्कि अल्पसंख्यक समुदाय द्वारा स्थापित होना चाहिये।

धर्म निरपेक्षता का आदर्श धर्म को व्यक्ति के आन्तरिक विश्वास की वस्तु मानता है। अतः संविधान में यह व्यवस्था की गयी है कि सार्वजनिक व्यवस्था, सदाचार और स्वास्थ्य तथा इस भाग के दूसरे उपबन्धों के अधीन रहते हुये सभी व्यक्तियों को अन्तःकरण की स्वतन्त्रता अर्थात् किसी भी धर्म का पालन करने, प्रचार एवं प्रसार करने का अधिकार होगा। भारतीय धर्मनिरपेक्षतावाद के सिद्धान्त में लोगों की बढ़ती सामाजिक व नैतिक जागरूकता के अनुसार परिवर्तन होना चाहिये तथा यह निर्धारित करने का अधिकार न्यायपालिका पर छोड़ दिया गया है कि, वह देखे कि राज्य द्वारा अनुच्छेद 25 के अनुसार आत्मा की स्वतन्त्रता पर जो प्रतिबन्ध लगाये गये हैं वे संविधान में निहित धर्म निरपेक्ष धारणा के अनुकूल हैं या नहीं। यह अनुच्छेद भारत में एक धर्मनिरपेक्ष राज्य की स्थापना करता है। राज्य किसी भी धर्म विशेष का पक्ष नहीं लेगा न उसे कोई विशेष सुविधा प्रदान करेगा। भारतीय

संविधान के अनुच्छेद 25 से 28 के अन्तर्गत धार्मिक स्वतन्त्रता के अधिकार को संरक्षित किया गया है।

प्रत्येक व्यक्ति किसी भी धर्म को स्वीकार करने, अनुसरण एवं प्रचार करने के लिये स्वतंत्र होगा। डॉ. राधाकृष्णन ने भारतीय राज्य के धर्म निरपेक्ष स्वरूप पर प्रकाश डालते हुये कहा कि “भारतीय राज्य न तो किसी धर्म द्वारा नियंत्रित होगा और न किसी धर्म विशेष से संबंधित होगा। हम किसी एक धर्म को वरीयता का स्थान या अद्वितीय स्तर प्रदान करना नहीं चाहते। किसी एक धर्म को राष्ट्रीय जीवन में अथवा अन्तर्राष्ट्रीय सम्पर्कों में विशेष सुविधाएं प्राप्त नहीं होंगी”⁹।

इन व्यवस्थाओं का उद्देश्य समाज को धर्म के नाम पर होने वाले शोषण से बचाना था तथा नागरिकों को सच्चे अर्थों में धार्मिक स्वतंत्रता प्रदान करना है। धार्मिक स्वतंत्रता से संबंधित कुछ उपबन्धों की व्याख्या से यह स्पष्ट प्रतीत होता है कि भारत एक धर्मनिरपेक्ष राज्य है यद्यपि राज्य पूर्णतः धार्मिक निष्पक्षता का व्यवहार करेगा किन्तु साथ ही समाज सुधार के लिये वह कोई भी कदम उठा सकता है तथा सार्वजनिक व्यवस्था स्वास्थ्य एवं नैतिकता के उद्देश्य से धार्मिक स्वतन्त्रता पर प्रतिबन्ध लगा सकता है।

इस प्रकार यह स्पष्ट है कि भारतीय धर्म निरपेक्षतावाद एक जड़ नहीं वरन् गतिशील अवधारणा है। यह एक विवेक सम्मत विचार है जिसके अनुसार राजनीति में धार्मिक हस्तक्षेप की तो मनाही है किन्तु सामाजिक कल्याण के नाम पर राज्य धर्म में हस्तक्षेप कर सकता है। भारत के एक लोक कल्याणकारी राज्य होने के कारण संविधान ने राज्य को जनहित में आवश्यक विधायन करने के लिये अधिकृत किया है जिसमें किसी भी धर्म के सिद्धान्तों में हस्तक्षेप नहीं समझा जायेगा।

इन सभी उपबंधों व तथ्यों से यह नितान्त स्पष्ट है कि भारत एक धर्म निरपेक्ष राज्य है धर्म विरोधी राज्य नहीं। एक व्यक्ति, एक मूल्य, एक वयस्क-एक मत यही है कानून का शासन, जिस पर धर्मनिरपेक्षता की छाप है।

वास्तव में राष्ट्रीय एकता के संदर्भ में धर्म निरपेक्षता को रखकर जब हम विचार करते हैं तो हम इस निष्कर्ष पर पहुँचते हैं कि भारत जैसे विशाल देश में धर्म निरपेक्षता न केवल आवश्यक और उपयोगी है, बल्कि सही मायने में इसका कोई दूसरा विकल्प सम्भव ही नहीं है। भारतवर्ष की विविधता में अन्तर्निहित जिस एकता के स्वरूप का वर्णन करते हुये हम कभी नहीं थकते। उस वैविध्य में पनपने वाली एकता की रक्षा धर्म निरपेक्षता के अतिरिक्त किसी दूसरी नीति या दर्शन से सम्भव ही नहीं। अतः धर्मनिरपेक्षता का आदर्श ही भारत के लिये नितान्त औचित्यपूर्ण है। यह सामान्य काल में धर्म एवं राजनीति को न केवल एक दूसरे से अलग रखती है, बल्कि असाधारण परिस्थितियों में सामाजिक सुधारों की आवश्यकता के लिये धर्म को राजनीति के अधीन भी बना देती है।

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मध्यप्रदेश में कृषि की स्थिति एवं कृषक आन्दोलन - राजनीतिक एवं प्रशासनिक उत्तरदायित्व

ज्योति कौरव

उच्च शिक्षा उत्कृष्टता संस्थान, भोपाल, म .प्र.

सारांश

हमारे लोकतंत्र की नींव ही जन आंदोलन के बीच बनती है। 19 वीं और 20 वीं शताब्दी के शुरुआत में देश में अनेक किसान आंदोलन हुये और आज भी अपनी माँगों को लेकर बढ़ते ही जा रहे हैं। इसमें निम्न वर्ग के साथ-साथ मध्यम वर्ग व उच्च वर्ग के लोगों ने बढ़-चढ़ कर भाग लिया और आंदोलन द्वारा अपने अधिकारों और लक्ष्यों को प्राप्त करने का प्रयास किया। शोधार्थी द्वारा प्रस्तावित शोधपत्र के विषय म. प्र. में कृषि की स्थिति एवं किसान आंदोलन-कृषि हेतु राजनीतिक एवं प्रशासनिक उत्तरदायित्व के माध्यम से इन्हीं परिस्थितियों और आंदोलन के औचित्य-अनौचित्यता के साथ-साथ आंदोलन के राजनीतिकरण पर बल दिया जायेगा।

सामान्यतः ऐसा माना जाता है कि किसान आंदोलन नया है। और कुछ असामाजिक तत्वों की उपज मात्र है वे मानते हैं कि यह मुट्ठीभर पढ़े लिखे बदमाशों का पेशा मात्र है। भोले भाले किसानों को बहलाकर थोड़े से सफेद पोश अपना उल्लू सीधा करने पर तुले बैठे हैं। इसलिए यह किसान सभाओं एवं किसान आंदोलन का तुफान-ऐ-बदतमीजी बरपा रहे हैं। यहाँ इनकी हरकते जारी हैं यह भी नहीं कि केवल उनके पृष्ठपोषक ऐसी बातें करते हैं सभी दलों के शीर्ष नेता भी यह मानते हैं, उन्हें किसान सभा की जरूरत ही महसूस नहीं होती वे किसान आंदोलन का राष्ट्रीय स्वतंत्रता संग्राम में रोड़ा समझते हैं फलतः इनका विरोध भी प्रत्यक्ष अप्रत्यक्ष रूप से करते हैं।

परंतु ऐसी धारणा भ्रान्त निर्मूल है, भारतीय किसानों का आंदोलन प्राचीन है, बहुत पुराना है दरअसल इस आंदोलन के बारे में लिपिबद्ध वर्णन का अभाव एक बड़ी त्रुटि है। यदि यह कहा जाये तो सत्य प्रतीत होता है कि हमारे लोकतंत्र की नींव ही जन आंदोलन के बीच ही पनपी है। 19वीं और 20वीं सदी के आरंभ में भारत में अनेक किसान आंदोलन हुये और आज भी अपनी अपनी माँगों को लेकर बढ़ते ही जा रहे हैं जिससे निम्न वर्ग के साथ-साथ मध्यम वर्ग और उच्च वर्ग ने भी बढ़-चढ़कर भाग लिया और आंदोलन द्वारा अपने अधिकारों और लक्ष्यों को प्राप्त करने का प्रयास किया। प्रस्तावित शोध इसी प्रकृति का है। मध्यप्रदेश में हुये हाल ही में ये किसान आंदोलन जिसने पूरे राज्य में आपात जैसी स्थिति पैदा कर दी। इस आंदोलन के बीच ऐतिहासिक रहे हैं। सरकार सत्ता में आने से पहले किसानों

की कर्जमुक्ति आत्याधुनिक कृषि साधन और 24 घंटे बिजली उपलब्ध कराने जैसे वादे कर किसानों के एक बड़े वोट बैंक को लुभाने का प्रयत्न किया।

मध्यप्रदेश में किसान आंदोलनों में मंदसौर का किसान आंदोलन काफी हिंसक रूप ले चुका था फायरिंग और पथराव के दौरान 6 किसानों की मौत हो गई। मुख्यमंत्री शिवराज सिंह चौहान (म.प्र.) ने किसानों से बातचीत कर उनकी माँगों को मानने की बात की।

मेरे द्वारा प्रस्तावित शोध पत्र के माध्यम से किसानों की आर्थिक सामाजिक स्थिति का आकलन किसानों द्वारा अपनी माँगों मुख्यतया कर्जमाफी, स्वामीनाथन आयोग की सिफारिशों को लागू करना,

किसानों पर लगे मुकदमों में वापस ले, जैसी घटनाओं का औचित्यपूर्ण अध्ययन किया जायेगा। मेरे द्वारा प्रस्तावित शोध का निष्कर्ष पूर्ण बिंदू कृषि और किसान रहेगा।

म.प्र. कृषि की स्थिति

म. प्र. के लिये कृषि वास्तविक अर्थों में जीवन रेखा रही है। म.प्र. एक कृषि प्रधान राज्य है यहाँ 3/4 जनसंख्या कृषि और कृषि से जुड़े व्यवसाय के जरिये जीवनयापन करती है और यही व्यवसायिक एकरूपता समाज को वास्तव में एक सूत्र में पिरोने का काम करती है। परन्तु आज की वर्तमान स्थिति में उपरोक्त पंक्तियाँ राज्य के वास्तविक रूप को पेश नहीं करती हैं। अब कृषि जीवनयापन की सहज संस्कृति नहीं बल्कि एक चुनौतीपूर्ण जाखिम भरा काम बन चुका है। नेशनल सेम्पल सर्वे आर्गनाइजेशन डाटा में किसानों की ऋणग्रस्तता पर किया गया अध्ययन यह बताता है कि म.प्र. के कुल 64 लाख किसानों में से 32 लाख किसान कर्ज के बोझ तले दबे हुये हैं। बैंक की प्रक्रिया के कारण उनका सरकारी वित्तीय संस्थानों से विश्वास कम हुआ है। अब भी 40 प्रतिशत कर्ज गैर सरकारी स्त्रों से किसानों को प्रदेश में मिलता है।

अतीत की बात करना एक चुनौतीपूर्ण स्वर्णयुग की चर्चा करने जैसा है। वर्तमान यह बताता है, कि म.प्र. में भी चूंकि सरकार ने आर्थिक उदारवाद की नीतियों को नीतिगत रूप से स्वीकार कर लिया है। इसलिये कृषि को भी अब संवेदनशील नजरियें से देखा जाने के बजाये खुले बाजार के एक पक्ष के रूप में ही देखा जायेगा वर्तमान में स्थिति यह है, कि कृषि पर निर्भरता तो कम नहीं हुई बल्कि उसका सामाजिक अर्थव्यवस्था में योगदान जरूर कम होता गया।

म.प्र. में किसान आंदोलन में किसानों की माँगें कुछ इस प्रकार रहीं हैं - कर्जमाफी, दूध के रेट, बढ़ाये फसल के खर्च का डेढ़ गुना दाम मिले, किसानों पर दर्ज केस वापस हो। स्वामीनाथन कमेटी की सिफारिश लागू हो।

म. प्र. के मालवा निमाड में हिंसक आंदोलन, मंदसौर की पिपलियामंडी के पास पुलिस पर पत्थर फेंके वाहन जलाये, रेल्वे क्रासिंग का फाटक तोड़ा, पटरियाँ उखड़ने की कोशिश की, इस तरह का आंदोलन 1998 के बाद हुआ।

स्वामीनाथन कमीशन की सिफारिशें।

- किसी फसल के प्रोडक्शन पर जितना खर्च आ रहा है। सरकार उससे डेढ़ गुना ज्यादा दाम दिलाये।
- सरप्लस और बेकार जमीनों को बांटा जाये।
- कृषि भूमि और जंगलों को नान-एग्रीकल्चर यूज के लिये कारपोरेट सेक्टर्स को देने पर रोक लगे।

- जंगलों में आदिवासियों और चरवाहों के जाने की इजाजत हो साथ ही कॉमन रिसोर्स पर जाने की इजाजत मिले,
- नेशनल लैंड यूज एडवायजरी सर्विस का गठन किया जाय ताकि लैंड यूज का फैसला पर्यावरण मौसम और मार्केटिंग फैक्टर्स को ध्यान में रखकर हो।
- कृषि भूमि की बिक्री को रेगुलर करने के लिये मैकेनिज्म बनाया जाये, जिसमें जमीन प्रपोजल और खरीदार की कैटेगरी को ध्यान में रखा जाये।

मध्य प्रदेश में किसान आंदोलन

कृषक आन्दोलन का इतिहास बहुत पुराना है। और विश्व के सभी भागों में अलग-अलग समय पर किसानों ने कृषि नीति में परिवर्तन करने के लिये आन्दोलन किये हैं ताकि उनकी दशा सुधर सके। मौजूदा दौर में भारत में कृषक आंदोलन तेज गति से बढ़ रहे हैं। इसका मुख्य कारण कृषक की आर्थिक हालत दिन प्रति दिन कमजोर हो रही है। और वो कर्ज के मकड़ जाल में फंस रहा क्योंकि मौजूदा दौर में कृषि में लागत बढ़ रही है। आमदनी घट रही है जिस कारण से किसानों में आत्म हत्या की घटनाएँ बढ़ रही हैं। दूसरी तरफ लोग कृषि नीति बदलवाने के लिए संघर्ष कर रहे हैं। वर्ष 2017 में देश में छोटे बड़े सैकड़ों आंदोलन देश में हुए हैं। सरकार को कृषि के सम्बन्ध में बोलने पर मजबूर किया है जिसमें महाराष्ट्र का जून 17 में गाँव बन्द हो, चाहे नासिक से मुम्बई तक का मार्च हो, राजस्थान में पानी व बिजली के सवाल पर आंदोलन, हरियाणा में 2015 में मुआबजे की मांग का आंदोलन हो, तमिलनाडू के किसानों का महिनो तक संसद मार्ग पर धरना, जून 2018 में मंदसौर किसान आंदोलन आदि मुख्यतया रहे हैं।

किसान आंदोलन एक नए युग में प्रवेश कर रहा है। पिछले समय में देश भर में किसानों की नई ऊर्जा उभरी है। नया नेतृत्व सामने आया है। नया संकल्प जुड़ा है। लेकिन उससे भी बड़ी घटना किसान आंदोलन का बदलता स्वरूप है। किसान की परिभाषा बदल रही है। किसान नेतृत्व की पृष्ठभूमि बदल रही है। किसान आंदोलन के मुद्दे बदल रहे हैं। और वैचारिक सरोकार भी बदल रहे हैं। आज यह बदलाव बारीक महसूस हो सकता है। लेकिन किसान आंदोलन के चरित्र में यह बदलाव किसानों की दशा और दिशा बदल सकता है।

आज का किसान आंदोलन आजादी के पहले और अस्सी के दशक के आंदोलनों से बहुत अलग है। अंग्रेजीराज के दौरान हुए किसान विद्रोह मूलतः औपनिवेशिक राज द्वारा स्थापित शोषक कृषि व्यवस्था के विरुद्ध थे। मोपला विद्रोह, चम्पारण सत्याग्रह, बारदोली सत्याग्रह और तेभागा आंदोलन जैसे किसान आंदोलनों ने कृषि व्यवस्था के सबसे शोषित वर्ग के न्यूनतम अधिकार की आवाज उठाई। अन्यायपूर्ण लगान, नील की बंधुआ किसानी और बटाईदार को फसल का कम से कम एक लिहाई हिस्सा देने की मांग पर चल रहे आंदोलनों ने किसान को एक राजनैतिक पहचान दी आजादी के बाद पहले चालीस

साल तक किसानों ने स्वराज में न्याय मिलने का इंतजार किया। उसके बाद कर्नाटक में ननजुन्दमस्वामी, महाराष्ट्र में शरद जोशी और उत्तर प्रदेश में महेंद्र सिंह टिकौत के नेतृत्व में किसान आंदोलनों का एक नया दौर शुरू न्यूनतम समर्थन मूल्य में बढ़ोत्तरी आंदोलन का नेतृत्व वह वर्ग कर रहे थे जिसे राजनीतिक सत्ता में हिस्सा मिला लेकिन जो किसान होने के नाते आर्थिक समृद्धि से वंचित थे।

इक्कीसवीं सदी के किसान आंदोलनों में किसान की नई परिभाषा का विस्तार हो रहा है। इस नई परिभाषा में किसान का मतलब सिर्फ बड़ा भूस्वामी नहीं बल्कि मंझौला और छोटा किसान भी है। ठेके पर किसानी करने वाला बटाईदार और खेतिहर मजदूर भी है। जमीन जोतने वाले के साथ पशुपालन, मुर्गीपालन और मछली पालन करने वाले को भी किसान के दायरे के भीतर शामिल किया जा रहा है।

पहली बार किसान आंदोलन आदिवासी और दलित को किसान की तरह स्वीकार करने को तैयार है। खेती में दो तिहाई मेहनत करने वाली औरतों को अब तक किसान की परिभाषा से बाहर रखा गया है। इस नए आन्दोलन में उनकी भूमिका को स्वीकार करने का मन बन रहा है। किसान की परिभाषा का यह विस्तार जरूरी था। जैसे-जैसे किसानी सिकुड़ रही है। वैसे-वैसे किसानी के किसी एक हिस्से को लेकर आंदोलन चलाना असम्भव होता जा रहा है। हर तरह के किसान को जोड़कर ही नया किसान आंदोलन ऊर्जा प्राप्त कर सकता है।

नए युग के इस नए किसान आंदोलन के वैचारिक सरोकार और मुद्दे भी पुनःपरिभाषित हो रहे हैं। आजादी के बाद के किसान आंदोलन द्वैतवादी थे एक तरफ भारत बनाम इंडिया का मुहावरा था तो दूसरी तरफ जमींदार बनाम खेतिहर मजदूर का द्वंद्व था। नया किसान आंदोलन अद्वैतवादी है। किसानी के भीतर ऊंच-नीच का वर्ग संघर्ष जगाने की बजाय सभी किसानों को जोड़ने का आग्रह इस दौर की विशेषता है। साथ ही किसान बनाम गैर किसान की लड़ाई से बचने की समझ भी विकसित हो रही है। खेती-किसानी को बचाने की लड़ाई प्रकृति को बचाने की लड़ाई है। जिसमें किसान और गैर किसान को एकजुट होना होता है। बीसवीं सदी की वैचारिक जकड़न से मुक्त होकर किसान स्वराज के नए विचार की ओर बढ़ रहे हैं।

यह परिवर्तन इन आन्दोलनों की माँग में भी दिखाई देता है। पहली नज़र में कर्जमुक्ति और फसलों के पूरे दाम की माँग में कुछ भी नया नहीं लगेगा। लेकिन आज इन पुरानी माँगों को नए तरीके से निरूपित किया जा रहा है। फसल के पूरे दाम का मतलब अब केवल सरकारी न्यूनतम समर्थन मूल्य

में बढ़ोत्तरी नहीं है। किसान आंदोलनों ने सीख लिया है, कि यह माँग बहुत सीमित है। और इसका फायदा दस प्रतिशत किसानों को भी नहीं मिलता इसलिए किसान आंदोलन अब चाहते हैं, कि फसल की लागत का हिसाब बेहतर पद्धति से किया जाय इस लागत पर कम से कम पचास प्रतिशत बचत सुनिश्चित की जाय साथ ही किसानों ने यह भी समझ लिया है। कि असली मामला सिर्फ सरकारी घोषणा का नहीं है। असली चुनौती यह है, कि सरकारी समर्थन मूल्य सभी किसानों को कैसे मिल सके। इसलिए नए किसान आंदोलनों की माँग है, कि सरकारी खरीद के अलावा भी नए तरीके खोजे जाएं

जिससे सभी किसानों को घोषित मूल्य हसिल हो सकें। ठीक इसी तरह कर्जमाफी की पुरानी माँग का विस्तार कर उसे कर्जमुक्ति की माँग में बदल दिया गया है। सिर्फ राष्ट्रीयकृत बैंक और सहकारी/ग्रामीण बैंक के कर्ज से ही नहीं सहकारी के कर्ज से मुक्ति की माँग भी अब जुड़ गई है। अब किसान आंदोलन याचक की तरह कर्जमाफी की प्रार्थना नहीं कर रहा आज का किसान आंदोलन देश को पिछले पचास साल से दिए अनुदान के बदले कर्ममुक्ति के अधिकार की बात कर रहा है।

छह जुलाई के मंदसौर से आरंभ हुई किसान मुक्ति यात्रा नए दौर के इस नए किसान आंदोलन की झलक दिखाती है। इसमें पिछले दो-तीन दशकों से किसानों के बीच संघर्ष करने वाले वरिष्ठ किसान नेता हैं। तो साथ में दलित आदिवासी संघर्ष में शामिल कार्यकर्ता भी हैं। पहली बार किसी राष्ट्रीय किसान समन्वय में महिला नेतृत्व की झलक और महिला आंदोलन के मुद्दों की खनक महसूस हो रही है। पहली बार किसान आंदोलन सोशल मीडिया और नई तकनीकी का इस्तेमाल कर रहा है।

किसान आंदोलन की विरासत को मंदसौर बारदौली और खेड़ा को याद करने वाली यह यात्रा एक ओर तो नर्मदा के विस्थापित किसानों के संघर्ष से जुड़ी वहीं दूसरी ओर यह यात्रा मेहसाणा में दलित संगठनों के आजादी कूच का हिस्सा बनी।

किसान आंदोलन: कारण और भविष्य की दिशा

गाँव की खेती से जुड़ी अधिकांश आबादी की जिन्दगी में पिछले कुछ सालों से भयंकर संकट छाया हुआ है। जिस पर इनका आक्रोश समय पर विभिन्न रूप से प्रकट होता रहता है। पहले यह किसानों-खेत मजदूरों की बढ़ती अत्महत्याओं के रूप में प्रकट हो रहा था। फिर यह विभिन्न राज्यों की तुलनात्मक रूप से सम्पन्न मानी जाने वाली किसान जातियों द्वारा आरक्षण की माँग के रूप में सामने आया। और अब यह महाराष्ट्र, मध्यप्रदेश, राजस्थान आदि राज्यों में किसान हड़ताल के रूप में सामने आया है। इन राज्यों में पहले तो बीजेपी-संघ ने इस आक्रोश को अपने किसान संगठन द्वारा नियन्त्रित ढंग से निर्देशित और हड़पने का प्रयास किया। आन्दोलन के बढ़ने पर इस संगठन से वार्ता और समझौते का नाटक कर आन्दोलन को वापस लेने की घोषणा भी करा ली गयी। लेकिन इससे किसान समुदाय का गुस्सा और भड़क उठा और आन्दोलन तीव्र हो गया। तब इसे पुलिस दमन से कुचलने का प्रयास किया गया, जिसमें पुलिस की गोली से मन्दसौर में 6 आन्दोलनकारियों की मृत्यु हो गयी इसके बाद मध्यप्रदेश के मुख्यमंत्री शिवराज चौहान द्वारा उपवास के नाटक से लेकर मृतकों को मुआवजा

न्यूनतम समर्थन मूल्यों पर कृषि उत्पादों की खरीद किसानों को कर्ज पर ब्याज में छूट, आदि घोषणाओं से आक्रोश को शान्त करने की कोशिश जारी है।

किसान समुदायों में इस तीव्र असन्तोष-आक्रोश का तात्कालिक कारण नोटबन्दी से पैदा नकदी के अभाव में भी किसानों ने किसी तरह उधार के सहारे जुताई, बीज, खाद की व्यवस्था कर बाजार में आर्यी उनके बिक्री मूल्य में भारी कमी हुई कुछ समय तक तो नकदी की कमी के नाम पर मण्डियों में

आढ़तियों ने फसल खरीद ने से ही मना कर दिया और गरज़बेचवा किसानों की मजबूरी में की गयी बिक्री पर मनमाने दाम दिये, जिसका भुगतान भी नोटों की कमी के नाम पर बहुत देर में किया गया या बैंक के चेक दिये गये जिन्हें खाते में जमा करने के पैसा निकालने में किसानों को भारी तकलीफ हुई इसके बाद बाजार में आर्यी सरसो, तूर दाल, सोयाबीन, गेहूँ के दाम भी इसी तरह तेजी से गिरे। सरकार ने वादे के खिलाफ न्यूनतम समर्थन मूल्य पर खरीदारी की व्यवस्था नहीं की। उत्तर प्रदेश में बीजेपी सरकार ने 20 लाख टन गेहूँ खरीदने की घोषणा की थी लेकिन खरीदा गया सिर्फ 2 लाख टन। महाराष्ट्र में तूर दाल की खरीदारी ही सरकार ने कुछ दिन बाद ही पूरी तरह बन्द कर दी और किसानों को न्यूनतम समर्थन मूल्य से 30-40 प्रतिशत कम दामों पर आढ़तियों को बेचने के लिए मजबूर होना पड़ा। यह भी आरोप लगा कि असल में सरकारी एजेंसियों ने किसानों से दाल खरीदी ही नहीं बल्कि इन आढ़तियों ने ही किसानों से 3-4 हजार रुपये क्विंटल पर खरीदी गयी दाल को सरकारी एजेंसियों में 5050 रुपये क्विंटल के समर्थन मूल्य पर बेचकर तगड़ा मुनाफा कमाया। इससे भी किसानों में तीव्र असन्तोष पैदा हुआ।

एक और तात्कालिक कारण है - मवेशियों के व्यापार पर पिछले सालों में लगायी गयी सरकारी रूकावटें और किसानों, मवेशी, व्यापारियों पर पुलिस-प्रशासन के संरक्षण में शासक दल और संघ के गुण्डों के हमले और हत्याएँ। बड़ी संख्या में गरीब किसान और खेत मजदूर अतिरिक्त आमदनी के लिए बिक्री के लिए पशु पालते हैं। साथ ही अनुत्पादक पशुओं की बिक्री भी किसानों के लिए जरूरत के समय सहायक होती है। लेकिन पिछले सालों की इन घटनाओं ने पशु व्यापार को अत्यन्त सीमित कर दिया है और कीमतें बहुत नीचे आ गयी हैं। इसने भी किसानों-खेत मजदूरों के जीवन में मुसीबत-तकलीफ को बढ़ाया है।

छोटे किसान आमतौर पर कर्ज-उधार के सहारे उत्पादन करता है , और फसल की कटाई के समय उसे बेचकर कर्ज लौटाना उसके लिए आवश्यक होता है, नहीं तो ब्याज बढ़ जाता है। अक्सर कर्ज देने वाला ही खरीदार भी होता है। इस हालत में छोटा किसान गरज़बेचा होता है। और खरीदार की मर्जी के दामों पर बेचने को मजबूर जबकि बड़ा किसान एक ओर तो प्रशासनिक पहुँच से न्यूनतम समर्थन मूल्य का लाभ उठा पाने की स्थिति में भी होता है। दूसरे वह बाजार कीमतों का फायदा उठा पाने के लिए ठहरने की स्थिति में भी होता है। अक्सर खुद ही छोटा व्यापारी भी होता है।

इससे भी महत्वपूर्ण बात यह है , कि दो हेक्टेयर तक की खेती कर रहे किसान के पास बाजार में बेचने वाला अधिशेष उत्पाद इतना होता ही नहीं कि लाभकारी मूल्य मिल जाने पर भी उसे

जीवननिर्वाह योग्य आमदनी हो सके। इसके विपरीत उसे बाजार से उद्योग ही नहीं कृषि के भी बहुत सारे उत्पाद भोजन के लिए खरीदने होते हैं। जिनकी बढ़ती कीमत उसे और संकट में डाल देती है। इसलिए कृषि उत्पादों सहित बाजार में किसी भी प्रकार के उत्पादों और सेवाओं की कीमतें बढ़ाने की बात इन छोटे और सीमान्त किसानों का आर्थिक संकट कम करने के बजाय उसे बढ़ाती है। साथ ही

इन्हें अपने ही जैसे मेहनतकश खेत मजदूरों और शहरी मजदूरों और निम्न मध्य वर्ग के भी खिलाफ खड़ा करती है। जो मंहगाई के इस हमले के सबसे बड़े शिकार होते हैं।

लाभकारी मूल्यों के दौर में भी अधिकांश किसान घाटे में थे और उनकी आमदनी कम हो रही थी जो बढ़ते कर्ज (किसान क्रेडिट कार्ड आदि इसी समय शुरू किये गये थे जिनमें उदारता से लिमिट बढ़ाई गयी।) के पीछे कुछ समय तक छिपी हुई थी। लेकिन यह कर्ज कभी तो वापस करना ही था जिसमें किसान अब अपने आप को असमर्थ पा रहे हैं। और भयंकर निराशा-हताशा के शिकार हैं।

अबीज/खाद आदि की अधिक लागत, कम जोत में ट्रैक्टर आदि यन्त्र खरीदने या किराये पर लेने में पड़ने वाली ज्यादा लागत, साहूकारों-आढ़तियों से सूद पर ली गयी पूँजी, सरकारी तन्त्र का धनी किसानों के साथ खड़े होने आदि के बहुत सारे कारणों से इनके लिए खेती घाटे का सौदा है।

किसानों और खेत मजदूरों दोनों के लिए पहले ही मुख्य सवाल वैकल्पिक रोजगार और जीवन निर्वाह योग्य मजदूरी बन चुका है। उनके लिए असली सवाल समर्थन मूल्य का नहीं, बल्कि जीवन निर्वाह योग्य रोजगार प्राप्त करना है। इसलिए लाभकारी मूल्य की यह सारी लड़ाई मुख्यतः बादल पवार, शिवराज चौहान, रमन सिंह, सिन्धिया, वाड़ा, जाखड़ जैसे फार्मरों की लड़ाई हैं। यहाँ लाभकारी मूल्य का सवाल हमारी चर्चा का मुख्य विषय है। उसके लिए पहले निजी मालिकाने पर आधारित पूँजीवादी व्यवस्था को उखाड़कर सामूहिक मालिकाने पर आधारित समाजवादी व्यवस्था की स्थापना करनी पड़ेगी।

मध्य प्रदेश में किसान आंदोलन - कर्ज माफी और फसलों के गिरते हुए दामों को लेकर पूरे देश के किसान आंदोलन कर रहे हैं। कहीं किसान उचित कीमत न मिलने के विरोध में फसलों को सड़कों पर फेंक रहे हैं। तो कहीं हजारों लीटर दूध को सड़कों पर बहाया जा रहा है।

मध्य प्रदेश के बालगुढ़ा गांव के छोटे किसान मनीष भानज ने अपनी टमाटर की 1000 पेटियां सड़कों पर फेंक दी। उनका कहना है, कि 25 किलों की एक पेटि थोक बाजार में 60 रुपये में बिक रही है। फसलों के इतने कम दाम कभी नहीं मिले और किसानों को सड़कों पर उतरने के लिए मजबूर होना पड़ रहा है। कई किसानों ने शहरों को सब्जियों और फलों की सप्लाई करनी बंद कर दी है। बतौर कुलबीर, कम कीमत मिलने की वजह से उनके लिए अपना रोजमर्रा का खर्च निकालना भी मुश्किल हो गया है।

आंदोलन का राजनीतिक दबाव

अब तक शांत चल रहे आंदोलन को किसान संगठनों ने तेज करने की तैयारी कर ली है। केन्द्र शासित और प्रधानमंत्री नरेंद्र मोदी की पार्टी बीजेपी की 8 राज्यों में सरकारें हैं। और यहां के हजारों किसानों ने

प्रदर्शन शुरू किया था। किसानों की मांग थी , कि कर्ज माफ किए जाएं और तेल, अनाज और दूध के सही दाम उन्हें दिए जाएं।

राष्ट्रीय किसान महासंघ के वरिष्ठ सदस्य संदीप पाटिल का कहना है। सरकार की गलत नीतियों का ही यह नतीजा है। कि आज किसानों को जीवनयापन करना भी मुश्किल हो गया है। पिछले समय मंदसौर में मारे गए 6 किसानों के लिए हमारे मन में सम्मान है। और अगर सरकार ने हमारी मांगें नहीं मानी तो कई शहरों को जाम कर दिया जाएगा।

आंदोलन या पब्लिसिटी स्टंट

दूसरी ओर, प्रधानमंत्री नरेंद्र मोदी की सरकार किसान आंदोलन को ज्यादा तवज्जो नहीं दे रही थी, केंद्रीय कृषि मंत्री राधामोहन सिंह ने किसानों द्वारा सड़कों पर फसलों को फेंके जाने को पब्लिसिटी स्टंट करार दिया और कहा कि इन आंदोलनों को बड़े किसान संगठनों का समर्थन हासिल नहीं है।

वहीं, विपक्षी दल कांग्रेस के अध्यक्ष राहुल गांधी ने पिछले दिनों मंदसौर में मारे गए किसानों के पीड़ित परिवार से मुलाकात कर मध्य प्रदेश में आगामी विधानसभा चुनाव के अभियान की शुरुआत की किसानों को संबोधित करते हुए राहुल गांधी ने कहा कि प्रधानमंत्री नरेन्द्र मोदी ने किसानों के साथ धोखा किया है। वह यह वादा कर सत्ता में आए थे कि किसानों को उनके उत्पादन का उचित दाम मिलेगा लेकिन उद्योगपति और अपने कारोबारी मित्रों को खुश रखना ही उनकी प्राथमिकता है।

किसान संगठनों की बड़ी भूमिका

दरअसल 2014 में सत्ता हासिल करने से पहले नरेंद्र मोदी ने वादा किया था कि वह सरकार बनाने के बाद किसानों की आय दोगुनी कर देंगे यही वजह है कि ग्रामीण इलाकों कि किसानों में फसलों के गिरते हुए दामों को लेकर रोष बढ़ रहा है। नेशनल क्राइम रिकॉर्ड्स ब्यूरो के डाटा के मुताबिक 1995 से अब तक कर्ज में दबे करीब 3 लाख किसान आत्महत्या कर चुके हैं। विशेषज्ञों की मानें तो भारत की कृषि व्यवस्था का तब तक समाधान नहीं निकलेगा जब तक लंबी अवधि की नीति न बनाई जाए और देश के हर कोने के किसान को इसका फायदा मिले।

भारत की 130 करोड़ की आबादी का दो-तिहाई हिस्सा आज भी कृषि पर निर्भर करता है। हालांकि जीडीपी में इसका महज 17 फीसदी योगदान है। शहरों की तरफ तेजी से जा रही आबादी के बावजूद ग्रामीण इलाकों में आधी से अधिक आबादी रहती है। जो आगामी चुनावों में तय करेगी कि सत्ता की चाबी किसे सौंपी जाए किसान संगठनों का उग्र होना चुनावों की दिशा तय करने में बड़ी भूमिका निभाएगा।

विषय का चयन

प्रस्तुत शोधपत्र में किसानों की स्थिति को दृष्टिगत रखते हुये किसानों में व्याप्त असंतोष के कारणों को जानने के प्रयास के साथ-साथ व्याप्त असंतोष के वहज से सरकार की वादाखिलाफी परिणामस्वरूप

किसानों का अपने अधिकारों के लिए आवाज उठाना जिसे सामान्यतः आंदोलन का नाम दिया जाता है। अतः किसान आंदोलनों के कारण आर्थिक सामाजिक राजनीतिक प्रशासनिक व्यवस्थाओं पर क्या प्रभाव पड़ता है। तथा राजनीतिक संस्थाओं द्वारा इन आंदोलनों को रोकने एवं निराकरण हेतु जो भी उपाय किये जा रहे हैं। क्या वे स्थायी हैं। अथवा अस्थायी। यदि अस्थायी हैं। तो उन्हें स्थायी उपाय में बदलने के लिये क्या-क्या सुधार किये जा सकते हैं। तथा इसमें म. प्र. सरकार का क्या उत्तरदायित्व बनता है। किसानों की आर्थिक सामाजिक एवं मनोवैज्ञानिक दशा को सुधारने में यही उत्तरदायित्व एवं सरकार का किसानों के प्रति उदारतापूर्ण रवैया ही आगे किसान आंदोलनों की दिशा तय करेगा क्योंकि यदि यह दिशा बदलेगी तभी किसानों की दशा बदलेगी।

इसी पृष्ठभूमि में यह अध्ययन म. प्र. में किसानों की स्थिति एवं किसान आंदोलन प्रशासनिक एवं राजनैतिक उत्तरदायित्व पर केन्द्रित किया गया है।

उद्देश्य

म. प्र. कृषकों की स्थिति एवं किसान आंदोलन किसानों के प्रति राजनैतिक एवं प्रशासनिक उत्तरदायित्व का उद्देश्य यह है, कि -

1. म. प्र. में कृषि की स्थिति का अध्ययन करना।
2. म. प्र. में हुए किसान आंदोलन की पृष्ठभूमि का अध्ययन करना।
3. किसान आंदोलन के दौरान हुए आंदोलन के राजनीतिकरण का अध्ययन करना।
4. किसान आंदोलन के सामाजिक राजनैतिक प्रभाव का अध्ययन करना।
5. किसान आंदोलन के औचित्य व अनौचित्य का अध्ययन करना।

शोध प्रश्न अथवा अवधारणा

1. म. प्र. में किसानों की वर्तमान स्थिति कैसी है ?
2. किसान आंदोलन होने के क्या कारण हैं। एवं इनकी समस्याओं का निराकरण कैसे किया जा सकता है ?
3. किसान आंदोलनों का राजनीति पर क्या प्रभाव पड़ रहा है। एवं राजनीति का किसान आंदोलनों के प्रति क्या उत्तरदायित्व बनता है ?
4. किसानों के प्रति प्रशासनिक रवैया कैसा होना चाहिये ?

उपलब्ध साहित्य की समीक्षा

(1) जादव दिनेश गौतम ने अपने शोध ग्रंथ उत्तरप्रदेश में किसान आंदोलन के प्रभाव "2013 के माध्यम से बताया है कि" होमरूल लीग के कार्यकर्ताओं के प्रयास तथा मदन मोहन मालवीय के दिशा निर्देशन के परिणाम स्वरूप फरवरी 1918 में उत्तरप्रदेश में किसान सभा का गठन किया गया 1919 में उत्तरप्रदेश में यह आंदोलन खुलकर सामने आया उत्तरप्रदेश के कई जिलों में लगान में वृद्धि व उपज के रूप में लगान वसूली को लेकर अवध के किसानों ने एक आंदोलन चलाया।

(2) खट्टर रवीन्द्र ने आपने शोध ग्रन्थ "केरल के मालाबार क्षेत्र" में मोपल किसान आंदोलन एक अध्ययन (2009) में रविन्द्र खट्टर ने बताया है। कि प्रारंभ में मोपला किसान आंदोलन सरकार के खिलाफ था गांधी शौकत अली, मौलाना जैसे नेताओं का सहयोग इस आंदोलन को था इस किसान आंदोलन ने जल्द ही उग्र साम्प्रदायिक आंदोलन का रूप धारण कर लिया।

(3) कौर, गुरमीत ने अपने शोध बिजौलिया किसान आंदोलन में विजय सिंह पथिक और माणिक्य लाल वर्मा की भूमिका और वर्तमान प्रासंगिकता (2008) में बताया है। कि यह एक ऐसा आंदोलन था जिसमें हुकूमत की जड़ों को हिला के रख दिया यह किसान आंदोलन संपूर्ण भारत में प्रसिद्ध रहा, किसानों ने लाग-बाग, लाटा, बाटा तलवार बधाई जैसी कर व्यवस्था के खिलाफ आंदोलन किया जिसे पथिक और माणिक्य लाल वर्मा ने सुचारु रूप से आगे बढ़ाया।

(4) पांडे सुदेशपाल ने अपने ग्रंथ भारत में किसान आंदोलन और आंदोलन का राजनीतिकरण (2018) के माध्यम से बताया है। कि वर्ष 2017 में देश में छोटे बड़े सैकड़ों आंदोलन हुए, सरकार को कृषि क्षेत्र में बोलने को मजबूर किया जिसमें महाराष्ट्र का जून 2017 देना बंद हो या नासिक से मुंबई तक का मार्च हो राजस्थान में पानी व बिजली के बवाल पर आंदोलन या तमिलनाडु के किसानों का संसद मार्ग पर धरना मुख्य रहा।

(5) यादव योगेन्द्र ने अपने आर्टिकल किसानों की मांग। (2018) के द्वारा सरकार पर पूर्ण रूप से कटाक्ष करते हुए लिखा है। कि सत्ता में आने से पहले सरकार किसानों से वादा करती है। प्रलोभन देती है। जैसे ही सत्त हाथ में आई वादे भूल जाती है। परिणामस्वरूप किसानों को सरकार पर उतरना पड़ता है। पिछले महिने म. प्र. में हुए उग्र किसान आंदोलन उसी वादाखिलाफी और असंतोष का परिणाम रही है।

अध्ययन क्षेत्र - मेरे द्वारा प्रस्तावित अध्ययन में मध्यप्रदेश के तीन जिले-भोपाल, उज्जैन, नरसिंघपुर चयनित किये हैं। जो मेरी नजर में आंदोलन के प्रमुख केन्द्र भी रहे हैं।

1. किसानों की वर्तमान स्थिति में क्या अपेक्षित सुधार आया ?
2. वर्तमान सरकार (राज्य केन्द्र) ने किसानों को वादानुरूप अपनी योजनाओं के माध्यम से संतुष्ट किया या नहीं ?
3. किसानों की आय में वृद्धि संबंधित
4. मध्यप्रदेश के किसान और देश के विभिन्न राज्यों के किसानों के आर्थिक सामाजिक स्तर का तुलनात्मक अध्ययन
5. पिछले पाँच सालों में किसानों की स्थिति में आये परिवर्तन विभिन्न स्तरों से संबंधित।

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समाचार पत्र

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The Institute have been awarded 'A' grade for three consecutive terms by the National Assessment and Accreditation Council. It has been recognized twice as a Center for Potential of Excellence by the University Grants Commission, and as a Center of Cluster for Enhancing Quality through Innovation and Collaboration by the Government of Madhya Pradesh.

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