RESEARCHER

A Multidisciplinary Journal

Vol. XIX No. 2, 2023
ISSN 2278-9022

SCIENCE AND TECHNOLOGY

SOCIAL SCIENCES

BUSINESS STUDIES

ARTS & HUMANITIES

The Journal of University of Jammu

EDITORIAL AND ADVISORY BOARD

Patron

Prof. Umesh Rai
Vice-Chancellor, University of Jammu, Jammu, J&KUT, INDIA

Editor/Convener

Anupama Vohra	Directorate of Distance & Online Education, University of Jammu

Editorial Board

B.K. Bajaj	School of Biotechnology, University of Jammu
Sarika Manhas	Department of Home Science, University of Jammu
N. Suresh Rao	Computer Centre, University of Jammu
Komal Nagar	The Business School, University of Jammu
Seema Rohmetra	The Law School, University of Jammu
Shallu Sehgal	Department of Economics, University of Jammu
Sandeep Arya	Department of Physics, University of Jammu
Isha Sharma	ICccR & HRM, University of Jammu
Navdeep Kaur Sasan	Department of Law, University of Jammu
Jasleen Kaur	Directorate of Distance & Online Education, University of Jammu

Advisory Board

Science and Technology

Ajit Khosla	Department of Mechanical Systems Engineering, Yamagata University, Yonezawa, Japan
Dinesh Agarwal	Department of Applied Chemistry (Biotechnology), Chaoyang University of Technology, Taiwan
Rupam Kapoor	Department of Botany, University of Delhi, New Delhi, India
Ram Alagan	Department of Geography, Alabama State University Montgomery, AL
Santi Prasad Maity	Department of Information Technology, Indian Institute of Engineering, Science & Technology, Shibpur Howrah, West Bengal, India

Social Sciences

Balwinder Singh	Department of Economics, Punjabi University, Patiala
Gurpreet Bal	Department of Sociology, Guru Nanak Dev University, Amritsar
Barbara Wejnert	Department of Global Gender Studies, University of Buffalo, SUNY, NY
R. Mahalaxmi	Center for Historical Studies, Jawahar Lal Nehru University, New Delhi
Priti Saxena	Department of Human Rights, Babasaheb Bhimrao Ambedkar University, Central University), Vidya Vihar, Raebareli Road, Lucknow-25

Business Studies

Yogesh Upadhayay	Faculty of Management, Jiwaji University, Gwalior, India
Gurmeet Singh	School of Business & Management, University of South Pacific, Fiji

Arts & Humanities

Payel Dutta Chowdhury	School of Arts & Humanities, REVA University, Bengaluru, Karnataka, India
Kalpana Purohit	Department of English, Jai Narain Vyas University, Jodhpur
Samina Khan	Department of English, Aligarh Muslim University, Aligarh, India

EDITORIAL

Dear Reader

Welcome to the reading of July-December Issue of *Researcher*!

In today's academic world, research is an important component, and equally important is its sharing on the academic platform for recognition. And *Researcher* has a niche in the research arena due to its multi-disciplinary context. In this Issue Section I on 'Science &Technology' has two papers: the first paper is a contribution toward designing medical expert systems, and the second paper reviews E- Learning from MOOCs through SWAYAM, the prominent emerging learning initiative in recent years. In Section II on 'Social Sciences', the first paper assesses the impact of ICT from the perspective of stakeholders of the universities across J&KUT whereas the second paper through a sample survey gives insights into the disparities in ownership of household assets among farmers in the rural areas of Punjab. The third paper based on secondary sources evaluates the impact of conflict on human life in district Poonch of J&KUT.The fourth paper looks at the use OERs from the perspective of preservice teachers. And the last paper is a study on skill gap and youth employability in Industry 4.0. In section III on 'Business Studies',Venkata Ramana Karri's paper explores the challenges faced by medical representatives, the intermediaries between pharmaceutical companies and healthcare specialists, in their professional life. Section IV on 'Arts and Humanities' has three papers : the first paper is a critical study of 'Neverlands' in an attempt to answer the challenge of disintegrated neo-liberal identities; the second paper underscores 'the culture of silence' leading to oppression, depression and finally suicide by Monisha in Anita Desai's novel *Voices in the City.* And the last paper in this section through feminist theoretical approaches, explores the construal of the gendered self through Pampa Kampana, the woman protagonist in Salman Rushdie's novel *Victory City.*

The credit of *Researcher's* serious research-oriented blind peer review process contribution goes to its reviewers to whom I am grateful. I also place on record the hard work of my two editorial board teams who worked with me since 2018.Six years has been a long time, we worked effortlessly to bring to our readers the best in academia research. Now it is time for the baton to pass on to another enthusiastic editor.

Thanks to all for their overwhelming support during the last six years.

Prof. Anupama Vohra

Editor

RESEARCHER

A Multidisciplinary Journal

Vol. XIX No. 2, 2023
ISSN 2278-9022

CONTENTS

SCIENCE AND TECHNOLOGY

SOCIAL SCIENCES

BUSINESS STUDIES

ARTS AND HUMANITIES

SCIENCE AND TECHNOLOGY

Comparative Analysis of Multivariate Quadratic Surface Modeling and Convolutional Neural Network for Tridoshas Estimation from Phonocardiographic Signals

Parul Sahl, Pawanesh Abrol**, Dongre***, Tinny Sawhney**** and Parveen Kumar Lehana******

ABSTRACT

Heart sounds are generated due to acceleration and deceleration of the blood into the heart. Cardiac auscultation technique is used to listen to these sounds. The sounds may be recorded as signals using phonocardiogram (PCG). The study of PCG signals provides information for the diagnosis of abnormalities in the heart and other organs in its vicinity. Ayurveda defines a definite relationship between the functioning of the heart and three fundamental quantities (Vata, Pitta, Kapha), also known as Tridosha that shows the overall functioning of living bodies. Although the technique is commonly used in India for predicting health related problems, quantification of the problem is always difficult because of the subjective analysis. The objective of the present research is to estimate the main dosha from the heart sounds recorded using a PCG. Multivariate quadratic surface modeling and convolutional neural network have been used for estimating the relationship between the PCG signals and Tridoshas. The results may be useful for designing medical expert systems for predicting health related problems automatically.

Key Words: Convolutional neural networks, multivariate quadratic surface modeling, phonocardiogram, signal processing.

1. Introduction

Signal based processing is one of the important research areas. Signals may be of different types like image, sound, electromagnetic etc. The signals generated from living bodies are classified as Biomedical signals. These biomedical signals can be processed for a variety of applications including health state estimation [1-7]. The signals may be obtained from different physiological systems in human body such as circulatory system, muscular system, nervous system, etc. As the heart is an important organ in the human body, the signals recorded around it provide significant information about the working of the body. The audio signals in the form of heart sounds, usually called phonocardiogram (PCG) signals, contain enough information about the working of the heart in particular and working of the body in general. Because of the complexity involved in the analysis of the heart sounds, the interpretation of the experts may vary depending upon their skill and expertise. Hence, there is a need for automating the process of diagnosis and decision making using intelligent signal processing algorithms.

* Research scholar, Department of Computer Science & I.T., University of Jammu, Jammu, India
** Professor, Department of Computer Science & I.T., University of Jammu, Jammu, India
*** Dongre Clinic, Mulund, Mumbai, India
**** Research scholar, Department of Electronics, University of Jammu, Jammu, India
***** Professor, Department of Electronics, University of Jammu, Jammu, India

Several researchers have been investigating different systems, both allopathic and ayurvedic, for enhancing the prediction rate of the diseases and abnormalities in human body [8-10]. The combination of these two modern and ancient sciences may further enhance the prediction accuracy of the abnormalities. Ayurveda is called as science of life. It is a natural remedial system that has its genesis in the vedic culture of India. The word ayurveda is derived from two sanskrit words: "ayus" meaning Life and "veda" meaning knowledge or science. Thus the term can be construed as a "science of life". The fundamental belief of ayurveda is a comprehensive system of health care. It is an alternative branch of medication and healing. This research focuses on how ayurveda, an ancient Indian medical science understands and visualizes the human body. The ayurvedic body is conceptualised as being composed of five constituent parts (Panchamahabhutas), seven body substances (dhatu), and three regulating qualities (doṣha). The Panchamahabhuta theory is the foundation of ayurveda and states that the different types of substances present in the universe are formed by the combination of the Panchamahabhutas which are space (akasa), air (vayu), fire (agni), water (jala), and earth (prithvi) [11-13].

Panchamahabhutas are the ultimate vital physical constituents from which the physical world is derived. Each element has its own characteristics. The interplay of these elements defines the features of the human body it manifests in. Space is symbolized by all the emptiness in which all other elements exist. It manifests in the body as the stomach, the mouth, the lungs, the nostrils etc. Air is symbolized by all the matter in the gaseous phase. It is responsible for all kinds of movements. It manifests itself in the body as contraction, expansion, movement, and pulsation. Fire is attributed as the energy responsible for transformation or change of a substance. This element is the source of energy in the body which is essential for carrying out important activities. In the body, metabolism, enzymatic changes, digestion, thought etc. symbolise fire. Water is symbolized by all the matter in the liquid phase. In our body, it represents our lymph, blood, saliva, digestive fluids, hormones, sweat, urine and all other fluids. Various chemical and biological reactions are performed using this element. Earth is symbolized by all the matter in the solid phase. In our body it manifests as the various strong parts of our body like bones, hair, nails, muscles, tendons, ligaments etc. [11-13]. The fundamental properties of space, air, fire, water and earth are sound, touch, sight, taste and smell respectively. A hierarchical relationship exists between the elements in the order as space, air, fire, water and earth. Each derived element is characterised by its fundamental property and the properties inherited from its superior or parent elements [14].

Fig 1.1 Representation of Panchamahabhuta and Tridosha (modified from [15])

An application of the Panchamahabhutas is the Tridosha theory. The Panchamahabhutas and Tridosha relationship is illustrated in Fig 1.1. According to the Tridosha theory, the five eternal elements combine in different proportions to form the human body and while doing so they create three vital energies or Tridoshas – Vata, Pitta and Kapha. These three living body constituents are defined depending upon the degree of prevalence of vayu, agni and jala in the body respectively. Each individual is a unique combination of Tridoshas. Vata, Pitta and Kapha are present in each individual and play a vital role in shaping the overall health of an individual. The doshas control various functions in a living being. The imbalance in the doshas is major cause of diseases in the Ayurveda [12]. Vata is the most powerful of all the doshas. It is formed by the interaction of space and air, air being the dominant element. It has qualities which are similar to these elements. Vata is like the wind- light, cool, dry and mobile. It is the energy of movement, respiration, heartbeat, nerve impulse, and muscle contraction. It is the force governing all biological activities and is responsible for circulating the blood and lymph, drawing and expelling air from the lungs, moving food through the digestive system, and eliminating waste. The main virtues of Vata are dry, rough, light, cold, subtle, and mobile. Pitta is formed by the interaction of fire and water, fire being the dominant element. Fire is the energy of change and water is the agent of change. Pitta is the energy that controls the metabolism, handles the digestion, release and absorption of hormones, production of heat, and cooling. The main virtues of Pitta are oily, hot, moving, sharp and acidic. Kapha is formed by the interaction of earth and water, water being the dominant element. It is the energy responsible for building the body and providing its structure and form. It handles the smooth functioning of all its parts. Skeleton, muscles, organs, ligaments, tendons, and skin are the work of Kapha along with lubricating the body ensuring the smooth function of joints. The main virtues of Kapha are moist, cold, heavy, dull, soft, sticky, and static [12]. The dosha and its dominant elements are presented in Table 1.1.

Table 1.1 *Tridosha* and its constituent elements

Dosha	Elements
Vata	*Vayu* (Air), *Akasa* (space)
Pitta	*Agni* (Fire)
Kapha	*Jala* (Water), *Prithvi* (Earth)

Physical constitution and health both depend on the balance and interplay of the Tridoshas. Thus the health state of a person could be judged by analysing the proportions of each of the five elementary elements present in the body. Ayurveda suggests different ways to analyse the health by calculating the predominance of an element in the body using permutation and combination and thereby offering a suitable remedy that balances the existence of each element and its derivatives in the body to its right amount [15]. However computer science applications may provide an aid in automating this analysis by generating a model that calculates the dominance of each of the three vital energies in the subject's body based on the actual data that it has learned. An ayurvedic concept of Nadi pariksha also known as wrist pulse examination is done to analyse and estimate the quantity of three fundamental doshas in the body i.e. Vata, Pitta, and Kapha [16].

Wrist pulse examination or Nadi pariksha is an ancient ayurvedic diagnosis technique. The

term nadi refers to a channel of physiological and biological signals like the pulse, nerves, veins, arteries etc. It involves observing the pulse from a perspective of diagnosis of the human body, mind and the sub-conscious. It is commonly known as pulse diagnosis. The pulse communicates more than what is felt [17]. It is a holistic technique that reaches the root cause of diseases rather than dealing with mere symptoms. It provides knowledge about how to improve one's health in accordance with the elements which are predominant in the body. Several diseases like hypertension, obesity, diabetes, paralysis, mental disorders, depression, severe joint pains, infertility and skin diseases can be detected by using Nadi pariksha. Dosha prediction is another important application of wrist pulse examination. The Tridosha combination of a human body should remain constant throughout his or her life. An imbalance in the natural level of any of the three doshas indicates a health disorder or disease in an individual. If the deficiency or excess of one or more doshas is larger, the greater would be the likelihood of the disease or disorder associated with that dosha. The basis of prediction and diagnosis in Ayurveda is formed by the identification of an imbalance in the Tridosha. The evaluation of the three doshas using wrist pulse examination is performed by sensing the radial artery of the right hand in males and left hand in females by placing the index, middle and ring fingers just below the thumb region. The thumping pulse beat felt under index finger is referred to as Vata, middle finger as Pitta, and ring finger as Kapha. The diagnosis and analysis of the wrist pulse examination is a subjective decision and hence the results depend largely on the skills and precision of the ayurvedic physician [18], [19]. Distinct types of patterns are observed at some points on the radial artery that correspond to the level and tendency of Vata, Pitta, and Kapha respectively. The sensation of the three distinct patterns on the radial artery is like that of a snake's crawling for high level of Vata which is sensed by the index finger placed at the knot below the wrist; frog's jumping for high Pitta which is experienced by the middle finger at a point just adjacent to the fourth finger; a swan's slow movement for risen Kapha which is experienced by the ring finger placed closed to the middle finger. The changes in the frequency, rhythm, shape, regularity, etc., in the waveforms are attributed to the deviation in the levels of Tridosha and the mind-body system of a person [16].

The hypothesis of this research work is that the Tridoshas can be derived from the phonocardiographic (PCG) signals using correlation, regression, and neural network based function estimation. In this research, most dominant dosha is estimated from PCG signals using convolutional neural network (CNN). For comparison, multivariate quadratic modeling (MQM), which is a regression based model estimation techniques, has also been used for predicting the Tridosha. The detail of CNN and MQM is presented in Section 2 and Section 3, respectively. The methodology adopted for conducting the experiment is presented in Section 4. The Results are presented in Section 5. Conclusion and future scope are presented in Section 6.

2. Convolutional neural network for classification

Convolutional neural network is a category of neural networks inspired by the biological neural system. It is largely used in fields like image recognition, classification, object detection, robotics etc. LeNet developed by Yann LeCun was one of the first CNN introduced to implement deep learning [20]. Because of its ability to intelligently acquire the knowledge of the discriminative feature, make spatial use of the visual images as data, saving a lot of time and resources it becomes a preferred network for many applications. Convolutional neural network uses information between the pixels of an image treating input as volume. The height and width of input represent the size of an image and depth represents the number of channels like in the color image, particularly RGB based images. The presence of separate channels introduce the concept of depth that makes input 3-dimensional [21]. The cross-section of an input volume of size 4 x 4 x 3 is illustrated in Fig 2.1.

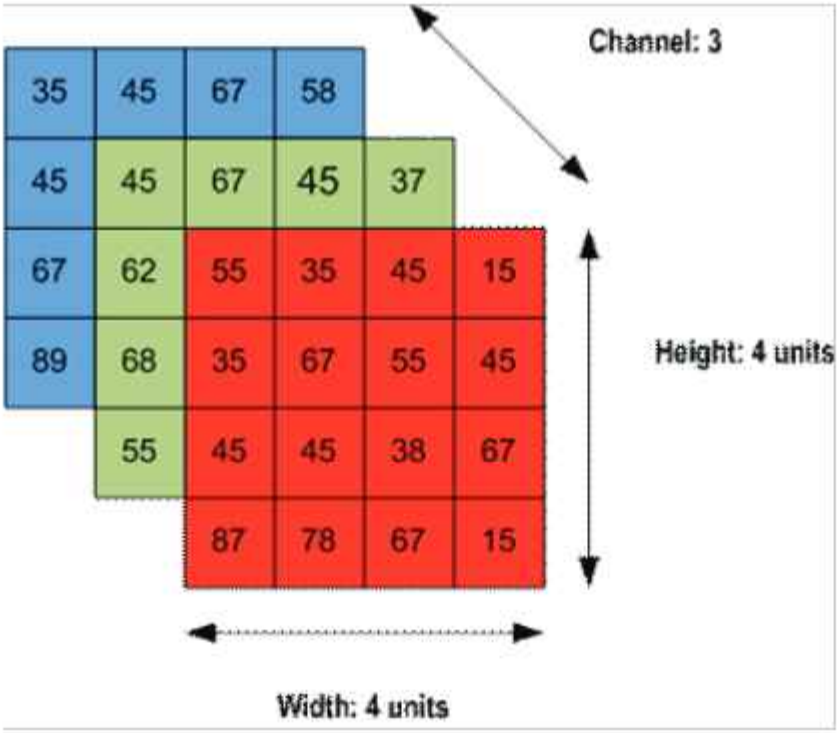


Fig 2.1 The cross-section of an input volume of size: 4 x 4 x 3 comprising of a 3 color channel matrix of the input image

The general architecture of a CNN as shown in Fig 2.2 comprises of three kinds of layers: convolutional layers, pooling layers and fully connected layers. The overall architecture is obtained when these layers are stacked one over the other [22]. The convolutional layer convolves filters or kernels or learnable weights all over the image starting from top of the image. The small region of the image that is convolved using the filter is called local receptive field that extends to the entire depth of the input. The number of filters to be used is specified the user. The number of steps filter moves during convolution is specified by hyper parameter stride. The output of this layer is called activation map or feature map. The activation map represents features present in the image. The pooling layer is used after convolutional layer and aims at reducing the dimensions of activation maps, thereby decreasing the number of parameters and the model complexity. The fully-connected layer converts the 2D activation map into a 1D feature vector. The neurons in the fully-connected layers are directly connected to the neurons in the adjacent layers similar to a traditional artificial neural network (ANN) [23].

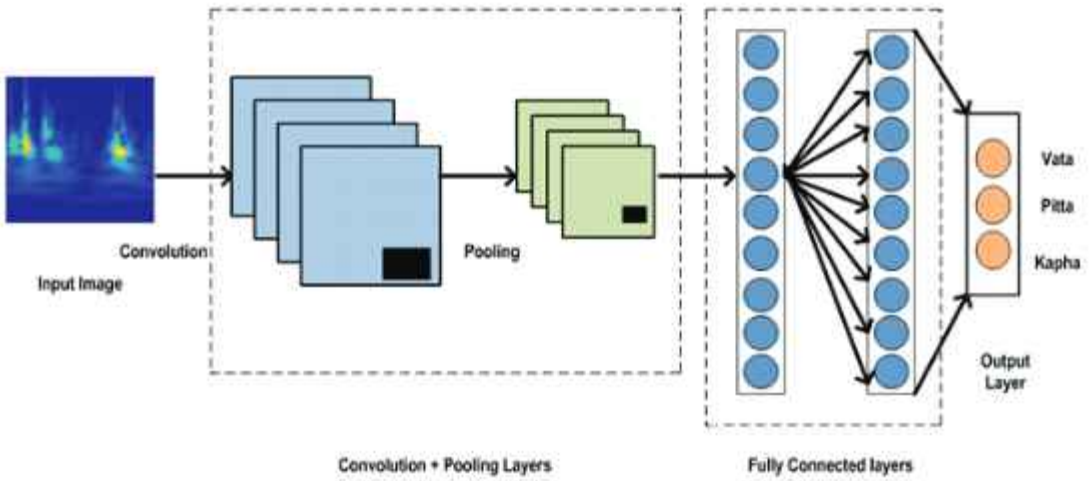


Fig 2.2 General architecture of CNN

3. Multivariate quadratic surface modelling

Multivariate quadratic surface modelling is a technique for the representation of the complex surfaces with the help of the combination of quadratic functions by creating real and smooth surfaces and providing high flexibility. A multivariate polynomial surface (f) can be constructed from an m-dimensional function (g) known at q points by approximating the given function with some error at each point [24] as:

$$g({}^{n}_{1}w, {}^{n}_{2}w, \ldots, {}^{n}_{m}w) = f({}^{n}_{1}w, {}^{n}_{2}w, \ldots, {}^{n}_{m}w) + \epsilon_n \quad (1)$$

where $n = 0,1,\ldots,q\text{-}1$ and ϵ_n is the error. The multivariate function is written as

$$f(w_1, w_2, \ldots, w_m) = \sum_{k=0}^{p-1} c_k \phi_k(w_1, w_2, \ldots, w_m) \quad (2)$$

where p is the number of terms in the polynomial of m variables. By combining equations (1) and (2), we get a matrix equation

$$\mathbf{b} = \mathbf{A}\mathbf{z} + \boldsymbol{\varepsilon} \quad (3)$$

where $\mathbf{b}$, $\mathbf{z}$ and $\boldsymbol{\varepsilon}$ are given by

$$\mathbf{b}^T = [g_0 g_1 \ldots g_{q-1}]$$

$$\mathbf{z}^T = [c_0 c_1 \ldots c_{p-1}]$$

$$\boldsymbol{\varepsilon}^T = [\epsilon_0 \epsilon_1 \ldots \epsilon_{q-1}]$$

And matrix $\mathbf{A}$ is a $q \times p$ matrix, with elements given as

$a(n,k) = \phi_k(^n_1 w, ^n_2 w, \ldots, ^n_m w), 0 \le n \le q, 0 \le k \le p-1.$

The solution is obtained as

$$\mathbf{z} = (\mathbf{A}^T\mathbf{A})^{-1}\mathbf{A}^T\mathbf{b} \quad (4)$$

where $(\mathbf{A}^T\mathbf{A})^{-1}\mathbf{A}^T$ is called the pseudo-inverse of A.

A mapping function is generated using this method to obtain a correlation between the features of the training input signals and their respective class in order to interpolate the class of the testing signals [24], [25]. The total number of terms (p) in a quadratic expression with (m) variables can be given as

$p = 1 + 2m + ^m_2 C$

4. Methodology

The methodology has been divided into two sections. In the first phase recording of phonocardiographic signals was performed as described in Section 4.1. In the second phase the two techniques: CNN and MQM were analysed as described in Section 4.2.

4.1 Recording the signal

The heart sounds or PCG signals of 30 subjects have been recorded in an acoustically tested room. The subjects have been instructed to enter the room one at a time and the process of 'Wrist Pulse Examination' by an ayurvedic physician has been carried out in which the subject's radial artery has been examined for dosha imbalance. In male subjects, the right hand's pulse and in female subjects, left hand's pulse has been examined. The subject has been instructed not to eat anything for atleast two hours prior to the examination. The examination has been performed with the subject sitting in a stable and upright position. After the wrist pulse examination, the heart pulse sounds of the subject has been recorded using Jabes advanced bio electronic stethoscope as shown in Fig 4.1. The acquisition device has been interfaced to an amplifier. The amplifier that has been used is SSB-45EM Ahuja Radio. The amplifier has been interfaced with a computer application to record the signal at 1000 Hz signal frequency for 3 minutes.

Fig 4.1 Wrist pulse examination by ayurvedic physician.

Fig 4.2 Recording set-up for PCG signals.

4.2 CNN and MQM based analysis

The methodology followed for CNN and MQM based analysis for estimating the dominant dosha from the PCG signal is presented in Section 4.2.1 and Section 4.2.2, respectively.

4.2.1 Methodology of CNN based analysis

The PCG signal dataset obtained in the above section is converted into a time-frequency representation. The representation used in this paper is a scalogram as shown in Fig 4.3. A scalogram is the absolute value of the continuous wavelet transform coefficients of the signal. Originally it represents the energy density obtained from the continuous wavelet transform in the time – frequency

domain. The continuous wavelet transform (CWT) preserves the information present in the signal. It was developed to overcome the short coming of the short time fourier transform (STFT). While STFT gives a constant resolution at all frequencies, the Wavelet Transform uses multi-resolution technique by which different frequencies are analysed with different resolutions. The CWT coefficients of the signals are obtained as per the following formula

$$C(\tau,s)=\frac{1}{\sqrt{s}}\int f(t)\psi^{*}\left(\frac{t-\tau}{s}\right)dt$$

where s is a scaling parameter τ is a translation parameter and $\psi()$ is the mother wave.

The scalograms are converted into RGB images of size 224 x 224 x 3 which are fed as input to the convolutional neural network. CNN mainly comprises of convolutional layers, pooling layers, subsampling layers followed by fully connected layer. The convolutional layer applies a filter or feature map over a small region of the image called local receptive field. The map contains learnable weights that slide across the width and height of the input volume. This allows the network to learn filters that activate when it sees some kind of feature. The output of this layer is an activation map. The pooling layer accepts the activation map as input and reduces its spatial size to reduce the amount of parameters and computations in the network. This layer may apply functions like max pool, average pool, min pool etc. Different blocks of convolution layers are applied for extracting the maximum set of features from the images followed by fully connected layers. The number of neurons in the fully connected layer is equal to the number of classes into which the images are classified. CNN is robust against rotation and shifts. This research uses transfer learning where a pre trained network is used to perform the classification task. The CNN used in this research is GoogLeNet [26] which was developed recently based on deep convolutional neural network. GoogLeNet is an efficient deep neural network architecture with an "Inception Module". The inception module acts as multiple convolution filters that are applied to the same input, with some pooling. The results are then concatenated. This allows the model to take advantage of multi-level feature extraction. It consists of convolutions and max pooling operation and there are nine such modules in GoogLeNet architecture. Fully-connected layers are being replaced with parallel convolutions that operate on the same input layer. The 1×1 convolution at the bottom of the module reduces the number of inputs and hence decreases the computation cost dramatically. It also captures the correlated features of an input image in the same region. GoogLeNet uses fewer parameters and also performs significantly better in terms of accuracy. The PCG signals are thus classified into three classes: Vata, Pitta and Kapha. The steps are illustrated in Fig 4.4.

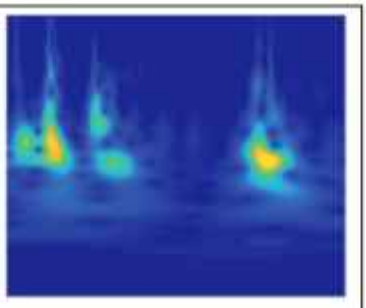


Fig 4.3 Scalogram of a typical heart sound.

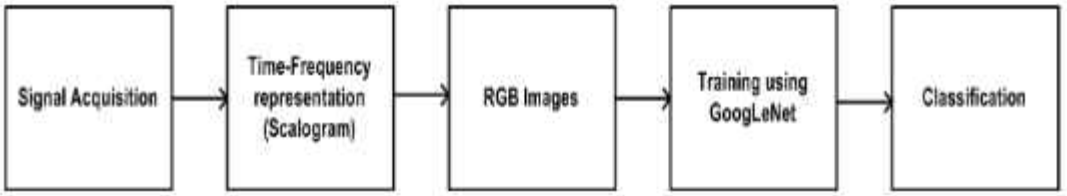


Fig 4.4 Overall steps for classification using CNN

4.2.2 Methodology of MQM based analysis

The labelled recorded signals obtained in the first section are analysed using Mel-frequency cepstral coefficients (MFCC) for obtaining the important features of the signals [27]. This feature extraction process transforms the raw signals into feature vectors in which specific properties are emphasized and statistical redundancies are suppressed [28], [29]. MFCC is a linear representation of the cosine transforms of a short duration of logarithmic power spectrum of the signal on a nonlinear scale [30], [31]. From the magnitude spectrum the MFCCs (order = 21) are estimated according to the following formula

$$C_m = a\sum_{m=0}^{M-1} \cos j\frac{\pi}{M}(m+0.5))log_{10}E_m \qquad (5)$$

where α is taken as 100 [32] and Em is the energy in each critical band in the spectrum. Dynamic time warping [33] is used for further frame by frame alignment of the parameters for the PCG signal frames. Using multivariate quadratic modelling, each class label value in the vector y is modelled as a multivariate quadratic function of all the components in the source vector x,

$$y_i = f(x_1, x_2, \ldots, x_{M-1}) \qquad (6)$$

where $01 \le i \le M-1$ and M=20 for MFCCs. Coefficient for the function, for mapping between the source frame vector to the class label vector is obtained using (4). This mapping function is used on the unlabelled signals after obtaining the source frame vector in order to predict the class label of the signals by estimating the class label value.

5. Results

An example of the zoomed view of recorded PCG signals (amplitude vs. time) belonging to the classes: Vata, Pitta and Kapha are given in Fig 5.1, Fig. 5.2, and Fig. 5.3, respectively. For the analysis of the signals in the frequency domain spectrographic analysis has been used. These signals along with their corresponding spectrogram and scalogram are represented in Fig 5.4 and Fig. 5.5 respectively. It is clear that the visual analysis of the signals and their representation in different domains provides no significant information for estimating the dominant dosha in the body. Hence CNN and MQM based analysis of the PCG signals are performed for estimating the relation between the PCG signals and Tridoshas. The results of CNN and MQM based analysis are presented in Section 5.1 and Section 5.2, respectively.

Fig 5.1 PCG signal of *Vata*

Fig 5.2 PCG signal of *Pitta*

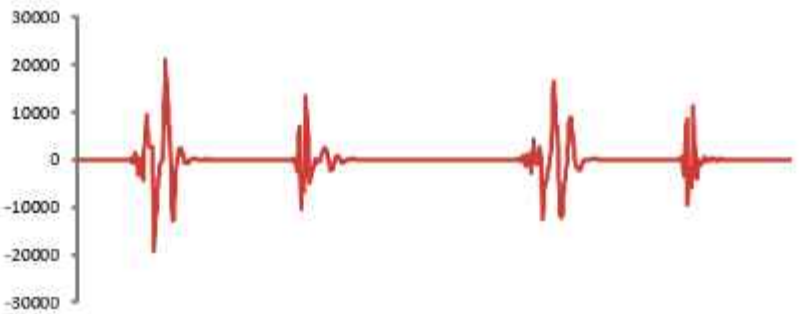


Fig 5.3 PCG signal of *Kapha*

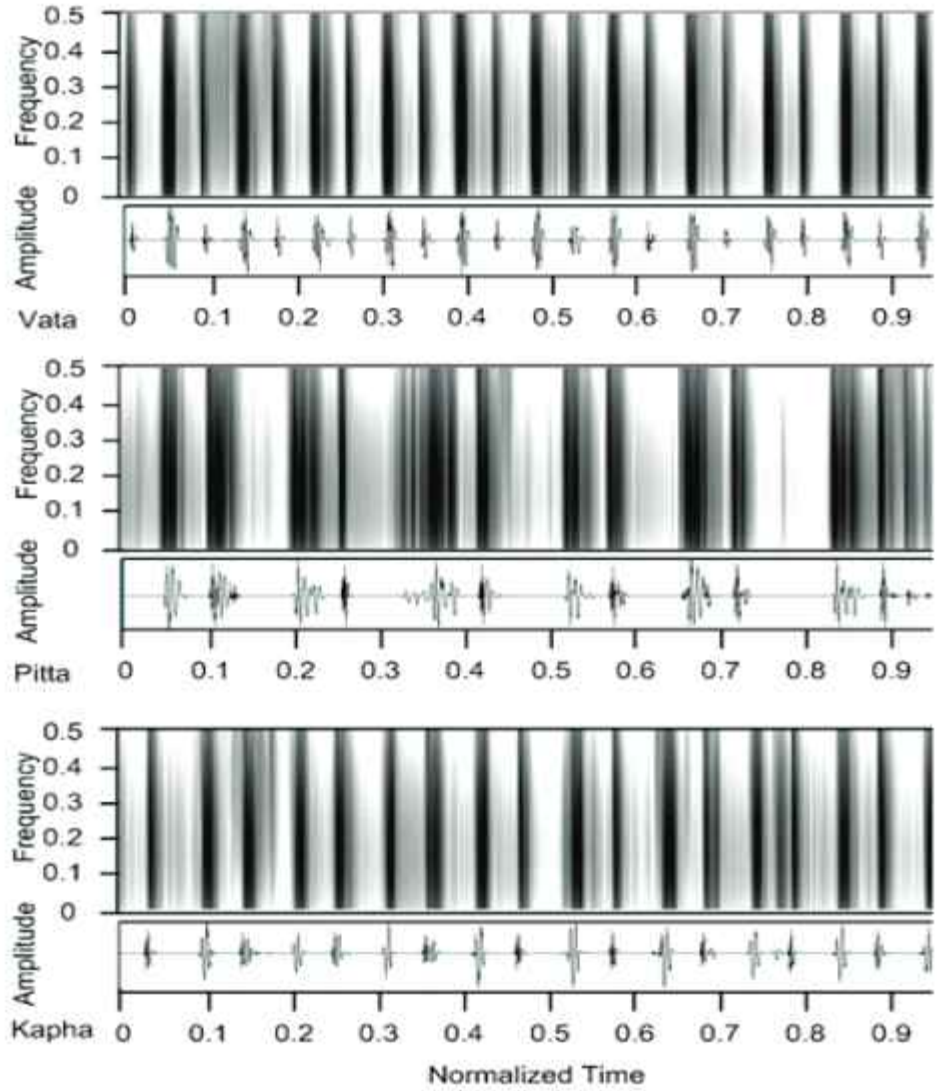
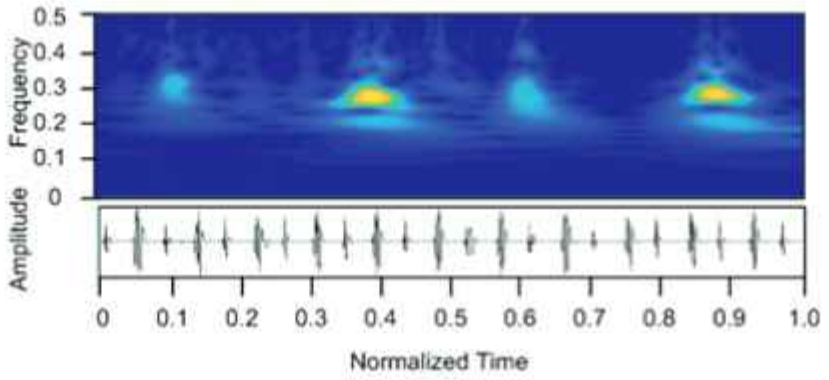


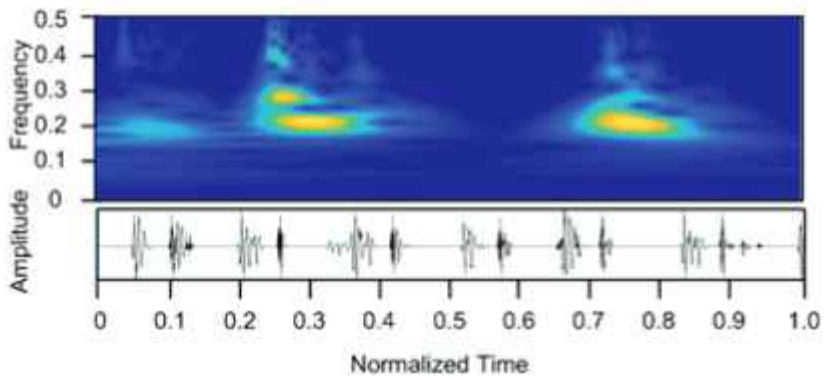
Fig. 5.4 Representation of the PCG signals and corresponding spectrograms

5.1 Investigation of CNN based analysis

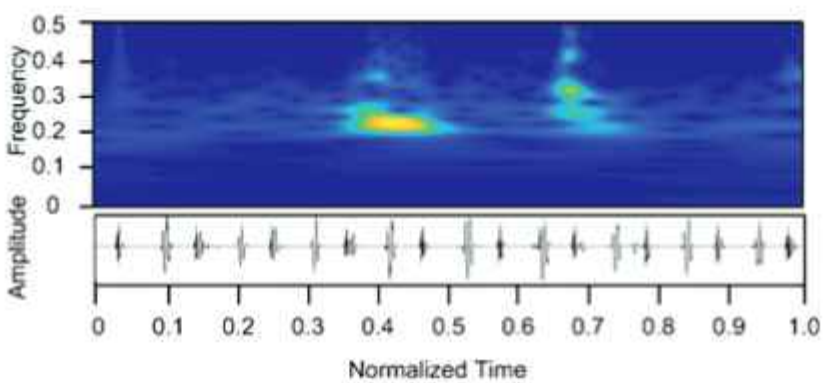
The accuracy of PCG signal classification using CNN varies according to the parameters specified during training like learning rate, number of epochs, batch size, activation functions etc. The accuracy reaches to a maximum of approximately 86% after training the CNN for 6 epochs. The confusion matrix for classification using CNN is given in Table 5.1



Vata signal and scalogram



Pitta signal and scalogram



Kapha signal and scalogram

Fig. 5.5 Representation of the PCG signals and corresponding scalogram

Table 5.1 Classification results using CNN

		Predicted Class		
		Vata	*Pitta*	*Kapha*
Actual Class	*Vata*	0%	0%	100%
	Pitta	0%	100%	0%
	Kapha	0%	0%	100%

The accuracy results after each epoch until it reaches its maximum value is represented in the graph in Fig 5.6

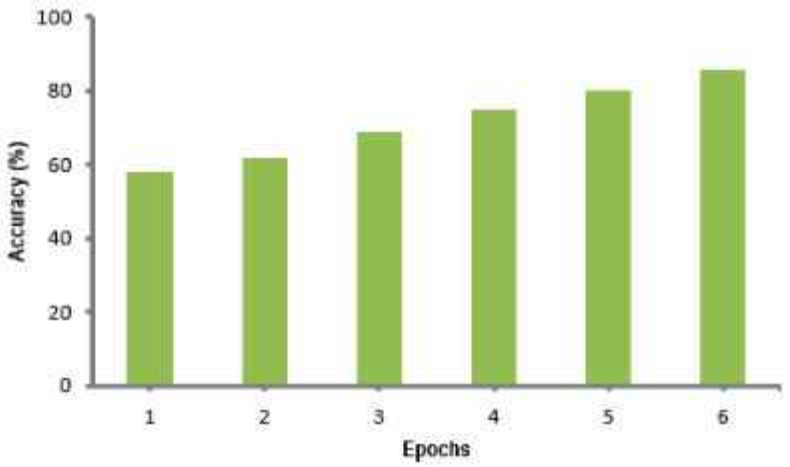


Fig 5.6 Validation accuracy at each epoch

5.2 Investigation of MQM based analysis

The confusion matrix for the classification of PCG signal into three classes: Vata, Pitta, and Kapha using multivariate quadratic modeling is given in Table 5.2.

Table 5.2 Classification results using MQM

		Predicted Class		
		Vata	*Pitta*	*Kapha*
Actual Class	*Vata*	50%	50%	0%
	Pitta	57%	43%	0%
	Kapha	100%	0%	0%

The accuracy of the classifications is obtained by dividing the correctly classified cases by the total number of cases used in the investigation. The accuracy of classification using MQM comes out to be 43%.

6. Conclusion and future scope

The study of phonocardiogram (PCG) signals provides important information for the diagnosing abnormalities in the heart of the living human beings. The PCG generated by the heart conveys information about different type of medical or psychological problems with in the body. The underlying problem may be expected to be related with imbalance in the Tridosha (Vata, Pitta, Kapha). Ayurveda, the ancient science explains in detail the relationship between the functioning of the heart and three fundamental quantities i.e. Vata, Pitta, Kapha, encrypting the information about the behaviour of the living being. The present research has been carried out with an objective to estimate the dominant dosha from the heart sounds recorded employing a PCG using the techniques of modern and ancient science. Multivariate quadratic surface modeling and convolutional neural network have been used for estimating the relationship between the PCG signals and Tridoshas. The outcome of the research may be helpful in developing a model for automating the process of disease diagnosis. The research can be extended further on various other types of biomedical signals for refining the diagnosis.

References

[1] Goette, J., Review of various Biomedical signals. Biomedical Signal Processing and Analysis, February 2014.

[2] Farina, D. and Holobar, A., Characterization of human motor units from surface EMG decomposition. In Proceedings of IEEE, 2016, 104(2), pp.353-373.

[3] Pal, N. R., Chuang, C. Y., Ko, L. W., Chao, C. F., Jung, T. P., Liang, S. F. and Lin, C. T.,EEG-Based Subject- and Session-independent Drowsiness Detection: An Unsupervised Approach. EURASIP Journal on Advances in Signal Processing, 2008.

[4] Rao, A., Biomedical Signal Processing. International Journal of Electrical, Electronics and Data Communication, 2017, vol. 5(10).

[5] Baumert, M., Porta, A. and Cichocki, A., Biomedical Signal Processing: From a Conceptual Framework to Clinical Applications. In Proceedings of IEEE, Jan 2016, 104, pp. 220-222.

[6] Sharma, A. and Abrol, P., Eye Gaze Techniques for Human Computer Interaction: A Research Survey. International Journal of Computer, 2013, 71(9), 18-25.

[7] Sharma, A. and Abrol, P., Direction Estimation Model for Gaze Controlled Systems. Journal of Eye Movement Research, 2016, 9(6), 1-12.

[8] Nandha, R. and Singh, H., Amalgamation of ayurveda with allopathy: A synergistic approach for healthy society. International Journal of Green Pharmacy, 2013, 7, 173-176.

[9] Morandi, A., Tosto, C., Sartori, G. and Sarsina, P. R., Advent of a Link between Ayurveda and Modern Health Science. Evidence-Based Complementary and Alternative Medicine, 2009, 2011, doi: 10.1155/2011/929083.

[10] Chauhan, A., Semwal, D. K., Mishra, S. P. and Semwal, R. B., Ayurvedic research and methodology: Present status and future strategies. Ayu, 2015, 36, 364-369.

[11] Meena, D. K., Upadhyay, D., Singh, R. and Dwibedy, B. K., A Critical Review of Fundamental Principles of Ayurveda. International Ayurvedic Medicine Journal, 2015, 3(7).

[12] Pal, M., The Tridosha Theory. Ancient Science of Life, 1991, 10(3), 144-155.

[13] Shiv Sharma, System of Ayurveda, Michigan, Neeraj Publishing House, 1929, pp. 1-356.

[14] Sahi, P., Abrol, P., Kumari, S. and Lehana, P. K., Origin of Object Oriented Computing Models for System Development in Indian scriptures, presented at the Third World Congress of Vedic Sciences, Pune, Jan 2018.

[15] Marut, Agni in Ayurveda: Part 2: Panchmahabhuta, Prachodayat, 31-Aug-2016. [Online]. Available: http://prachodayat.in/agni-ayurveda-panchmahabhuta/.

[16] Gaddam, D., A Survey on Nadi Pareeksha for Early Detection of Several Diseases & Computational Models using Nadi Patterns. International Journal of Computer Science and Information Technologies, 2015, 6(4), 3424-3425.

[17] Kachare, K. B., Girbide, S. G. and Bankar, S.A., Nadi Pariksha: An Ancient Ayurvedic Method of Diagnosis. Journal of AYUSH: Ayurveda, Yoga, Unani, Siddha and Homeopathy, 2016, 5(3), 48–51.

[18] Kulkarn, D., Doddoli, S., Shete, S., Verma, A. and Bhogal, R., A Bio-Electrical Model for Physiological Evaluation of Nadi Pariksha (Ayurvedic Pulse Diagnosis).International Journal of Ayurveda and Pharma Research, 2014, 2(4), 25-31.

[19] Rao, S. K. R, The conception of nadi its examination. Ancient Science of Life, 1985, 4(3), 148-152.

[20] LeCun, Y., Bengio, Y. and Hinton, G., Deep Learning. Nature, 2015, 521(7553), 436-444.

[21] O'Shea, K.; Nash, R., An Introduction to Convolutional Neural Networks, Available online: https://white.stanford.edu/teach/index.php/An_Introduction_to_Convolutional_Neural_Networks.

[22] Jia, X., Image Recognition Method Based on Deep Learning. In Proceedings of 29th Chinese Control and Decision Conference (CCDC), 2017, pp. 4730-4735.

[23] Kuang, P., Cao, W. N. and Wu, Q., Preview On Structures And Algorithms Of Deep Learning. In Proceedings of International Computer Conference on International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP), 2014, pp. 176-179.

[24] Lehana, P. K. and Pandey, P. C., Transformation of short-term spectral envelope of speech signal using multivariate polynomial modeling. In Proceedings of National Conference on Communications, Jan. 2011, pp. 1-5.

[25] R. L. Branham, Scientific Data Analysis: An Introduction to Overdetermined Systems, London: Springer-Verlag, 1990.

[26] Szegedy, C., Liu, W., Jia, Y., Sermanet, P., Reed, S., Anguelov, D., Erhan, D., Vanhoucke, V. and Rabinovich, A., Going deeper with convolutions. In Proceedings of 2015 IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2015.

[27] Boussaa, M., Atouf, I., Atibi, M. and Bennis, A., ECG signals classification using MFCC coefficients and ANN classifier. In Proceedings of IEEE International Conference on Electrical and Information Technologies, May 2016, pp. 480-484.

[28] Sahay, S., Wadhwani, A.K. and Wadhwani, S., A Survey Approach on ECG Feature Extraction Techniques. International Journal of Computer Applications, 2015, 120(11), 1-4.

[29] Miranda, M. V. G., Espinosa, I. P. V. and Calero, M. J. F., ECG signal feature extraction. In Proceedings of 2016 IEEE Ecuador technical Chapters Meeting, 2016.

[30] Wanli, Z and Guoxin, L., The Research of Feature Extraction based on MFCC for Speaker Recognition. In Proceedings of 2013 3rd International Conference on Computer Science and Network Technology, China, Oct 2013.

[31] Seddik, H., Rahmouni, A. and Sayadi, M., Text Independent Speaker Recognition using the Mel Frequency Cepstral Coefficients and a Neural Network Classifier. In Proceedings of Ecole Nationale Des Sciences Informatiques, Manouba, Tunisia, 2010.

[32] Cappe, O., Laroche, J. and Moulines, E., Regularized estimation of cepstrum envelope from discrete frequency points. In Proceedings of Euro Speech Madrid, Spain, 1995, pp. 451-454.

[33] Myers, C. S. and Rabiner, L. R., A comparative study of several dynamic time-warping algorithms for connected word recognition. The Bell System Technical Journal, 1981, 60(7), 1389-1409.

E- Learning from MOOCs through SWAYAM: Motivations and challenges of the Indian learners

Neeru Sharma *

ABSTRACT

SWAYAM MOOCs was introduced as a part of 17 by 17 Digital Learning Initiatives by the Ministry of Education, Government of India in 2017, and it was mandated that it should become a part of the credit-based program of the institutions. During COVID digital learning became the buzzword and saved the precious academic years of the students. The present study was conducted among the stakeholders of SWAYAM MOOCs in India. The questionnaire was framed in the Google Forms and posted through WhatsApp groups. The purpose of the study was to understand the profile, motivations and challenges faced by the learners. Most of the data was analysed by the Google Form App itself, and a few questions were manually analysed. The respondents were mostly in the age group of 22-24 years, females, enrolled for their master's degree programs, and were belonging to nuclear families. Their parents' education ranged majorly from 10th to Higher Secondary School, most of the fathers were in government service whereas mothers were home makers. Most of the respondents had registered for some courses on SWAYAM platform and their source of information and guidance were mostly their teachers. The major motivation for doing SWAYAM MOOCs was the requirement for completion of their degree, and they were satisfied with the online courses available on MOOCs, though they did report problems in registration. They preferred online mode of examination rather than the current practice of proctored examinations and have forwarded suggestions for improvement of outreach of SWAYAM platform.

Key Words: MOOC, SWAYAM, Online Education, Motivations, Challanges

Introduction

Education is a basic human right of an individual, and Education for all has been the motto of our Indian Educational Philosophy. If the person is somehow unable to reach the system of education, it has now become possible that the education reaches out to every individual, through the MOOCs. MOOCs stands for Massive Open Online Courses. The word MOOC was coined in 2008 by Dave Cormier, from the University of Prince Edward Island for a course offered by the University of Manitoba, "Connectivism and Connective Knowledge." In 2011, the Massachusetts Institute of Technology (MIT) Open Courseware (OCW) became the first to offer a large collection of MOOC resources. In 2012, MIT and Harvard initiated the EdX initiative for the advancement of MOOCs. Universities and other institutions worldwide partnered with external providers, the largest including US-based Coursera, Udemy, Udacity, and EdX, and Australian MOOEC. Some providers specialize in certain areas of study. Career and educational benefits have been reported by majority of people who have completed MOOCs, and contrary to the beliefs even economically and academically disadvantaged populations were taking advantage of these (Zhenghao et. al., 2015).

* Professor, Department of Home Science, University of Jammu, Jammu, India

Why MOOCs?

Massive Open Online Courses (MOOCs) are a relatively new way, especially in India, of offering education and training to individuals around the world. Especially during COVID Lockdown MOOCs served as a link to education for many. The development of Massive Open Online Courses (MOOCs) has initiated a breakthrough by providing academic instruction which is free of cost and development of professional skills from the leading universities of the world to anyone with the access the internet (Garrido et al, 2016). MOOC providers often promote their courses as an education that builds saleable skills (Rivas et al.2020). MOOCs offer many students the opportunity to study high quality courses online with prestigious Universities, and if we talk of Indian MOOCs through SWAYAM the courses are free and only certification examination is to be paid for. Many MOOC users are graduates seeking to top up their skills and competences. Being remote learning mechanisms, they can be combined with regular other study or work, since they can be accessed from any computer at any location including ones' home. With the introduction of Online Degree Programs on SWAYAM, the introduction of dual degree option and the multiple entry exit options, the learners in India can maximize their opportunities, even if they are not able to attend the regular teaching programs due to financial, distance or work constraints. MOOCs are very helpful in case of Persons with Disabilities or those who are immobile e.g., Aged, or Infirm, as they can be accessed from Anywhere, Anytime and by Anyone. There are no entry level requirements except in the newly introduced online degree programs, by the Ministry of Education, through SWAYAM. In terms of adopting new technologies for teaching, new forms of teaching, such as online courses, MOOCs, are increasingly seen as a feasible future form of learning (Xia,2015). Initial research has shown that MOOCs have mostly been deepening, rather than broadening, access to education (Trehan et al., 2017), yet an increase has been noted in the numbers of courses and enrolments since their inception.

A large survey of MOOC completers found that nearly half of respondents had enrolled to seek career related goals, and majority reported that the MOOC had provided benefit to their career (Zhenghao et al., 2015) , in the form of enhancing skills for the current job, successfully looking for a new job, and for few even starting their own businesses. MOOCs do not always lead to formal qualifications. Video-based, they offer interaction either through peer review and group collaboration or automated feedback through objective, online assessments (including quizzes and exams). SWAYAM dashboard gives an opportunity to directly interact with the Course Coordinator.

The basic principles of education, diversity, and inclusion can be achieved through online degree programs; besides the growing demand for higher education can be met at much lowered costs, and it can reach out to the non-traditional populations who were unable to attend any residential degree program (Kizilcec et al., 2019). However, even though online programs have begun to reduce some structural barriers, they may unconsciously have erected psychological barriers.

Research Facts on MOOCs

Based on surveys of 1,400 Massive Open Online Courses (MOOC) users and 2,250 non-users aged 18 to 35 years in Colombia, the Philippines, and South Africa, Garrido et al. (2016) found that low- and middle-income populations make up majority of MOOC users, in contrast to affluent ones reported at other places. Majority of MOOC users only had basic or average ICT skills, challenging the belief that MOOCs were predominantly opted for by people with higher-level skills. Women were more likely than men to complete a MOOC or obtain certification (Garrido et al., 2016). As per the survey, the major motivation of MOOC users was gaining specific skills for jobs, followed by preparation for further education, and obtaining professional certification. The major barrier among

nonusers was the lack of time; lack of access to computer or computer related skills were not found to be barriers (Garrido et al., 2016).

Malik (2015) says that the participation by Indians has been overwhelming in the major platforms such as Coursera, EdX and Udacity. According to a report the leading MOOCs platform had 10.5 million enrolled students. In the last three years, over 25 million people from across the world have enrolled in Massive Open Online Courses (MOOCs) offered by Coursera, EdX, and other platforms (Zhenghao et al., 2015).The survey also revealed that in some cases as many as 39% of learners were teachers. However, negative stereotypes and the experience of stigma related to online degree programs can act as psychological barriers to academic achievement, employability, and career advancement (Kizilcec et al., 2019). By the end of 2018, 101 million learners had registered in one or more of the 11,400 Massive Open Online Courses (MOOCs) offered by over 900 institutes worldwide (Shah, 2018).

Indian MOOCs: SWAYAM: Introduction

Indians, since ancient times, have held the belief that education takes us from darkness to light. Great universities like Takshshila, Nalanda and many others existed in India at the time when many of the now developed countries of the world were still initiating into a civilized life. Education is a basic human right of an individual, and Education for all has been the motto of our Indian Educational Philosophy.

SWAYAM (meaning 'Self'), a Hindi acronym that stands for "Study Webs of Active-Learning for Young and Aspiring Minds", is an Indian Massive Open Online Course (MOOC) platform. SWAYAM was initiated by the Ministry of Human Resource Development, now the Ministry of Education, Government of India, under 17 by 17 Digital Learning Initiatives, to give a free entry to web courses, covering all advanced education streams, High School, College, University, and skill sector courses. It was launched on 9th July 2017 by the Honourable President of India.

The National Education Policy, 2020, has stressed the consequent shift to the online mode of teaching-learning, thus reflecting the growing importance of online education in India. Focus on learner-centred pedagogy, and blended approach, to address the social, affective, and psychomotor dimensions of learning has also been emphasized, to improve the quality of teachers, and teaching. The target population for online education is the young persons with high aspirations and low income (KPMG and Google India, 2017), and as per the Census (2011) nearly 46% of India's population is between 15-40 years of age. SWAYAM MOOCs follow the four-quadrant approach of self-directed study.

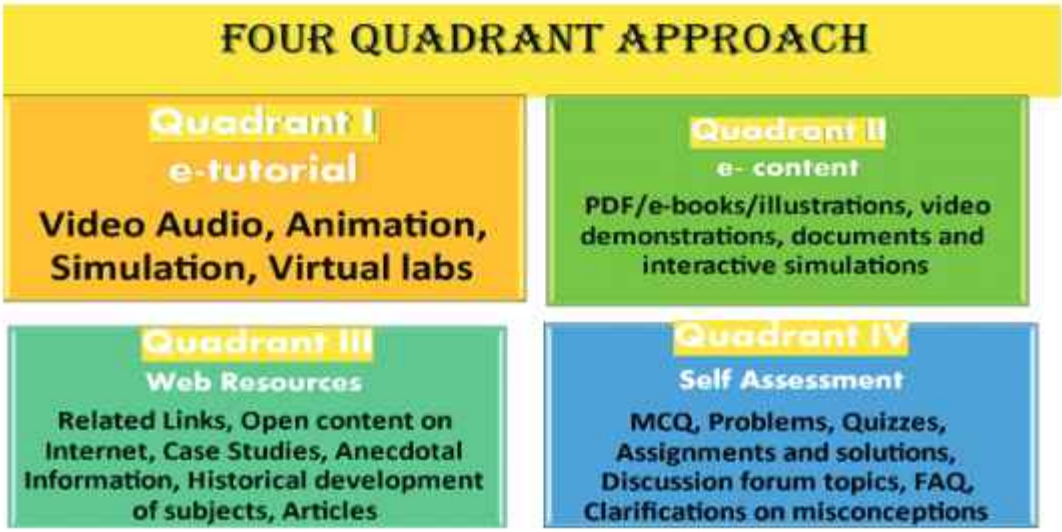


Fig 1: The Four Quadrant approach to SWAYAM MOOCs

(Source: UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016)

India has invested more than 33 million dollars in SWAYAM (Mendez, 2019). As an emerging superpower, that accounts for nearly one fifth of the world's population, India's belief on MOOCs sends a strong message of integrating online and traditional education that can help developing nations overcome challenges of education of youth. Some developing nations have already taken this message seriously, and in late 2018, India and Afghanistan signed a cooperation agreement to let institutions and students of Afghanistan to respectively offer and take courses on SWAYAM (Mendez, 2019). From the 2021-22 academic session, students of 149 universities may be able to earn upto 40% of their required credits from over 800 online courses available on the SWAYAM platform. The Academic Bank of Credit (ABC), which is going to be a repository of credits earned by a student, would become functional from the next academic session (Gohain, 2021). The enrolment in the January 2021 semester of SWAYAM was 24.6 lakh, and since its inception 2.1 crore learners have enrolled in SWAYAM.

Though the SWAYAM MOOCs have been launched successfully, with evident increase in the titles offered and the enrolments sought, there is a need to evaluate the experiences of Indian learners regarding these, and to understand their challenges, and suggestions based on these. The present study was planned, keeping in mind the above, to understand the popularity and receptivity of the SWAYAM courses among the learners.

Objectives

1. To know the demographics of the online learners
2. To assess the receptivity, accessibility, and motivations of SWAYAM MOOCs among the learners
3. To understand the challenges faced by the learners
4. To seek suggestions from the learners based on their experiences

METHODOLOGY

SAMPLE: The sample was selected through snowball sampling technique, by posting the Google Form on different WhatsApp groups. It was a pan India study, with a response return from 170 respondents.

Tools: Google Form was created. It contained questions related to the SWAYAM MOOCs only.

Data Collection: The data was collected through Online Forums only

Data analysis: Google form presents the analysed results, hence the same were used. Manual calculation was done regarding some questions.

RESULTS AND DISCUSSION

Background Information of The Respondents

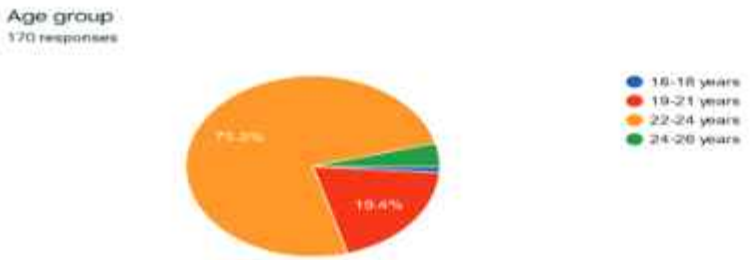


Fig 1: Age of the respondents

Majority (75%) of the respondents, as revealed by Fig 1, were in the age group of 22-24 years, and 19% were 19-21 years of age.

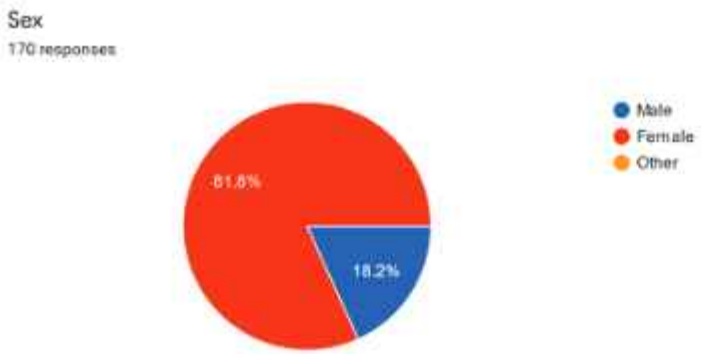


Fig 2: Sex of the respondents

Fig 2 shows that almost 82% of the respondents were females and 18 % were males

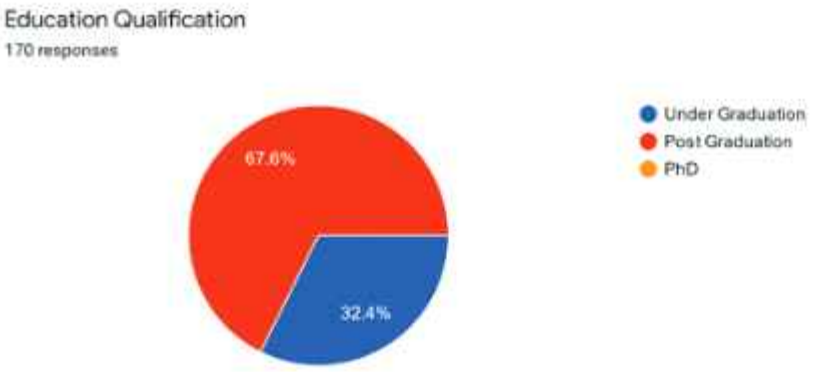


Fig 3: Education of the respondents

The data given in Fig 3 shows that almost 67% respondents were pursuing their Master's Degrees, and 32% were pursuing their undergraduate degrees.

FAMILY INFORMATION ABOUT THE RESPONDENTS

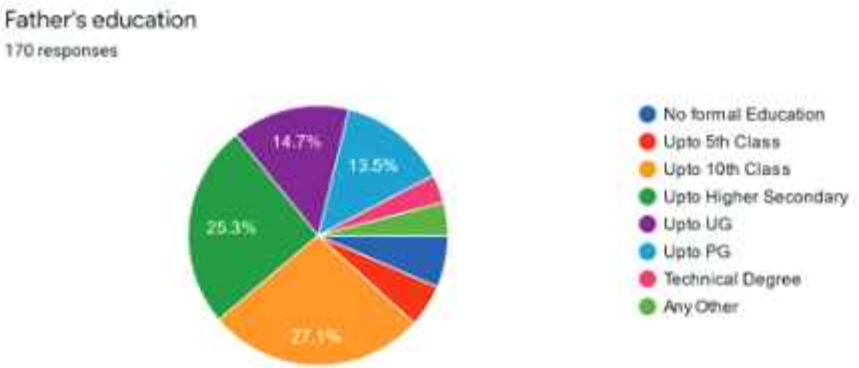


Fig 4: Education of respondents' Fathers

Fig 4 reveals that 27% of the fathers of the respondents had studied upto 10th standard, 25% upto Higher Secondary (12th standard) level, 15% upto under graduation, and 14% upto Post Graduation. Few of them had received no formal education, had studied upto 5th standard, or held technical degrees.

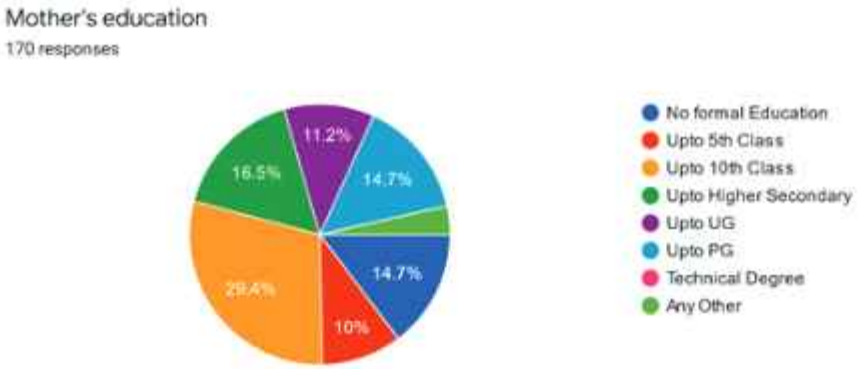


Fig 5: Education of respondents' Mothers

Like the data on fathers, Fig 5 shows that 29% of the mothers had studied upto 10th standard. 17% had studied upto Higher Secondary (12th standard) level. Almost 15%, each, either had received no formal education or had studied upto Post Graduation, respectively, and 11% had studied upto under graduation.

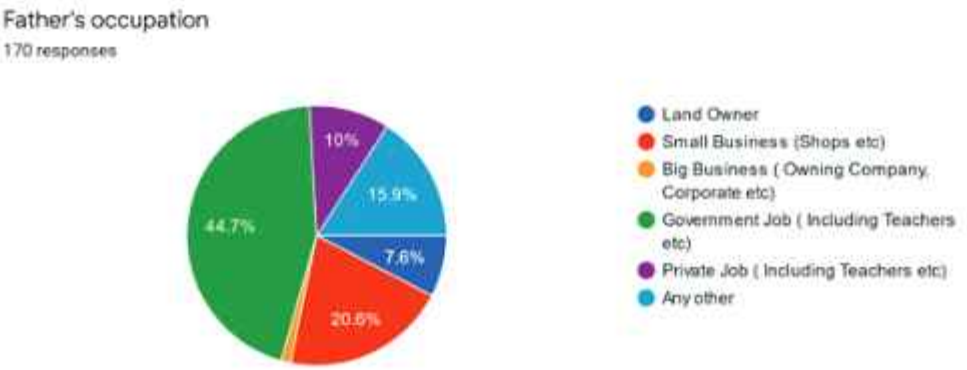


Fig 6: Occupation of respondents' Fathers.

Almost 45% of the fathers were employed in Government Jobs as per the data given in Fig 6, 21% were doing small businesses, 10% had private jobs, 8% were landowners, and 16 % were engaged in other jobs, not specified by the respondents.

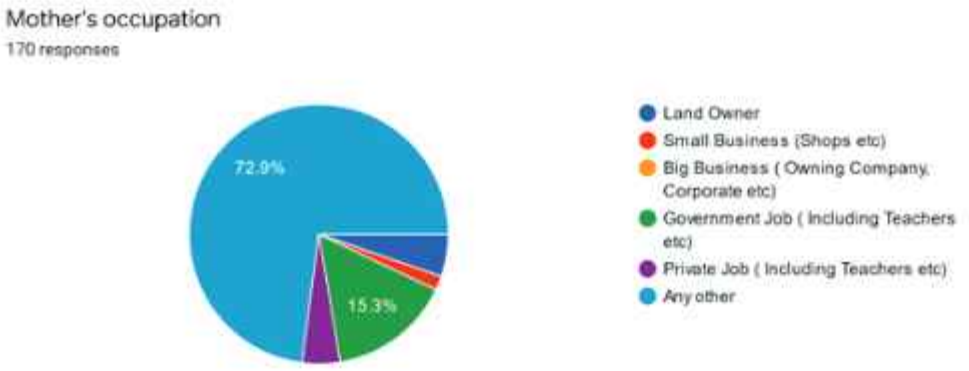


Fig:7: Occupation of respondents' Mothers

Fig 7 reveals that 73% of the mothers of the respondents were engaged in other occupations, i.e., they were home makers, and 15% were employed in Government Jobs.

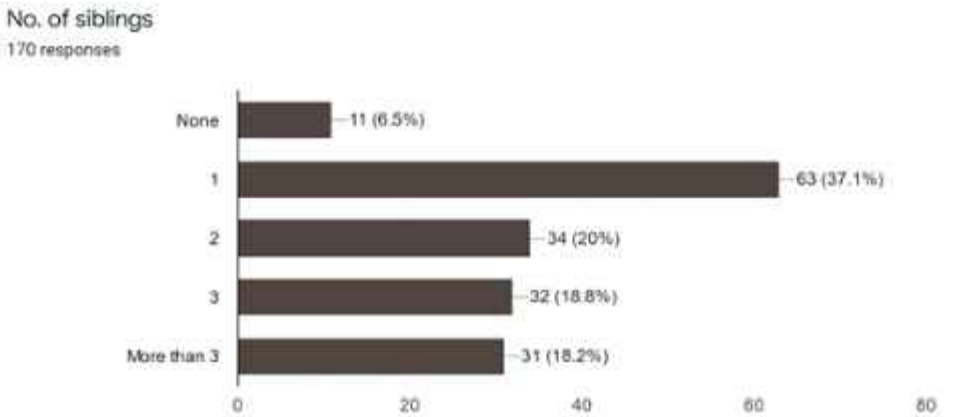


Fig 8: Number of siblings of the respondents

The data represented in Fig 8 shows that majority (37%) of the respondents had 1 sibling, 20% had 2 siblings, 19% had 3 siblings, and 18% has more than 3 siblings.

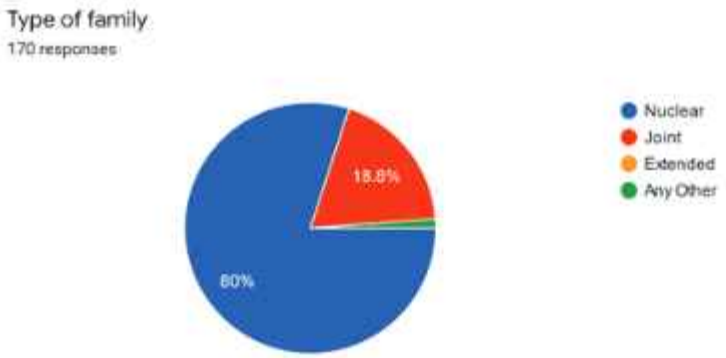


Fig 9: Type of family of the of the respondents

As per the data depicted in Fig 9, 80% of the respondents lived in nuclear families and 19% resided in joint families.

MOOCS ACCESSIBILTY, RECEPTIVITY AND MOTIVATION AMONG THE RESPONDENTS

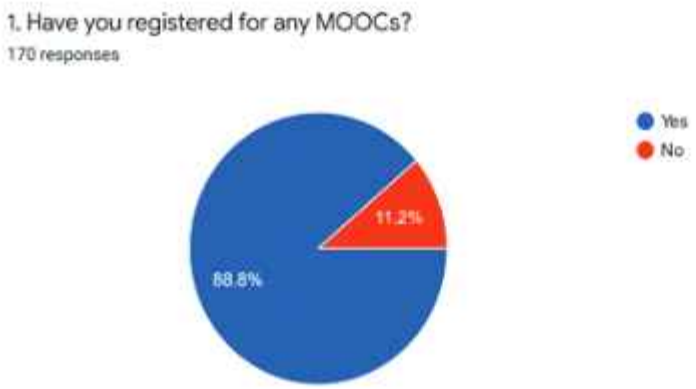


Fig 10: Registration for MOOCs

Eighty nine percent of the respondents had registered for MOOCs as per the data given in Fig 10.

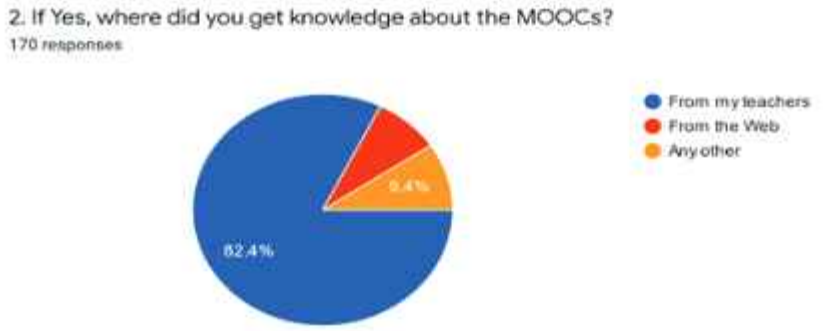


Fig 11: Source of information regarding MOOCs

Fig 11 reveals that 82% of the sample had received the Information regarding MOOCs from their teachers. Ten respondents had received information about MOOCs from the Web, and six respondents had received information from other sources.

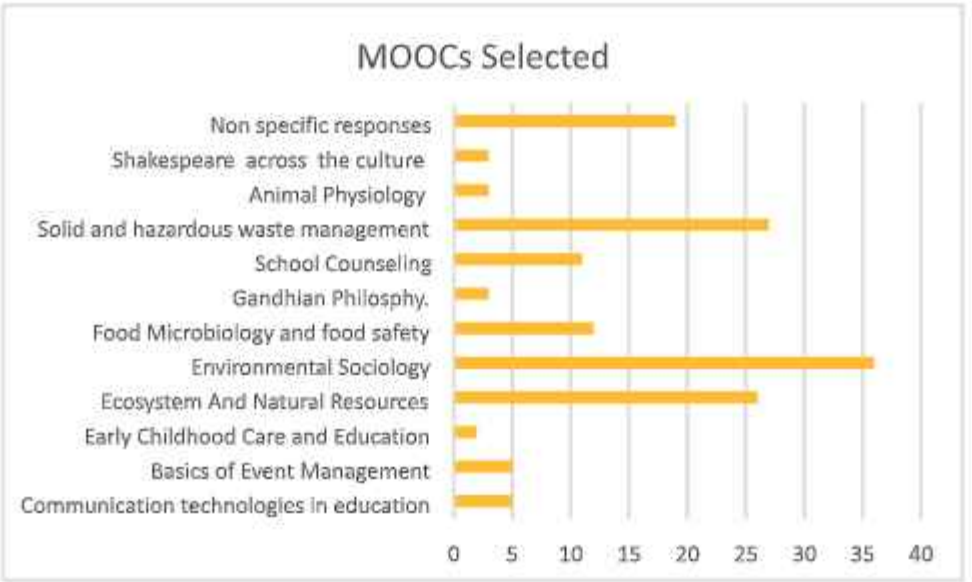


Fig 12: SWAYAM MOOCs selected by the respondents

The data given in Fig 12 shows that majority of the respondents had selected SWAYAM MOOCs titled Environmental Sociology, Solid and Hazardous Waste Management, and Ecosystem and Natural Resources. Few of them has selected Food Microbiology and Food Safety, and School Counselling.

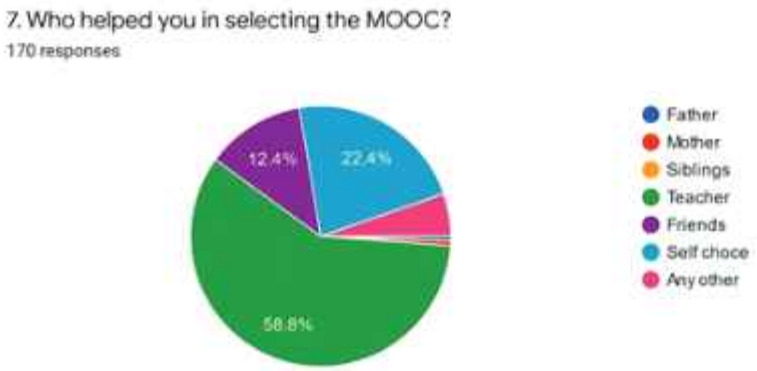


Fig 13: Help received in selection of MOOCs

The data depicted in Fig 12 shows that almost 59% of the respondents were helped by teachers in selection of MOOCs, 22% chose the courses themselves, and 12% took the help of friends in choosing the course.

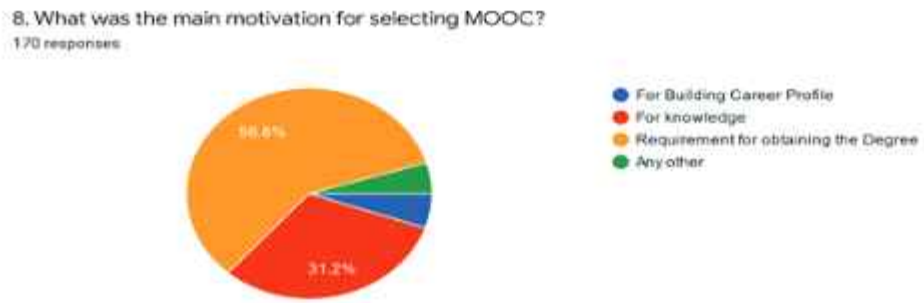


Fig 14: Motivation for selecting MOOCs

The major motivation for selection of MOOCs, for 59% of the respondents (Fig 14) was the requirement for obtaining the degree, and for 31% it was for gaining knowledge.

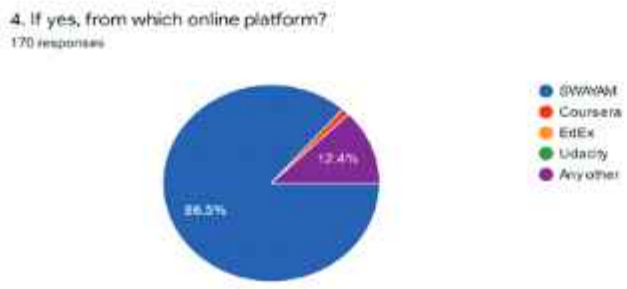


Fig 15: Platform selected for MOOCs

Fig 15 shows that almost 87% of the respondents had selected the MOOCs from SWAYAM portal of Government of India, and 12% had selected these from other platforms.

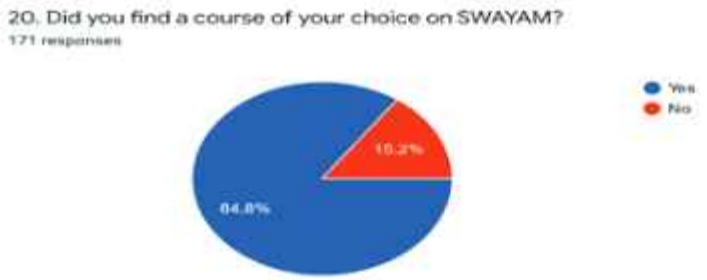


Fig 16: Availability of Course of choice on SWAYAM?

Majority (85%) of the respondents were able to find a course of their choice on SWAYAM.

MOOCS COMPLETION

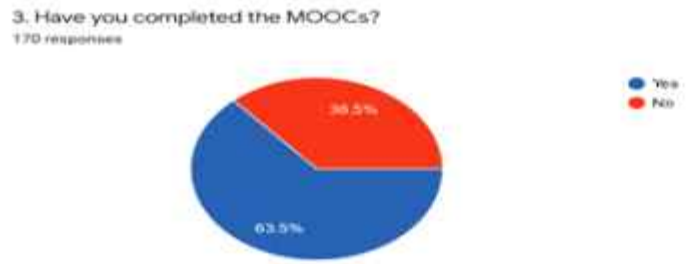


Fig 17: Completion of MOOCs

63.5 % of the respondents had completed the MOOCs course as per the data given in Fig 12, whereas 36.5% had not completed the course.

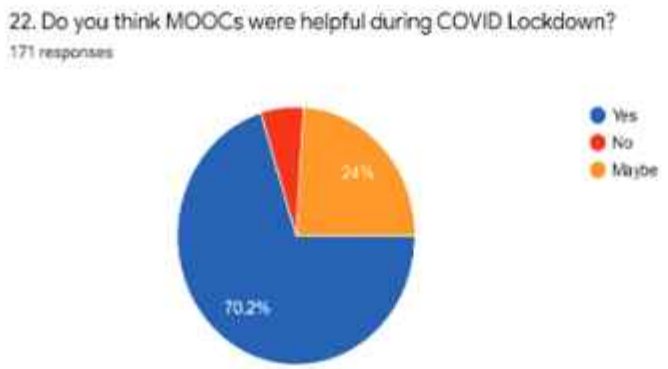


Fig 18: Helpfulness of MOOCs during COVID 19 Lockdown

Seventy percent of the respondents believed that MOOCs were helpful during the COVID Lockdown, 24% were not sure of this.

MOOCs COMPLETION AND EXAMINATION

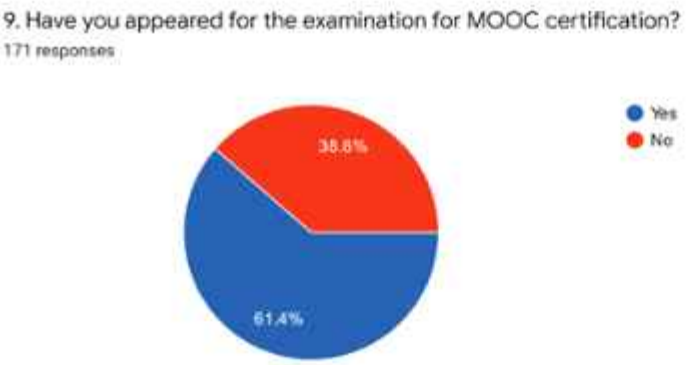


Fig 19: Appearing in MOOCs Examination for Certification

Fig 19 shows that 61% of the respondents had appeared for the MOOCs certification. Many of them were still to appear for examination as the course was ongoing. Few of them cited other issues such as internet connectivity, lack of information about MOOCs, lengthy syllabus, non-receipt of admit card, etc, as reasons for not appearing for Certification. It may be mentioned here that 20 respondents had not registered for the MOOCs due to lack of awareness and other factors.

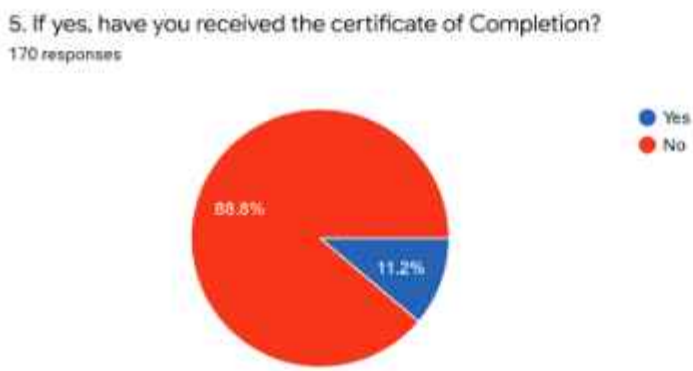


Fig 20: Receipt of Completion Certificate

Almost 89% of the respondents (Fig 20) had not received the certificate of completion of the course, as the courses were ongoing in many cases and the examination was awaited in others.

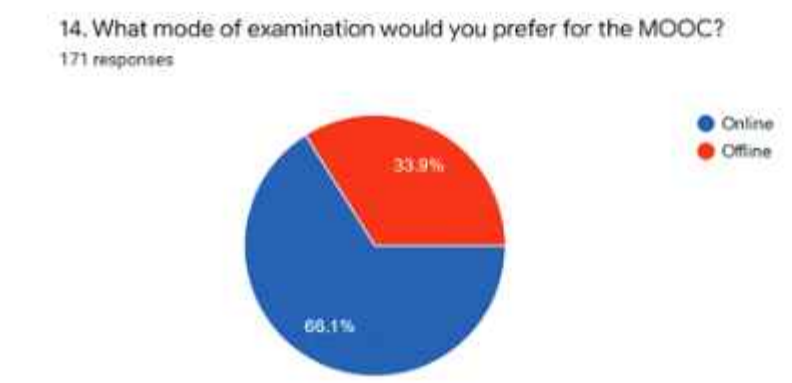


Fig 21: Preferred mode of MOOC examination

Fig 21 shows that 66% of the respondents would prefer Online Examination for MOOCs, whereas almost 34% would prefer Offline examination.

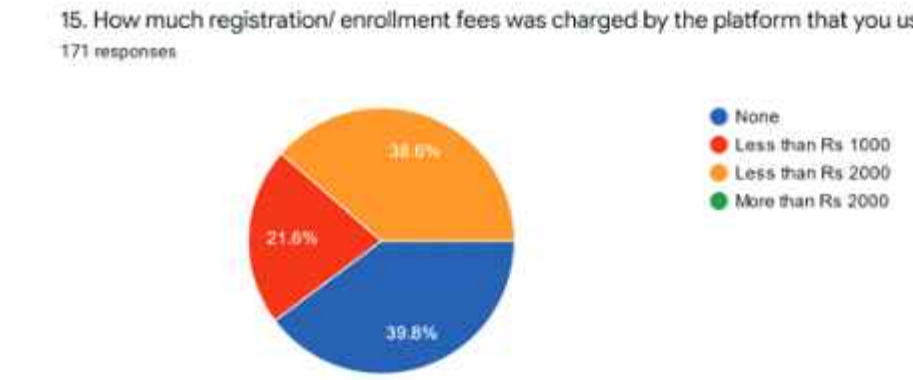


Fig 22: Fees charged for MOOCs

Majority of the respondents (40%) said that no fees was charged for registration/ enrolment on the platform they had used for MOOCs, almost 39% said that they had paid less than Rs.2000, and 22 % said that they had paid less than Rs.1000. SWAYAM charges no course fees as all courses are free for anyone, anywhere and anytime, only examination fees are charged by the National Testing Agency (NTA).

SATISFACTION AND CHALLENGES

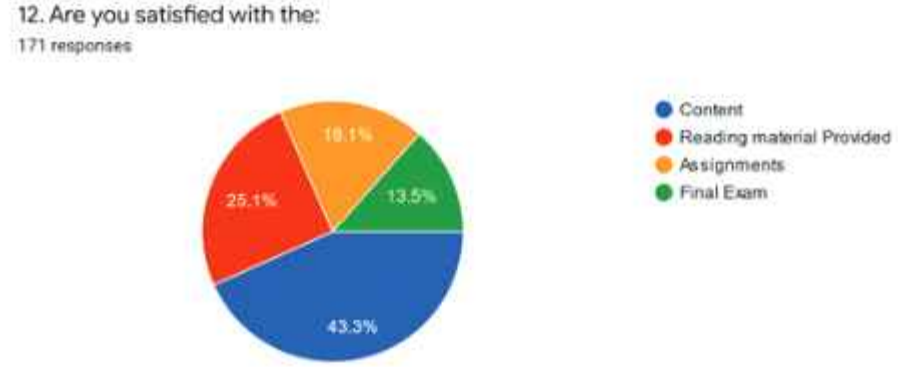


Fig 23 a) Satisfaction with quadrants of MOOCs

Fig 23 a) shows that 43% of the respondents were satisfied with the content, 25% were satisfied with the Reading material provided, 18% were satisfied with the Assignments, and almost 14% were satisfied with the Final Exams.

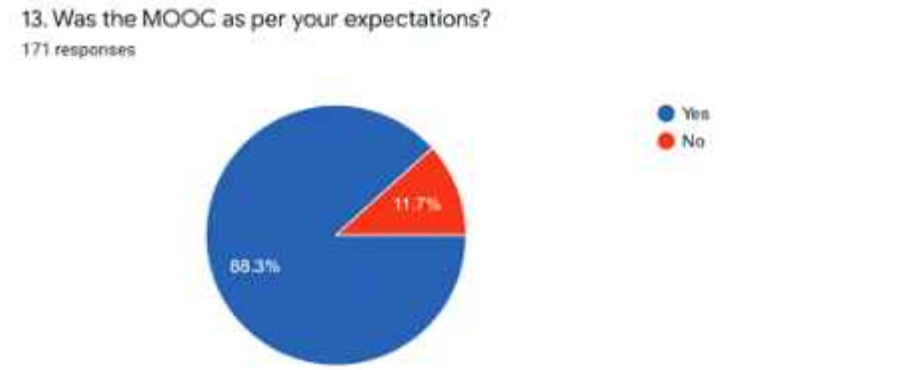


Fig 23 b) Satisfaction with MOOCs

Since only 89% respondents had done the courses from MOOCs, majority (88%) of them were satisfied with the MOOCs and found them as per their expectations.

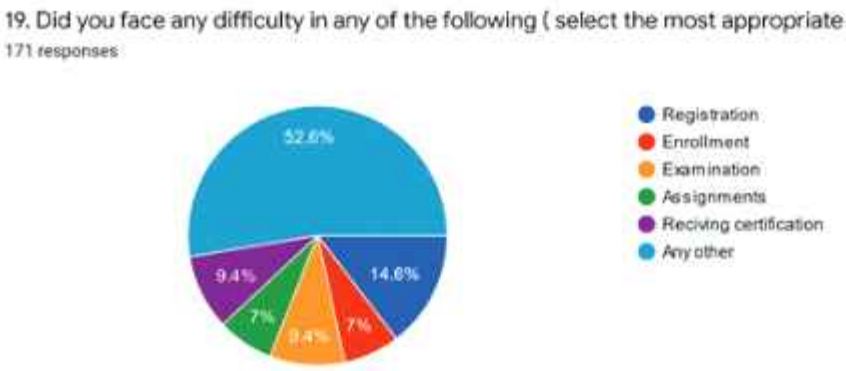


Fig 24: Difficulties faced in completion of MOOCs

Fig 24 shows that 15% of the respondents faced difficulties in Registration, 9% each faced difficulties in examination and receipt of certificate, 7% each faced difficulties in enrolment and assignments, and 53% faced other problems which they have not specified.

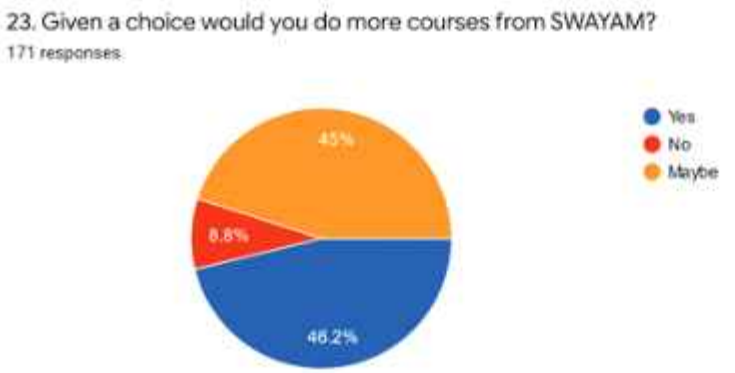


Fig 25: Would do more MOOCs from SWAYAM?

Fig 25 reveals that 46% of the respondents would so more MOOCs from SWAYAM, given a choice, 45% were not sure, but 9% said no they would not do more courses.

SUGGESTIONS FROM THE RESPONDENTS

Suggestions of the respondents for improvement of SWAYAM

1. Reference Material: Majority of the respondents were satisfied with the courses available and had no suggestion as such, but many of them wanted that more courses, and material covering more disciplines should be made available. The problems of learners in India must be seen within the context of the specific issues related to education. Some of the major concerns regarding the implementation of MOOCs, in Indian context, are the availability of technological infrastructure, investment in education, diversified population, quality of

courses, adoption of MOOC among learners and their acceptance by the academic institutions (Pant, Lohani and Pandey, 2021).

2. Language of Instruction for MOOCs: Few suggested that there should be availability of a greater number of lectures, usage of both Hindi and English Language for videos, one to one interactive sessions with the Course Coordinator etc. India has a diversity of languages and dialects, the learners belong to diversified cultural and socio-economic backgrounds, which has to be taken into consideration while planning any new policy or program of learning. Learning is mediated by language of instruction and social engagement (Barak, Watted and Haick, 2016). Learners, coming from different cultural backgrounds, can differ in terms of learning methods, communication style, and rules of behaviour, and attention must be paid to the significant role of language in participants' motivation to learn in online environments (Barak, Watted and Haick, 2016). India is a widely diversified country having multicultural society and MOOCs require addressing this issue in a more practical way (Pant, Lohani and Pandey, 2021). Though the courses in most of the languages are available, yet efforts can be made to include more languages in a course where mode of instruction in the parent institution is available neither English nor Hindi.

3. Awareness about MOOCs through SWAYAM: Some of them suggested that there should be more awareness generation regarding SWAYAM MOOCs, and few others who had faced technical issues suggested improvement in these. Majority of the respondents were not aware of MOOCs, and among those who were aware most of the respondents had learnt about them from the Internet, whereas few of them had come to know about them from a Friend (Purkayastha and Sinha, 2021). Hence, more emphasis on spread of information regarding MOOCs through SWAYAM should be made by the individuals offering the course, the institutions where the learners are enrolled and the Ministry of Education at large, especially in far flung areas of the country, where learners and others may be able to derive maximum benefit from these.

Discussion

The results of the present study revealed that the age of majority of the respondents was 22-24 years, mostly females returned the responses, and their educational qualification was post-Graduation. Fathers and mothers of most of the respondents had studied upto 10th standard or Higher Secondary schools, fathers were mainly employed in government jobs, and mothers were homemakers. They respondents on an average has one sibling and they belonged to nuclear families.

Majority of them had registered for a MOOCs course, and they had got the information about MOOCs from their teachers, whereas a few of the respondents said said that they had no awareness regarding MOOCs. The studies conducted across India show mixed results regarding awareness of SWAYAM MOOCs. The learners themselves have suggested the need for more awareness programs on the issue. Mohile (2021) found that many of the students were not aware about SWAYAM MOOCs. Ambadkar (2020) also found that majority of her respondents were not aware of SWAYAM MOOCs, and after brief introduction about them most of the respondents exhibited their readiness of learning through the portal, and they were also motivated to opt for certification. In another study majority of the respondents had come to know about SWAYAM from teachers and few from their friends (Subaveerapandiyan and Ahamed, 2020). The Indian universities should play a significant role in making the students as well as the common masses aware of the educational interventions made by MOOCs under the SWAYAM platform (Bordoloi et. al., 2020).

There are many factors which may motivate the level of awareness and adoption of SWAYAM

MOOCs by the institutions and learners. Researchers have found out many such motivators and tried to consolidate them into factors. Sahoo et.al (2019) found that there was significant effect of level of education and streams of higher education on students' awareness, indicating higher awareness among post graduate students as well as professional course students (Sahoo, Sahoo and Devi, 2019). Self-directed learning (SDL) is necessary for successful learning in MOOCs (Zhu,2022). In a mixed method study to examine the design and delivery of MOOCs, Zhu (2022) found that the MOOC instructors conferred ownership of learning to students to motivate education, and also used intrinsic motivation techniques like helping students identify the value of and need for learning in the MOOCs, increasing their self-efficacy, usage of a variety of resources and strategies, such as short videos and concrete examples, to increase students' self-efficacy in achieving their learning goals. For extrinsic motivations they provided incentives such as certificates, badges, and credits. SWAYAM MOOCs provide the extrinsic motivations to learners, but it is upto the course instructors to provide the intrinsic motivations to increase the self-efficacy of the learners to finish the courses.

Awareness generation and motivations through people who have benefitted from the MOOCs can be used effectively to achieve this target. Many of the stakeholders in states/UTs like Jammu and Kashmir belong to far flung areas, where even the uninterrupted supply of electricity is still a farfetched dream, the internet connectivity is disrupted or the signal is not available, and the teachers at the school, and college level are themselves not aware of the MOOCs and their benefits, the outreach of SWAYAM has to be encouraged and facilitated in all manners, if this has to sustain and make an impact. Having spent so much on preparation of MOOCs, the aim should now be to spread awareness about them to the people who may require it the most, due to faculty shortage in their area or lack of subject options, or also for help in clarifying the content of the courses at Secondary and Higher Secondary Levels, so that the learners are not forced to drop out.

Regarding the selection of the courses, MOOCs are open electives, which the learner select with the help of their mentors, who in most cases are their teachers. In the University of Jammu, we have incorporated SWAYAM MOOCs in the regulations, and the credit transfer and reflection in the marksheet has also been accepted by the University Council, the highest decision-making body of the University. The respondents of this survey were doing the MOOCs course from SWAYAM portal of the Ministry of Education, Government of India, on Environmental Sociology, followed by Solid and Hazardous Waste Management and Ecosystem and Natural Resources. Their teachers had helped them in the selection of the course. The main motivation for selecting the MOOCs was the requirement for obtaining the Degree, and most of them could find a course of their choice on SWAYAM platform.

Five types of MOOC completers according to their learning motivation were classified by Barak, Watted and Haick (2016), based on their research: Problem-solvers, Networkers, Benefactors, Innovation-seekers, and Complementary learners, and the learners from the present study may fall in the category of Complementary Learners, since they were enrolled in MOOCs only because of requirement of their Degree, or a new category may be created for them such as Enforced Learners, till the time they become the motivated learners. In a study on Commerce students of MSU, Baroda, Ambadkar (2020) found that majority of the learners selected Skill based courses, very few selected diploma courses, and most selected post graduate degree course subjects. Zengaho et.al. (2015) found that the most common reason for taking a MOOCs was the career benefits derived from it, many of the people surveyed reported a primary goal of improving their current job or finding a new job, saying that they are "career builders". Majority of their respondents reported an intangible educational benefit (such as gaining knowledge in their field), and few reported a tangible educational benefit, either gaining credit toward an academic degree or completing prerequisites for an academic

program, as is the case with majority of the respondents of the present study who were majorly focussed on the tangible benefits of MOOCs.

Most of the respondents, of the present study, had completed their MOOCs, whereas a few were awaiting their examination or results. They had still not received their course completion certificates at the time of research. They have connected their MOOCs completion with their degrees mostly, and the requirements of the University Degree was their main motivation in course completion and certification. Many youth with whom I have interacted over the last few years, in the course of introduction and stabilization of MOOCs in our University, felt that this was an additional burden for them, as they already had a number of credits to earn from their regular courses, others felt that if the credits were not going to be added to the final grade sheet/ transcript, doing MOOCs was a futile exercise. So, unless they derive some extrinsic motivation it will be difficult to initiate the learners to MOOCS, and once they derive some benefits from it, they would certainly try to shape their degree themselves, filling in the blanks through SWAYAM MOOCs. Badali et.al., (2022) have classified the motivational factors for MOOCs retention as need-based motivation and interest-based motivation, and academic motives played an important role in MOOCs completion, which was also the case of the learners in the present study. In a review-based paper 43 motivational factors were identified by Hakami, White and Chakaveh (2017), which were classified into four major dimensions which were: learner related, institution and instructor-related, platform and course-related, and perception of external control/ facilitating conditions-related factors. Reaching that stage of motivation would take time and the stakeholders should focus on the leaders amongst their learners, who would later become motivators for others.

Connectivism learning theory suggests that newer learning contexts like MOOCs, which are digitally facilitated and informal can have different learning motivations than the traditional, formal ones (Wang and Baker, 2015). Their results showed different motivations among those who completed the course and those who did not; the course completers tended to be more interested in the course content, whereas non-completers tended to be more interested in MOOCs as a type of learning experience. Since the SWAYAM MOOCs are mandatory in nature the motivation to complete them remains enforced. Not completing them would lead to delay in obtaining the degree.

The system or type of examination is a motivating or restraining factor too. Initially SWAYAM evaluations were done online, but as the enrolment increased the offline mode was introduced. NTA, National Testing Agency, is endowed with the responsibility of conduct of examination. SWAYAM evaluations are done now based on mostly external pen and paper proctored exams, and the internal assignments, in the ratio of 70/30 respectively, but the respondents mostly opined for online mode of examination for these, a preference shown by majority of the respondents in Ambadkar's (2020) study. If the online mode of examination is sustained more learners, from far flung areas, will be able to appear for them. Informal feedback from the students at the University of Jammu has shown that they would like the examination to be online, as many of the learners belong to remote areas, and sometimes due to weather conditions or other deterrents like transport facilities, finances involved in boarding lodging at the place of examination, and certain other unavoidable factors may demotivate them from appearing for certification, though they may have completed all other work related to MOOCs.

Financial viability of the course may be motivator or deterrent for any program for people in countries like India, where majority of the population lives in rural areas, sustenance is agriculture based, and poverty still is the main reason for lack of development in certain areas. If a student registers and enrols for a MOOCs through SWAYAM, no course fee is charged, as it a free course

based on the tenets of Anywhere, Anytime, Anyone, but for appearing in the examination for obtaining a course completion certificate, the National Testing Agency (NTA) charges a fee of Rs. 1000/course from the general category candidates. Many of the respondents said that they were charged nothing for the MOOCs course, many said they were charged less than Rs. 2000, and others said less than Rs 1000. The respondents seem to be confused regarding the fees they were charged.

The respondents were mostly satisfied with the content of the MOOCs and the reading material provided, though less number were satisfied with the assignments and final exams, yet majority were satisfied with the MOOCs, and found them as expected. The difficulties faced by the respondents were not specified by the majority, although few listed difficulties in registration, receiving of certification, examination etc. Subaveerapandiyan and Ahamed (2020) found that majority of the respondents were satisfied with the course instruction and syllabus. Not only India but also globally MOOCs are undergoing a decline in enrolment of students (Pant, Lohani and Pandey, 2021). Providing timely support and assessment of students has become a challenging task as far as MOOCs are concerned (Nisha and Senthil, 2015).

Given a choice almost half of the respondents would do other courses on SWAYAM and almost half of them were not sure about it. Many regular students of higher education expressed positive reaction towards MOOCs (Sahoo, Sahoo and Devi, 2019). Based on the analysis of secondary data, MOOCs in India do not seem to be very popular till today and they are accessible only to a small section of the society (Bordoloi et.al., 2020). Pathak and Mishra (2021) studied learner satisfaction and learner intention-fulfilment (IF) with the MOOCs, among 177 MOOC participants. The satisfaction level of their respondents was positively affected by variables like online self-regulated learning which includes goal setting, behavioural variables, and perceived course usability, and not age or sex.

During COVID 19 Lockdown the education system in India, like in other countries, shifted to an online mode, for almost 3 years. Majority of the respondents found MOOCs as helpful during the COVID 19 Lockdown. Massive Open Online Courses (MOOCs) have received a great deal of attention from the academic community, business, and the media, especially after the World Health Organization (WHO) officially declared COVID-19 as a pandemic in March 2020 (Pant, Lohani and Pandey, 2021).

Conclusion

MOOCs have sustained themselves since they were first introduced and have a huge potential in a diverse country like India. The learners require some time to absorb the concept and adapt to digitally mediated self-regulated learning. The support from their mentors, teachers in most cases, is essential to keep them motivated to join and complete the MOOCs, if not for certification only, but for gaining of knowledge. The adult learners need to be made aware of the benefits of shaping their own degree programs, rather than following the tailor-made traditional courses. Poverty and Unemployment are big concerns for Indian youth, and if they educate and equip themselves well, with knowledge and skill, they will be better suited for the job market. With the NEP 2020 Higher Education in India has opened to multiple entry exit possibilities, and learners can take benefit of MOOCs in enhancing their job profiles, by not only aiming for accumulation of degrees, but also for being better prepared for the job market.

References

Ambadkar, Rupali. (2020). E-Learning Through SWAYAM MOOCs- Awareness and Motivation Among Commerce Students. International Journal of Scientific & Technology Research. 9: 3529-3538.

Badali, M., Hatami, J., Banihashem, S.K. et al. (2022). The role of motivation in MOOCs' retention rates: a systematic literature review. RPTEL 17,5. https://doi.org/10.1186/s41039-022-00181-3

Bordoloi, R.., Das, P. and Das, K. (2020).Lifelong learning opportunities through MOOCs in India", Asian Association of Open Universities Journal, 15(1):83-95. https://doi.org/10.1108/AAOUJ-09-2019-0042

David Cormier reference: A Policy Brief on MOOCs, https://openbooks.col.org/ policybriefonmoocs/ part/main-body/ retrieved on 28/4/2022.

Garrido, M., Koepke, L., Andersen, S., Mena, A., Macapagal, M., & Dalvit, L. (2016). An examination of MOOC usage for professional workforce development outcomes in Colombia, the Philippines, & South Africa. Seattle: Technology & Social Change Group, University of Washington Information School.

Gohain, Manash Pratim.(2021). Students can now get 40% of university credits from e-courses. https://economictimes.indiatimes.com/industry/services/education/students-can-now-get-40-of-university-credits-from-e-courses/articleshow/84749236.cms. Last Updated: Jul 26, 2021, 10:30 AM IST

Hakami, N., White, S. and Chakaveh, S. (2017) Motivational Factors that Influence the use of MOOCs: Learners' Perspectives - A Systematic Literature Review. DOI: 10.5220/0006259503230331 In Proceedings of the 9th International Conference on Computer Supported Education (CSEDU 2017) ,2:323-331

Kizilcec., René. and Davis, Dan. and Wang, Elle.(2019). Online Degree Stigma and Stereotypes: A New Instrument and Implications for Diversity in Higher Education. Available at SSRN: https://ssrn.com/abstract=3339768 or http://dx.doi.org/10.2139/ssrn.3339768

KPMG and Google India. (2017). Online Education in India 2021: A study by KPMG in India and Google. Retrieved on 31.05.2022

Malik, Sumeet. (2015). Indian MOOCs (Massive Open Online Courses): Need of the hour. International Journal of Applied Research. 1(11): 930-932

Mendez, M.C. (2019). In India, MOOCs Are Now Part of the Education System. The Report by Class Central. https://www.classcentral.com/report/swayam-for-credit/

Mohile, Rahul. S. (2021). A Study on E-Learning using SWAYAM (MOOCs)- Awareness among Undergraduate and Post Graduate Students. International Journal of Creative Research Thoughts (IJCRT),9(1):1785-1789.

Nagasampige, Manojkumar. and Nagasampige, Kavita.(2017). A qualitative study on usage and effectiveness of Massive Open Online Courses (MOOCs) In Indian University Education System. European Journal of Open Education and E-learning Studies, [S.l.], Available at: <https://oapub.org/edu/index.php/ejoe/article/view/761>. Date accessed: 24th of May 2022. doi:http://dx.doi.org/10.46827/ejoe.v0i0.761.

Nisha, Faizul. and Senthil, V. (2015). MOOCs: Changing Trend Towards Open Distance Learning with Special Reference to India. DESIDOC Journal of Library & Information Technology, 35 (2): 82-89

Pant, Harsh., Lohani, Manoj. and Pande, Jeetendra. (2021). MOOCs in Higher Education: Current Trends in India and Developed Countries. 10.4018/978-1-7998-7844-5.ch004. Retrieved on 23.05.2022.

Pathak, A, and Mishra, S.(2021) An Empirical Exploration of MOOC Effectiveness Towards

Participants' Intention-Fulfilment and Learners' Satisfaction. Vision. doi:10.1177/09722629211054170

Purkayastha, Nilanjana., Chanda A.K. and Sinha, Kumar, Manoj.(2021). Unstoppable study with MOOCs during Covid 19 Pandemic: A study" (2021). Library Philosophy and Practice (ejournal). 4791. https://digitalcommons.unl.edu/libphilprac/4791

Rivas, M.J., Baker,R.B. and Evans, B.J. (2020). Do MOOCs Make You More Marketable? An Experimental Analysis of the Value of MOOCs Relative to Traditional Credentials and Experience. AERA Open. doi:10.1177/2332858420973577

Sahoo, P.K., Sahoo, Namita. and Devi, Usha. (2019). A Study of Higher Education Students Awareness of MOOC (SWAYAM) Programme and Usefulness of a Teacher Education Course offered through SWAYAM. PCF-9 Submission 317, Pan-Commonwealth Forum 9 (PCF9), 2019. http://oasis.col.org/handle/11599/3333, retrieved on 23.05.2022.

Shah, D. (2018). By the numbers: MOOCs in 2018. Class Central. https://www.classcentral.com/report/mooc-stats-2018/

Subaveerapandiyan, A and Ahamed, Fakrudhin Ali,(2020). Awareness and Usage of Swayam Courses among Library and Information Science Students: A Survey . Library Philosophy and Practice (e-journal). 3705. https://digitalcommons.unl.edu/libphilprac/3705

UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016.

Wang, Yuan. and Baker, Ryan. (2015).Content or platform: Why do students complete MOOCs? MERLOT Journal of Online Learning and Teaching, 11(1): 17-30

Zhenghao, C., Alcorn, B., Christensen, G., Eriksson, N., Koller, D., and Emanuel, E. (2015). Who's benefiting from MOOCs, and why. Harvard Business Review, 25(Sept), 2-8.

Zhu, Meina .(2022) Designing and delivering MOOCs to motivate participants for self-directed learning, Open Learning: The Journal of Open, Distance and e-Learning, DOI: 10.1080/02680513.2022.2026213

SOCIAL SCIENCES

Impact of Information Communication Technologies on Library Resources and Services in the University Libraries of Jammu & Kashmir: A Study

Amit Sharma & Meghna Dhar***

ABSTRACT

The present study was designed to assess the impact of Information Communication Technologies (ICT) on the approach of students, scholars and faculty members of various Universities of Jammu and Kashmir towards library. The study is carried out to explore in detail the types of ICT based information sources and services provided to the users and the benefits they were reaping from them. It discussed the awareness level of users, literacy and skills, level of satisfaction, availability and barriers with respect to ICT based resources and services. It further described in detail the use pattern of ICT based information sources, services and problems faced by the users in accessing these sources. ICT has influenced almost every segment of our life which resulted in bringing a transformation in the user's thinking, searching, interaction, etc. This ground-breaking change is also factual in the case of libraries and information centres. It was also assessed that a well-resourced library or information centre with the ICT based services and resources can satisfy the maximum demand of its patrons.

Key Words: Information Communication Technology; ICT; Information Technology; Web based Library Services; Digital Libraries, Internet.

Introduction

The world of libraries is witnessing tremendous change due to the development of Information Communication Technology (ICT) and phenomenal rise of electronic and print resources. Due to information explosion, ICT application in libraries has become inevitable. Effective application of ICT in libraries helps in performing their operations and services most efficiently. Information has always been one of the most important commodities and is accepted as a resource with equal emphasis on its contents and means of delivery for users. ICT is essential in the Libraries for speedy and easy access to information, remote access to users, 24x7 availability of information, and access to unlimited information from different sources with no geographical limitations. It is essential to provide the right kind of information in the right form to the right user at the right time. Use is the key purpose and user is the most dynamic component of any library and information system. The effectiveness of a library and information system depends on the extent to which system characteristics corresponds with the user.

Significance of the Study

The study is significant as it sought to examine the use of ICT in the universities of Jammu and Kashmir. The relevance of the study also lies in exploring the ICT infrastructure, its use and application of ICT based library services and resources. It also tries to find out the perception of the users towards

*Research scholar, Department of Library & Information Science, University of Jammu, Jammu, India
**Assistant Professor, Department of Library & Information Science, University of Jammu, Jammu, India

the ICT based library services and resources.

Review of Related Literature

Literature search plays a very important role in research activities, as it forms the very first step of research pursuit. A thorough review of literature is very essential in conducting a new research. Considerable amount of literature is available regarding application of Information Communication Technology (ICT) in libraries, professional development and continuing educational needs of library professionals. Some of the worth mentioning studies which are reviewed and deserve to be mentioned are as follows: -

(Jones & Umoh, 2022) described that in this era of globalization, in which the world is connected, information gains its power through permanent storage and wide distribution, which could be achieved through ICT .The aim of libraries is to provide services that satisfy their users' needs and wants, and the incorporation of ICT into library services has provided libraries with a great opportunity to do so. The study also recommended that in order to achieve sustainable development the government should adopt the role of ICT in the provision of library services, allocate resources for the creation of digital libraries, provide training and conduct awareness programs to emphasize the value of digital libraries. (Alahakoon & Somaratne, 2020) in their study measured the levels of sources of ICT self-efficacy of undergraduates in Humanities and Social Sciences (HSS) of universities especially in Sri Lanka has not been adequately explored. The main objective of this research study was to identify the levels of the factors that are affecting the ICT self-efficacy among the HSS undergraduates in Sri Lanka and the differences between the factors based on the university. The study recommends conducting a cross-sectional, longitudinal research study to better understand the levels of ICT Anxiety, ICT Training and the Library Support. (Patil & Dhembre, 2019) states that higher education in India has made considerable progress in last few decades. Similarly, development in technology brings the terms like e-learning or use of Information Communication Technology (ICT) in higher education which makes a tremendous change in the education system. It allows learners to study anywhere and at anytime, with effective learning to unlimited number of students.(Mohan & Mahapatra, 2018) in their study considering the implacability of knowledge management in the higher education sector attempts to understand and explore the impact of ICT. In this research, a sincere attempt has been made to analyze last fifteen years of research studies extensively, which proves the synergistic implication of knowledge management and ICT in higher education institutions in the rapidly evolving competitive globalization era. (Meenambigai, 2017) states that ICT is a significant component in the education development in order to prepare the citizens for the tomorrow. Higher education plays a crucial role in the development of a nation, as it is viewed as a dominant means to construct knowledge-rich society. The class of teaching is often associated with the use of ICT in teaching and learning. Hence, this study was intended to analyse the attitude, knowledge and extent of utilization of ICT tools and techniques. (Babu et al., 2015) in their study revealed that in view of the ICT environment and emergence of e-resources, it was suggested that libraries should pay more attention to procure e-resources and subscribe e-journals and databases, etc. Further, it is suggested that the existing staff should be trained in the application of ICT in libraries through continuing professional education programmes. Although a sizable number of libraries have acquired computers, yet it is found that those libraries are not completely automated. (Velmurugan & Amudha, 2014) in their study explained the ICT resources and their use by the faculty members, research scholars and students in the colleges of Virudhunagar District. The paper discussed the awareness adequacy, purpose, usefulness, and satisfaction level of using ICT based resources among the library users. ICT has pioneered new methods of teaching and conducting research on education facilities for

online learning, teaching and research collaboration. (Kumar, 2013) in his article stated that over the decades there has been a remarkable transformation in the information globe. Everyone has to adapt to these changes in society and information demands have compelled information professionals to seek more effective and efficient methods of processing, storing, and retrieving data in order to keep up with the application of modern information technology. Librarians lack technical skills required for optimum utilization of information communication technologies. The main constraints faced by professionals in acquiring ICT skills are the poor infrastructural facilities and lack of cooperation from management. (Yadagiri & Thalluri, 2011) in their paper delved deeply into the possible threats created by information explosion and the necessary action to be taken by library and information professionals in dealing with and managing the information sources to bring them to the mouse click of right information seeker at the right time. (Haneefa & Shukkoor, 2010) found that the professional assistants are more ICT literate than the Junior Librarians and Assistant Librarians. Professional Assistants use more ICT-based resources and services, library automation software, and general purpose application software than Junior and Assistant Librarians. The use of digital library and institutional repository software by library professionals was extremely low. The majority of professionals were comfortable with routine ICT and internet tasks, but they needed advanced training in library automation, digital library, and institutional repository software. (Sharma & Arora, 2004) discussed the impact of Information Technology on Libraries and also described that the factors for modernisation and importance of introducing library automation, networks and use of Internet which has projected the future libraries as electronic libraries. (Goswami, 2003) in his paper presented the overview of digital development in India. The current policies and programmes of the state with regard to digital libraries, e-governance and information facilities centres have been examined keeping in view their suitability for socio-economic development. In India, digitalization of knowledge artifacts (i.e. manuscripts, archival records, books, periodicals, maps etc.) and dissemination of electronic information to the common citizen have become part of state policy. (Sambisivan, 2002) in this paper mentioned that due to the rapid development and diffusion of Information Communication Technologies in all walks of life, the entire human society is on the verge of a transition or transformation. (Goswami, 2001) underlined the importance, components of information technology and its application for development of libraries and information centres. He discussed the use of technologies relevant to the activities of the library. (Baby, 1998) pointed out some of the important developments in the field of Information Technology and their applications in library operations and information handling. Automation in libraries and information canters saved the time of users. The accuracy and speed gained by library automation brings out economy to the institution and enables to achieve promptness in services. All this help in improving the working efficiency of libraries and thereby attained maximum satisfaction of library users.

Objectives

- To find out level of awareness of users with respect to ICT based library resources and services.
- To examine the literacy and skills of the users concerning ICT based library resources and services.
- To find out satisfaction level of users towards ICT based library resources and services.
- To identify various problems faced by the users while accessing ICT based library resources and services.

Methodology

The study is carried out to explore in detail the types of ICT based information resources and services offered to the users of University Libraries of Jammu & Kashmir. The researcher used the questionnaire method to collect data from the users of various universities in Jammu and Kashmir to determine the level of awareness, ICT knowledge and skills, level of satisfaction, availability of ICT-enabled resources and services, and to identify the barriers faced by the users in using ICT-enabled library resources and services. A total of 200 questionnaires were distributed among the Librarians and Users of different University Libraries of Jammu and Kashmir, out of which 180 responses were received back duly filled. The University libraries undertaken for the study were:

- University of Kashmir (UoK)
- University of Jammu (UoJ)
- Sri Mata Vaishno Devi University (SMVDU)
- Central University of Jammu (CUJ)
- Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-J)
- Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir (SKUAST-K)

Data Analysis and Findings

The study was undertaken to explore in detail the kind of ICT based information sources and services made available to the users and the benefits they were exploiting from them. It studied in detail the use pattern of ICT based information resources, services and problems faced by the users while accessing these resources. The data of this study was collected both from primary and secondary sources. The primary data was collected through questionnaire. The questionnaire contained both closed and open-ended questions seeking quantifiable information and opinion of library users on ICT based information resources and services. About 200 questionnaires were distributed among the library users of various University libraries under study and out of which 180 responded. The detailed analysis is given herein:

The respondents were asked about their awareness level towards application of Information Communication Technologies in their respective Libraries. Their response is indicated in Table 1 and Fig 1.

Table 1: Awareness level of Users about ICT in Libraries

Name of University	Awareness Level of Users about ICT				Total
	To Great Extent	To Some Extent	To Moderate Extent	Not Aware	
UoK	30	2	10	3	30
UoJ	18	5	15	7	18
SMVDU	14	11	3	2	14
CUJ	6	0	0	0	6
SKAUST -J	11	4	1	2	11
SKAUST - K	13	18	2	3	13
Total	92	40	31	17	180
%age	51.11 %	22.22 %	17.22 %	9.44 %	100

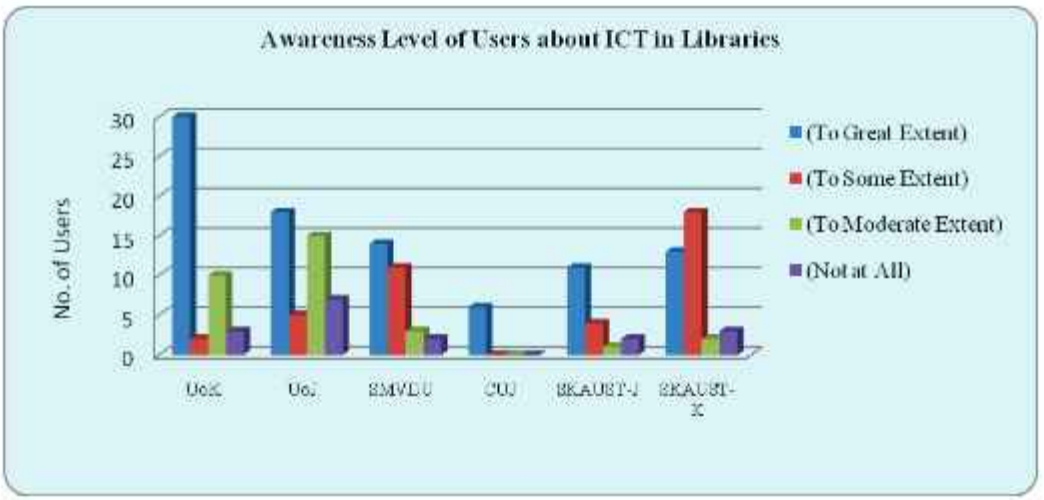


Fig 1: Awareness Level of Users towards ICT in Libraries

From Table 1 and Fig 1 it is revealed that majority 92 (51.11 %) of the respondents were aware towards ICT to a great extent, followed by 40(22.22 %) to some extent, 31(17.22%) to a moderate extent and 17(9.44%) are not aware.

The respondents were asked whether they possess ICT Literacy and Skills to use ICT based resources and services. Their response is indicated in Table 2 and Fig 2.

Table 2: ICT Literacy and Skills among Users

Name of University	ICT Literacy & Skills		Total
	No	Yes	
UoK	30	15	45
UoJ	18	27	45
SMVDU	21	9	30
CUJ	0	6	6
SKAUST-J	0	18	18
SKAUST- K	3	33	36
Total	72	106	180
%age	40%	60%	100

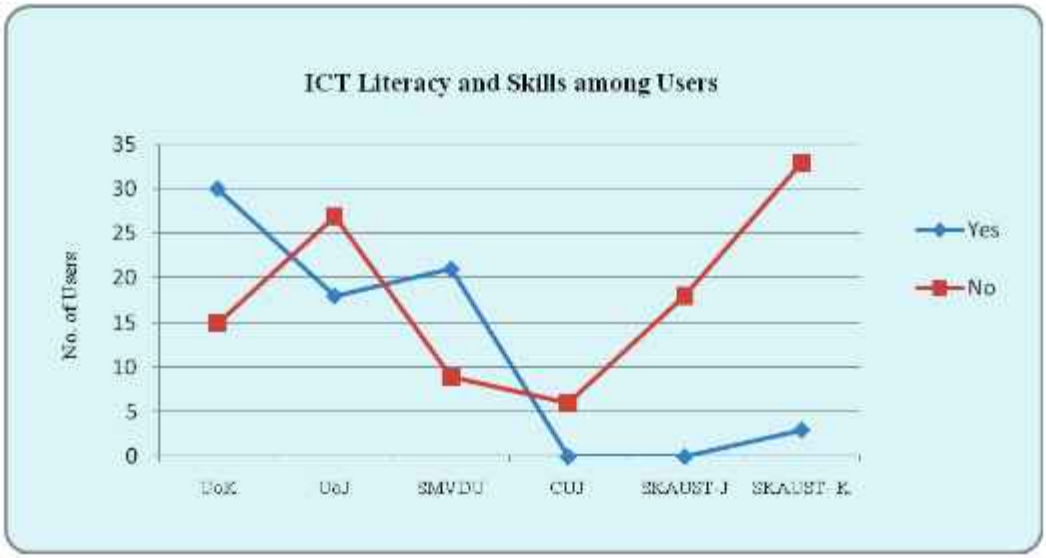


Fig: 2: ICT Literacy & Skills among Users

From Table 2 and Fig 2 it is depicted that maximum number of respondents 106 (60%) have adequate knowledge and skills to access ICT based Library resources and services whereas 70 (40%) of respondents do not have adequate knowledge.

The respondents were asked about their satisfaction level of users towards ICT based resources and services in libraries. Their response is indicated in Table 3 and Fig 3.

Table 3: Satisfaction Level of Users towards ICT based Resources and Services

Name of University	Satisfaction Level of Users		Total
	Satisfied	Not Satisfied	
UoK	24	21	45
UoJ	21	24	45
SMVDU	20	10	30
CUJ	5	1	6
SKAUST-J	15	3	18
SKAUST- K	29	7	36
Total	99	81	180
%age	63.3%	36.7%	100

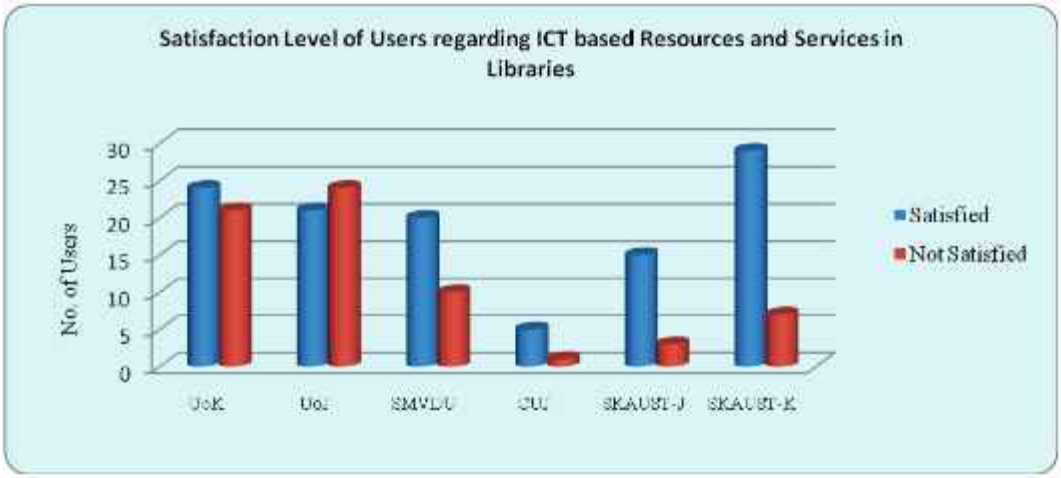


Fig 3: Satisfaction Level of Users towards ICT based Resources and Services

From Table 3 and Fig 3 it is revealed that majority 99 (63.3%) of the respondents are satisfied with ICT based resources and services in libraries whereas 81(36.7%) respondents are not satisfied with ICT in based resources and services libraries.

The respondents were asked about their knowledge about availability of ICT based Resources and Services in their respective Libraries. Their response is indicated in Table 4 and Fig 4.

Table 4: Knowledge about availability of ICT based Resources and Services in Libraries

Name of University	Knowledge about ICT facilities				Total
	To Great Extent	To Some Extent	To Moderate Extent	Not at All	
UoK	30	12	3	0	45
UoJ	24	18	0	3	45
SMVDU	12	9	3	6	30
CUJ	3	3	0	0	6
SKAUST-J	0	18	0	0	18
SKAUST- K	24	9	3	0	36
Total	93	69	9	9	180
%age	51.7%	38.3%	5%	5%	100

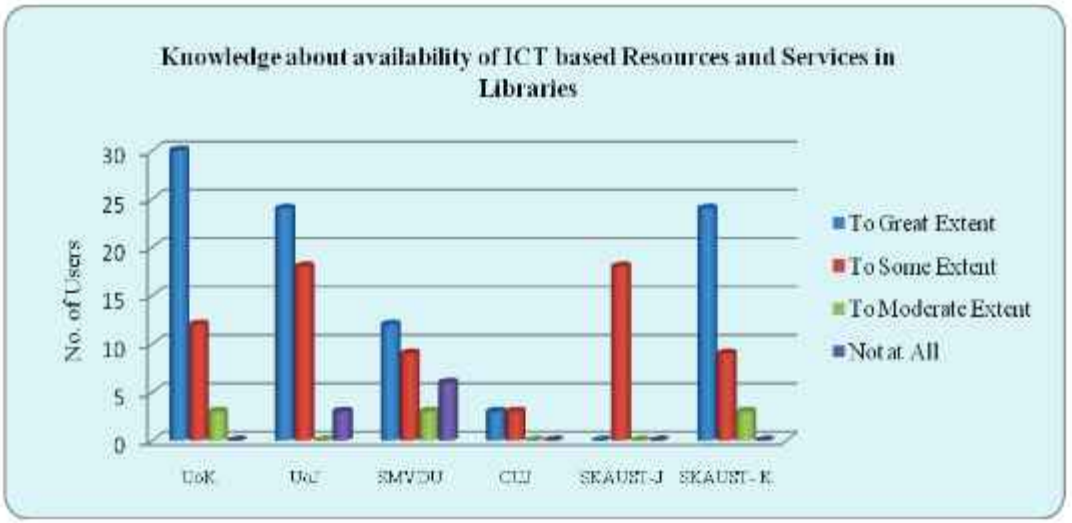


Fig.4: Knowledge about ICT based Resources and Services in Libraries

From Table 4 and Fig 4 it is indicated that majority 93 (51.7 %) of the respondents replied that they know about ICT facilities/services in their Libraries to great extent, followed by 69 (38.3 %) to some extent, 9 (5%) to a moderate extent whereas 9 (5%) users have no information about ICT facilities in their respective libraries.

The respondents were asked about resistance/hurdles they face while using ICT resources and services, in their respective libraries. Their response is indicated in Table 5 and Fig 5.

Table 5: Reasons/hurdles for resisting ICT implementation

Name of Universities	Feeling of Insecurity		Lack of upgraded ICT Skills		Lack of Proper Training		Inadequate Infrastructure		Competencies with Trained staff	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
UoK	45	0	36	9	27	18	42	3	42	3
UoJ	45	0	39	6	36	9	39	6	42	3
SMVDU	21	9	24	6	21	9	18	12	24	6
CUJ	6	0	6	0	6	0	6	0	6	0
SKAU ST-J	18	0	18	0	0	18	18	0	18	0
SKAU ST-K	36	0	36	0	24	12	24	12	18	0
Total	171	9	159	21	114	66	147	33	168	12
%age (`180)	95%	5%	88.3%	11.7%	63.3%	36.7%	81.7%	18.3%	93.3%	6.7%

From Table 5, majority 66(36.7%) of the respondents have indicated 'Lack of proper training' the main reason behind their resistance, followed by Inadequate Infrastructure 33 (18.3%), lack of updated ICT Skill 21(11.7%), competencies with trained staff 12 (6.7%) and minimum number of

respondents 9 (5%) have feeling of insecurity.

Findings

- The majority, 92(51.11%) of the respondents, were highly aware of ICT, while only 17(9.44%) of the respondents were not aware of ICT.
- Most of the respondents, 106(60%), have adequate knowledge and skills to access ICT enabled library resources and services while 70(40%) of the respondents do not have adequate knowledge and skills to access ICT enabled library resources and services.
- 99(63.3%) of the respondents were satisfied with ICT-enabled library resources and services while 81(36.7%) of the respondents were not satisfied with ICT-enabled library resources and services.
- Majority 93(51.7%) of the respondents are highly aware of the ICT facilities and services in their libraries while only 9(5%) of the respondents have no information about the ICT facilities in their respective libraries.
- The majority, 66(36.7%) of respondents, cited lack of proper training, the main reason behind their resistance, followed by inadequate infrastructure 33(18.3%), lack of updated ICT skill 21(11.7%), competencies with trained staff 12(6.7%) and feeling of insecurity 9(5%).

Suggestions

The applications of ICTs are increasing in academic libraries, especially in the university environment. Based on the findings of the present study, the following suggestions have been made for developing and improving the status of ICT application in the studied university libraries with special reference to Jammu and Kashmir. The study recommends the following:-

- The University Libraries must increase the availability of ICT infrastructure to enable the users to maximize the usage of ICT-based resources and services.
- The University Libraries must put efforts to bring awareness among the Users towards the ICT-based resources and services through Orientation programs, workshops, training sessions etc.
- The "Digital/Online Library Service" is one of the most useful services in the university library system. Users can access digital resources subscribed by the libraries and open access resources within library or through remote login software such INFED, EZ-Proxy, Open Athens etc.
- The libraries should implement digital library software. It is found that no library has implemented digitization software. It is very useful to digitize rare collections such as older and out of print editions.
- Special financial assistance may be provided for the development of subject oriented university libraries.

Challenges of ICT in Libraries

- Changing role of libraries and librarians
- Funding of libraries
- Copyright management
- Information access

- Preservation of digital information resources
- Legal deposit (Copyright, Plagiarism)

Conclusion

Information Communication Technology (ICT) has impacted almost every aspect of our lives, changing the way people think, interact, etc. This revolutionary change also applies to libraries and information centers. Today, libraries and information centers can hardly function without computers and information technologies. In the modern world, library and information professions have changed and adapted to the development of information and communication technologies. These technologies have gained the crucial importance. A well-equipped library, which has modern information infrastructures and technologies, can satisfy the maximum demand of its customers.

References

Alahakoon, C., & Somaratne, S. (2020). Measuring the levels of sources of ICT self-efficacy among the Humanities and Social Sciences undergraduates in Sri Lanka. Journal of the University Librarians Association of Sri Lanka, 23, https://doi.org/10.4038/jula.v23i2.8006

Babu, B. R., Rao, P. N., & Baskar, K. (2015). Libraries in Chennai on the Threshold of the Third Millennium: Information Communication Technology Issues and Challenges. DESIDOC Journal of Library & Information Technology, 35(4 SE-Special Issue on Visualising Libraries). https://doi.org/10.14429/djlit.35.4.8847

Baby, M. (1998). Use of information technology in information handling in libraries. Kelpro Bulletin, 2(1), 9–12.

Demeke, W., Olden, A., & Abdelnour Nocera, J. (2016). Factors Affecting the Adoption of Information and Communication Technologies: Small Hotels and Tour Operators in Addis Ababa, Ethiopia. Libri, 66. https://doi.org/10.1515/libri-2016-0029

Goswami, A. (2001). Application of Information technology in libraries services. Herald of Library Science, 40(2), 36–41.

Goswami, P. R. (2003). Digital Development in India: Libraries and Information Facilitation Programme. CLIS Observer, XX(1–2), 3–7.

Gurikar, R., & Mukherjee, B. (2015). Information Technology Usage Scenario in Academic Libraries of Higher Education in Chhattisgarh: Challenges and Opportunities. DESIDOC Journal of Library & Information Technology, 35(4 SE-Special Issue on Visualising Libraries). https://doi.org/10.14429/djlit.35.4.8844

Haneefa, Mohamed K; Shukkoor, C. K. A. (2010). Information Communication Technology Literacy among Library Professionals in Calicut University, Kerala.

DESIDOC Journal of Library & Information Technology, 30(6), 55–63.

Jones, F. P., & Umoh, M. (2022). The Role of Ict in the Provision of Library Services: A Panacea for Sustainable Development. Intercontinental Academic Journal of Library and Information Science, 4(1), 45–56.

Kawatra, P. R. (2013). Fundamentals of Information Communication Technology (ICT). B.R. Publishing Corporation.

Koganuramath, M. M., & Angadi, M. (2010). Digitisation in an Academic Library: A Success Story at

Tata Institute of Social Sciences. DESIDOC Journal of Library & Information Technology, 30(1 SE-Papers). https://doi.org/10.14429/djlit.30.1.283

Kumar, K. (2013). Knowledge on ICT Skills among LIS Professionals of Engineering Institutions of Andhra Pradesh State: A Survey. DESIDOC Journal of Library & Information Technology, 33, 480–487. https://doi.org/10.14429/djlit.33.5479

Meenambigai, J., Yeshwanth, S. S. G., & Thatchinamoorthy, C. (2017). Attitude, Knowledge and Extent of Utilization of ICT Tools Among the Staff and Students of Faculty of Agriculture, Annamalai University, Chidambaram, Cuddalore District, Tamil Nadu. Journal of Global Communication, 10(1), 26. https://doi.org/10.5958/0976-2442.2017.00005.2

Mohan, A., & Mahapatra, M. (2018). Managing knowledge in higher educational institutions in the ICT era: The road ahead. International Journal of Knowledge Management and Practices, 6(2), 21–25.

Mondal, A. K., & Bandyopadhyay, A. K. (1 C.E.). Application of ICT and Related Manpower Problems in the College Libraries of Burdwan. DESIDOC Journal of Library & Information Technology, 30(4), 44–52. https://doi.org/10.14429/djlit.30.4.459

Nasiruddin, M. (2001). Challenges to the IT Industry in Bangladesh: Present and Future. Kelpro Bulletin, 5(2), 27–33.

Patil, D. B., & Dhembre, G. R. (2019). Application of ICT in Higher Education. Journal of Emerging Technologies and Innovative Research, 6(3), 495–500.

Sambisivan, K. (2002). Information Communication Technology and social change. SRELS Journal of Information Management, 39(2), 227–232.

Sharma, P. C., & Arora, I. (2004). Information Technology on the Gateway to Impart Knowledge. Herald of Library Science, 43(2), 104–108.

Velmurugan, V. S., & Amudha, G. (2014). Use of ICT Based Resources and Services among the Users of Arts and Science Colleges in Virudhunagar District: A Study. International Research Journal of Library and Information Science, 4(4), 522–535.

Yadagiri, S., & Thalluri, P. V. S. (2011). Information Technology on Surge: Information Literacy on Demand. DESIDOC Journal of Library & Information Technology, 32(1 SE-Papers). https://doi.org/10.14429/djlit.32.1.1408

Disparities in Ownership of Household Assets among Farmers in Rural Punjab: An Analysis

Manjeet Kaur, Ravita** and Gian Singh****

ABSTRACT

The present paper examines the disparities in ownership of household assets among farmers in the rural areas of Punjab. For the present paper, a sample of 510 farm households has been selected from the high, medium, and low productivity regions. The results reveal that an average farm household has household assets worth Rs. 13225402.43; and this value varies from the marginal farm-size category to the large farm-size category. The ownership of durable, farm and livestock assets is positively associated with the farm size. There are wide disparities in ownership of household assets among the different farm-size categories. The average value of durable assets of the large farm-size category is 6.36 times of the marginal farm-size category. The farmers representing large and medium farm-size categories own relatively more expensive and qualitative livestock assets. There is a positive relationship between the per capita value of assets and farm size. The distribution of per household and per capita assets is highly skewed among the farm households in the rural areas of Punjab.

Key Words: Farm households, household assets, farm assets, livestock assets, disparities

Introduction

Assets are an important indicator of economic well-being of households. These are the resource endowments and capabilities which are essential for the people to sustain their livelihoods and enhance their welfare (Moser & Dani, 2008; and Singh & Singh, 2017). Assets lead to positive outcomes for individuals, families, and communities; create opportunities for advancement; and enable the poor to raise their economic, political and social position (Weiss & Curley, 2003). Access to productive assets plays a significant role in enhancing the welfare of rural households; helps them to deal with income uncertainty; and enables them to move out of poverty (Tatwangire, 2011). As per All India Debt and Investment Surveys (AIDISs), there were wide variations in average value of assets between the rural and urban areas in India. The state-wise average value of assets in the rural areas was the highest in Haryana, followed by Punjab state (National Sample Survey Office, 2016).

In Punjab, the agricultural sector is the backbone of the economy. The agriculture and allied sector contributed almost 30 per cent of the Gross State Value Added (GSVA) on an average between the period of 2011-12 and 2018-19. As per the Periodic Labor Force Survey (PLFS) 2017-18, this sector provided employment to 26 per cent of workers aged 15 and above as per Usual Principal and Subsidiary Status (UPSS) against 44.14 per cent at the national level. Since the Green revolution in 1960s to 1970s, the State has grown to be the bread basket of the country (Government of Punjab,

*Lecturer, Department of School Education, Punjab, India
** Assistant Professor, Department of Economics, Punjabi University, Patiala, India
*** Professor, Department of Economics, Punjabi University, Patiala, India

2020). The adoption of New Agricultural Technology or well known Green Revolution consisting of high yielding varieties of seeds, chemical fertilisers, and irrigation facilities helped the Punjab economy to achieve a high growth trajectory (Gulati et al., 2017). During the 1980s, the momentum of the Green Revolution could not be sustained. There was stagnation in yields accompanied by increasing costs of cultivation. The cost increase came largely from over mechanization, labour and irrigation (Singh, 2000). The Green Revolution which has generated growth and prosperity was also the indirect cause of the widening gap between the rich and poor farmers (Ladejinsky, 1969). The benefits acquired from the technology were confined only to those farmers who had sufficient land and owned capital funds; and ultimately, large volume of marketable surplus (Singh & Dhaliwal, 2011). In Punjab, distribution of ownership holdings of land was also extremely unequal; and the substantial share of land continued to be in the hands of large land-owners.

The present paper is an attempt to examine the disparities in ownership of household assets among farmers in the rural areas of Punjab. More specifically, it estimates per household and per capita values of household assets; examines the relative shares of the different constituents of household assets; and explores the extent of inequalities in household asset ownership that are prevailing among the different farm-size categories.

RESEARCH METHODOLOGY

For the purpose, Punjab state has been divided into three regions known as high, medium and low productivity regions on the basis of agricultural productivity. In order to calculate the agricultural productivity, output of major ten crops has been aggregated, and average was taken for the year 2013-14 (Government of Punjab, 2015). For avoiding the geographical contiguity, Ludhiana, S.A.S. Nagar and Mansa districts have been selected from the high, medium and low productivity regions respectively. The three selected districts also cover the agro-climatic zones of the state, representing Ludhiana from the Central Plains Zone, S.A.S. Nagar from the Shivalik Foothills Zone, and Mansa from the South-West Zone. The selected districts comprise 21 development blocks. One village from each development block has been selected through the random sampling method. In all, 21 villages have been selected. As many as 10 per cent farm households out of total farm households have been selected randomly for the survey. Thus, a representative sample of 510 farm households has been taken up. Out of these, 264 farm households are selected from Ludhiana district, 114 from S.A.S. Nagar district, and 132 from Mansa district. On the basis of ownership of land holdings, farm households have been classified into marginal (having land up to 1 hectare), small (having more than 1 and up to 2 hectare land), semi-medium (having more than 2 and up to 4 hectare land), medium (having more than 4 and up to 10 hectare land), and large (having more than 10 hectare land) farm-size categories (Government of Punjab, 2015). Out of total 510 farm households, as many as 188, 144, 88, 63, and 27 farm households represent the marginal, small, semi-medium, medium, and large farm-size categories respectively. The statistical tools such as percentages and mean values have been used for tabular analysis. The Gini Coefficient has been calculated; and Lorenz Curves have been drawn to justify the distributional pattern of household assets.

RESULTS AND DISCUSSION

Ownership of assets plays an important role in determining the levels of living of the farm households. The possession of productive assets directly affects their income and consumption expenditure (Kaur, 2008; and Singh et al., 2019a). The estimated values of household assets of the different farm-size categories have been given in Table 1. The table shows that an average farm household has household assets worth Rs. 13225402.43. There are disparities in the ownership of

household assets among the different farm-size categories. For instance, the average value of household assets is worth Rs. 4035395.88, Rs. 8059475.48, Rs. 15612272.84, Rs. 30649956.82, and Rs. 56329964.83 for the marginal, small, semi-medium, medium, and large farm-size categories respectively which shows that ownership of household assets is positively associated with the farm size. The average value of household assets of the large farm-size category is 13.96, 6.99, 3.61, and 1.84 times of the marginal, small, semi-medium, and medium farm-size categories respectively. These findings are supported by the studies organized by Kaur (2016); Singh et al. (2017); and Singh (2016) on asset ownership among farm households in the rural areas of Punjab.

Household durable assets comprise such assets which have no direct effect on household income and employment, but they indirectly help to raise the efficiency, skill and levels of living of the households (Sharma, 2010). The average value of household durable assets is Rs. 1590162.78 for an average farm household. This value is the highest (Rs. 5059377.78) for the large, followed by medium (Rs. 2838341.59), semi-medium (Rs. 1901645.45), small (Rs. 1240390.97) and marginal (Rs. 795761.70) farm-size categories. The average value of household durable assets is positively related with the farm size. The homestead land and residential building are the most valuable asset which reflects the social and economic status in the society. The average value of this asset is Rs. 1235876.47 for an average farm household. Ornaments (Rs. 88708.82) are the second important durable asset, followed by jeeps/cars (Rs. 87121.57), and motorcycles/ scooters/mopeds (Rs. 36283.33) among the farm households. The other important constituents of household durable assets are coolers/fans/ACs (Rs. 12964.02), bedding and clothing (Rs. 11044.12), utensils (Rs. 9434.31), cellular/landline phones (Rs. 9367.65), beds (Rs. 9331.57), cots (Rs. 8856.86), inverter/generator (Rs. 7984.51), and almirahs (Rs. 7800.39). The average values of assets such as microwave oven/mixer/juicer (Rs. 819.02), dining table/watches and clocks (Rs. 1229.45), geyser (Rs. 1561.96), and bicycles (Rs. 1660.69) are lesser among the farm households. The average value of household durable assets of the large farm-size category is 6.36, 4.08, 2.66, and 1.78 times of the marginal, small, semi-medium, and medium farm-size categories respectively. The average value of household durable assets are relatively higher among the large and medium farm-size categories. The farmers representing both these categories own costlier items such as residential building, furnishing articles, vehicles, ornaments, bedding and clothing, coolers, ACs, refrigerator, computer, and laptop as compared to the marginal, small and semi-medium farm-size categories. The large and medium farm-size categories have better affordability to durable assets due to high income from large size of land holdings and keep a high standard of living.

The adoption of New Agricultural Technology in Punjab encouraged the farmers to invest more in assets such as tractors, electric pumps, threshers, and the others used in farm production activities. These assets led to transform the subsistence agriculture into commercial one and helped in generating more farm incomes by reducing cost of farm operations particularly for the large land holdings and employment opportunities (Kaur, 2017). The average value of farm assets is Rs. 11479441.02 for an average farm household. This value is the highest (Rs. 50925087.04) for the large farm-size category, and the lowest (Rs. 3130162.93) for the marginal farm-size category. The similar values for the small, semi-medium, and medium farm-size categories are Rs. 6679190.76, Rs. 13531451.25, and Rs. 27595170.79 respectively. The average value of farm assets of the large farm-size category is 16.27, 7.62, 3.76, and 1.85 times of the marginal, small, semi-medium, and medium farm-size categories respectively. Among the different constituents of farm assets, land is the most valuable asset. The average value of land is worth Rs. 10950000.00 for an average farm household. This value is the highest (Rs. 49340740.74) for the large, followed by medium (Rs. 26505555.56),

semi-medium (Rs. 12797159.09), small (Rs. 6287326.39) and marginal (Rs. 2930452.13) farm-size categories. It is pertinent to mention here that the value of land has been taken as reported by the farmers. However, the field survey has revealed a disturbing fact that there are a few buyers of land in the rural areas of Punjab. Tractor, electric tubewells, and trolley are the next important farm assets; and the average values of these assets are Rs. 211674.51, Rs. 129191.18, and Rs. 43088.24 respectively for an average farm household. Harvester combine (Rs. 20196.08), farm buildings (Rs. 18325.49), farm generator (Rs. 16149.02), harrow (Rs. 14345.10), and rotavator (Rs. 13415.69) are the other important farm assets. The ownership of almost all the farm assets varies from the marginal farm-size category to the large farm-size category; and it has shown a positive relationship with the farm size. The average values of farm assets have remained relatively higher among the medium and large farm-size categories than the marginal, small and semi-medium farm-size categories. The ownership of expensive and modern machinery/equipments such as tractors, electric tubewells, harvester combine, thresher, leveller, farm generator, and rotavator is mainly limited to the medium and large farm-size categories. The marginal, small and semi-medium farm-size categories have a relatively limited ownership of agricultural machinery/equipments in the rural areas of Punjab. The field survey has revealed that most of the households belonging to marginal, small and semi-medium farm-size categories hire agricultural machinery/equipments on rent from the medium and large farm-size categories. The availability of agricultural machinery/equipments through primary agricultural co-operative societies/co-operative banks can be made available for helping the needy farmers at low rents for performing farm operations more efficiently.

Livestock wealth is deemed as the oldest wealth resource for mankind and was once a symbol of economic status in the society. It plays an important and vital role in providing nutritive food to families, and provides stability to family income especially for marginal and small farmers (Government of India, 2012). An average farm household has livestock assets worth Rs. 155798.63. The average value of livestock assets is worth Rs. 109471.28, Rs. 139893.75, Rs. 179176.14, Rs. 216444.44, and Rs. 345500.01 for the marginal, small, semi-medium, medium, and large farm-size categories respectively. It is evident that the average value of livestock assets is the lowest for the marginal farm-size category, and the highest for the large farm-size category. There is a positive relationship between ownership of livestock assets and farm size which reveals the fact that farmers' access to better livestock assets has increased with an increase in the farm size. The average value of livestock assets of the large farm-size category is 3.16, 2.47, 1.93, and 1.60 times of the marginal, small, semi-medium, and medium farm-size categories respectively. Buffaloes in milk are the most important asset among the different constituents of livestock assets, and its average value is Rs. 98347.06 for an average farm household. The average value of cows in milk (Rs. 23172.55) appears at the second position. The farmers keep buffaloes and cows to supplement their meagre income, and fulfil their needs of milk and milk products. Buffaloes not in milk (Rs. 14341.18) are the next important asset, followed by young stock of cattle (Rs. 13834.31), bullock/ox (Rs. 2609.41), cows not in milk (Rs. 2015.69), and others (Rs. 1478.43). The large and medium farm-size categories own relatively more expensive and qualitative livestock assets as compared to the marginal, small and semi-medium farm-size categories in the rural areas of Punjab.

The per capita value of household assets is the average of household assets per person that helps to evaluate the standard of living and quality of life of farm households. The data showing estimated per capita values of household assets of the different categories of farmers are presented in Table 2. The table shows that the per capita value of household assets is Rs. 2313878.30 for an average farm household. It is Rs. 817515.55, Rs. 1465359.18, Rs. 2530165.77, Rs. 4459462.55, and

Rs. 6944790.18 for the marginal, small, semi-medium, medium, and large farm-size categories respectively. The category-wise per capita value of household assets is positively associated with the farm size. The per capita value of household assets of the large farm-size category is 8.49, 4.74, 2.74, and 1.56 times of the marginal, small, semi-medium, and medium farm-size categories respectively. The analysis makes it clear that the economic condition of large and medium farm-size categories is relatively better than that of marginal, small and semi-medium farm-size categories. The studies conducted by Kaur (2015), Singh et al. (2016), and Singh et al. (2019b) confirmed similar results in Punjab.

The per capita value of household durable assets is worth Rs. 278210.30 for an average farm household. This value is the highest (Rs. 623758.90) for the large farm-size category, and the lowest (Rs. 161210.34) for the marginal farm-size category. The similar figures for the small, semi-medium, and medium farm-size categories are Rs. 225525.63, Rs. 308185.64, and Rs. 412968.87 respectively. It is evident that the per capita value of household durable assets is positively associated with the farm size. The per capita value of homestead land and residential building (Rs. 216225.39) ranks at the first position, followed by ornaments (Rs. 15520.24), jeeps/cars (Rs. 15242.54), motorcycles/scooters/mopeds (Rs. 6348.03), whereas this value is the lowest (Rs. 143.29) for microwave oven/mixer/juicer, preceded by dining table/watches and clocks (Rs. 215.10), geyser (Rs. 273.28), and bicycles (Rs. 290.55). The per capita values of all household durable assets are positively associated with the farm size except the assets such as computer/laptop/printer, buildings used for commercial purpose, and commercial vehicles. The per capita value of household durable assets of the large farm-size category is 3.87, 2.76, 2.02, and 1.51 times of the marginal, small, semi-medium, and medium farm-size categories respectively.

The per capita value of farm assets is Rs. 2008409.92 for an average farm household. This value is Rs. 634127.84, Rs. 1214398.32, Rs. 2192942.38, Rs. 4015001.76, and Rs. 6278435.39 for the marginal, small, semi-medium, medium, and large farm-size categories respectively. The per capita value of land (Rs. 1915780.45) has appeared at the first place, followed by tractor (Rs. 37033.96), and electric tubewells (Rs. 22602.92), while the assets such as axes/sickles/spades (Rs. 207.40) have the lowest per capita value. A similar pattern exists between per capita and per household values of farm assets among the different farm-size categories. The per capita value of farm assets of the large farm-size category is 9.90, 5.17, 2.86, and 1.56 times of the marginal, small, semi-medium, and medium farm-size categories respectively. The farmers belonging to large and medium farm-size categories are financially better placed as they own large land holdings and apply modern techniques of farming.

The per capita value of livestock assets is Rs. 27258.08 for an average farm household. It is the highest (Rs. 42595.89) for the large, followed by medium (Rs. 31491.92), semi-medium (Rs. 29037.75), small (Rs. 25435.23) and marginal (Rs. 22177.37) farm-size categories. There is a positive relationship between the per capita value of livestock assets and farm size. Among the various components of livestock assets, per capita values of buffaloes in milk (Rs. 17206.52), cows in milk (Rs. 4054.20), and buffaloes not in milk (Rs. 2509.09) appear at the first, second, and third positions respectively. The per capita values of young stock of cattle, bullock/ox, cows not in milk, and other livestock assets are Rs. 2420.41, Rs. 456.54, Rs. 352.66, and Rs. 258.66 respectively for an average farm household. The analysis does not establish any clear relationship between the farm size and per capita values of different components of livestock assets except buffaloes in milk. The large farm-size category owns 1.92, 1.67, 1.47, and 1.35 times per capita livestock assets of the marginal, small, semi-medium, and medium farm-size categories respectively.

The extent of inequality in the distribution of household assets has been examined by taking cumulative percentages of value of per household and per capita assets for each decile group after arranging the same in an ascending order. The distribution of per household value of assets of the different farm-size categories has been exhibited in Table 3. The table shows that the bottom 10 per cent farm households share only 1.86 per cent of the total household assets, whereas the top 10 per cent share 38.61 per cent of the total household assets when all the farm households are taken together. The table further shows that the bottom 70 per cent farm households account for 31.72 per cent; and this share is less than the share of top 10 per cent farm households, i.e., 38.61 per cent.

The category-wise figures show that the bottom 10 per cent farm households of the marginal farm-size category share 4.73 per cent, whereas the top 10 per cent farm households of this category share 18.98 per cent of the total household assets. The bottom 10 per cent farm households of the small farm-size category share 5.94 per cent, while the top 10 per cent farm households of this category claim 18.95 per cent of the total household assets. In the case of semi-medium farm-size category, the bottom 10 per cent farm households share 5.52 per cent, whereas the top 10 per cent farm households share 19.43 per cent of the total household assets. The bottom 10 per cent farm households of the medium, and large farm-size categories share 5.07, and 4.82 per cent respectively, while the top 10 per cent farm households of these categories claim 22.19, and 11.40 per cent of the total household assets respectively. It is clear from the table that the household assets possessed by the top 10 per cent farm households of the marginal, small, semi-medium, medium, and large farm-size categories are 4.01, 3.19, 3.51, 4.38, and 2.36 times of the bottom 10 per cent farm households of the respective farm-size categories.

The values of Gini Coefficient for the marginal, small, semi-medium, medium, and large farm-size categories are 0.2063, 0.1903, 0.1975, 0.2528, and 0.1628 respectively. It reflects that the concentration of household assets is the highest in the case of medium farm-size category, and the lowest for the large farm-size category. The value of Gini Coefficient is 0.4937 when all the farm households are taken together. It shows that distribution of household assets is highly unequal among farm households in the rural areas of Punjab and these findings are also supported by the studies conducted by Toor et al. (2018); and Singh and Singh (2020). Land and buildings are the predominant components of assets which lead to greater inequalities in the rural areas (Sarma et al., 2017; and NSSO, 2014; 2016).

The Lorenz Curves drawn in Figure 1 highlight the distribution of per household value of household assets of the different farm-size categories. The figure shows that concentration of household assets is high among the farm households because the difference between the Lorenz Curve of all the farm households taken together and the line of equality is large. Inequality in the distribution of household assets is the highest in the case of medium farm-size category because the difference between the Lorenz Curve against this farm-size category and the line of equality is large. However, the difference between the line of equality and the Lorenz Curve of the large farm-size category is small which indicates that there is less inequality in the distribution of household assets in this farm-size category.

Table 4 presents the distribution of per capita assets of the different farm-size categories. The table shows that the bottom 10 per cent persons of the farm households account for 1.88 per cent, while the top 10 per cent persons of the farm households account for 33.87 per cent of the total per capita assets when all the farm households are taken together. The bottom 10 per cent persons of the marginal farm-size category share 4.24 per cent, whereas the top 10 per cent persons of this category

claim 19.61 per cent of the total per capita assets. The bottom 10 per cent persons of the small farm-size category share 4.20 per cent, whereas the top 10 per cent persons of this category share 20.64 per cent of the total per capita assets. Further, the bottom 10 per cent persons belonging to the semi-medium, medium, and large farm-size categories share 4.30, 3.54, and 4.40 per cent of the total per capita assets respectively, whereas the top 10 per cent persons of the respective farm-size categories share 20.30, 23.53, and 21.72 per cent of the total per capita assets. The top 10 per cent persons of the marginal, small, semi-medium, medium, and large farm-size categories share 4.63, 4.91, 4.72, 6.65, and 4.94 times more per capita assets than the bottom 10 per cent persons of the respective farm-size categories.

The Gini Coefficient values for the marginal, small, semi-medium, medium, and large farm-size categories are 0.2481, 0.2343, 0.2423, 0.2892, and 0.2530 respectively. It shows that the distribution of per capita assets is more uneven for the medium farm-size category, and less uneven for the small farm-size category. The Gini Coefficient value for all the farm households taken together is 0.4511 which reveals that there is uneven distribution of per capita assets in the rural areas of Punjab.

The concentration of per capita assets is displayed in Figure 2 with the help of Lorenz Curves. There is a large gap between the Lorenz Curve of all the farm households taken together and the line of equality which shows that the distribution of per capita assets is more uneven. The distribution of per capita assets is more uneven than per household assets among all the farm-size categories. The distribution of per household assets is relatively more uneven than the per capita assets when all the farm households are taken together.

CONCLUSION AND POLICY IMPLICATIONS

The foregoing analysis shows that an average farm household has household assets worth Rs. 13225402.43. The ownership of household assets is positively related with the farm size. There are wide disparities in the ownership of household assets among the different farm-size categories. The average value of household assets of the large farm-size category is 13.96, 6.99, 3.61, and 1.84 times of the marginal, small, semi-medium, and medium farm-size categories respectively. The average value of household durable, farm, and livestock assets is worth Rs. 1590162.78, Rs. 11479441.02, and Rs. 155798.63 respectively. Farm assets account for a major proportion, i.e., 86.80 per cent of the value of total household assets, followed by household durable assets (12.02 per cent) and livestock assets (1.18 per cent). The large and medium farm-size categories own more expensive and better quality of household durable assets such as residential building, furnishing articles, vehicles, coolers, ACs, ornaments, mobile phones, and others. The average value of household durable assets of the large farm-size category is 6.36 times of the marginal farm-size category. Farmers' ownership of better livestock assets increases with an increase in the farm size. The average values of household assets are relatively low among the farmers representing the marginal and small farm-size categories. Such farmers are generally unable to possess modern agricultural machinery/equipments and better livestock assets due to their inadequate income. Thus, financial assistance and subsidies should be provided by the government to these farmers for the purpose. Arrangements should also be made to provide modern agricultural machinery/equipments to the farmers through the primary co-operative societies at the village level, so that they can hire it at a reasonable rent. The government should be liberal in its approach to provide the credit and subsidies for purchasing the exotic-breeds of milch animals; and dairy animals need to be taken as collateral for providing loans instead of land among these farm-size categories. The values of Gini Coefficient for

per household and per capita assets are 0.4937, and 0.4511 respectively which shows that the distribution of per household and per capita assets is highly skewed among the farm households. There is a need to ensure equal access to productive assets among the different farm-size categories through the redistributive policies. The situation demands redistribution of land favouring the poor farmers particularly from the marginal and small farm-size categories. It will help them to strengthen their income resources, credit worthiness and economic security. There is a need to develop some subsidiary occupations such as poultry, dairying, bee-keeping, fishery, etc. for widening their income base. All these measures will also be helpful in reducing unemployment and poverty among the farmers in the rural areas of Punjab.

Table 1

Estimated Values of Household Assets of Farmers

(Mean Values in Rs.)

Assets	Marginal Farmers	Small Farmers	Semi-medium Farmers	Medium Farmers	Large Farmers	All Sampled Farmers
(A) Household Durable Assets						
Homestead land and residential building	625422.87	978055.56	1483494.32	2191507.94	3824629.63	1235876.47
Buildings used for commercial purpose	5478.72	4166.67	795.45	20634.92	0.00	5882.35
Beds	5916.49	7689.58	10465.91	15277.78	24296.30	9331.57
Almirahs	4107.98	5725.69	8368.18	14587.30	26888.89	7800.39
Wooden and steel boxes	4576.60	5783.33	7764.77	12150.79	19611.11	7199.02
Tables/chairs	1649.73	2073.61	3023.86	4057.14	6337.04	2552.06
Dressing table	1526.60	2208.33	3318.18	6144.44	9500.00	3020.78
Dining table/watches and clocks	568.35	807.29	1032.39	2605.88	5514.82	1229.45
Sofa	3425.53	5746.53	8284.09	10738.10	18296.30	6609.80
TVs/LCDs/radio/VCR/CD/ DVD player	4739.52	6030.55	7957.96	10449.21	16296.29	6843.83
Refrigerator	5180.32	6420.14	7798.86	9690.48	14740.74	7045.49
Coolers/fans/ACs	7390.69	9993.06	13618.18	21495.24	45577.78	12964.02
Geyser	555.85	1106.94	1948.86	3265.08	5759.26	1561.96
Inverter/generator	5243.62	7234.72	9767.05	11936.51	16037.04	7984.51
Sewing machine/electric iron	1640.16	1988.20	2431.82	2825.39	3742.60	2132.75
Washing machine	3182.45	4415.28	5385.23	6620.63	9444.44	4666.86
Microwave oven/mixer/ juicer	382.18	555.56	823.29	1770.64	3031.48	819.02
Computer/laptop/printer	1164.89	881.94	2954.55	4333.33	10851.85	2298.04
Cots	6781.91	8308.33	9931.82	11612.70	16296.30	8856.86
Utensils	7095.74	8775.69	10350.00	12476.19	19148.15	9434.31
Bedding and clothing	8090.43	9892.36	11784.09	15777.78	24296.30	11044.12
Gas connection	3501.60	4081.94	4720.45	5382.54	6562.96	4270.20
Ornaments	40976.06	68312.50	109090.91	160555.56	295777.78	88708.82
RO	1276.60	2524.31	3427.27	4642.86	7288.89	2734.12
Cellular/landline phones	4654.26	7418.06	12090.91	16115.87	27962.96	9367.65
Bicycles	1249.47	1521.18	1926.14	2274.60	2970.37	1660.69
Motorcycles/scooters/mop eds	24853.72	31972.22	40738.64	58301.59	72962.96	36283.33
Jeeps/cars	14797.87	45659.92	118352.27	196349.21	455185.19	87121.57
Commercial vehicles	691.49	1041.67	0.00	4761.90	70370.37	4862.75
Sub-total	**795761.70**	**1240390.97**	**1901645.45**	**2838341.59**	**5059377.78**	**1590162.78**

(B) Farm Assets						
Land	2930452.13	6287326.39	12797159.09	26505555.56	49340740.74	10950000.00
Farm buildings	7117.02	14951.39	21136.36	36825.40	62037.04	18325.49
Axes/sickles/spades	771.44	1042.15	1409.20	1773.17	2731.48	1185.44
Electric tubewells	59720.74	104166.67	166193.18	236190.48	376111.11	129191.18
Diesel tubewells	6356.38	2847.22	1818.18	2698.41	7222.22	4176.47
Diesel engines	1930.85	3880.56	5323.86	6073.02	9092.59	3957.65
Leveller	1997.34	3569.44	9835.23	11444.44	14096.30	5601.18
Tractor	81845.74	168159.72	303034.09	409285.71	588888.89	211674.51
Trolley	12659.57	30881.94	69920.45	85634.92	133333.33	43088.24
Thresher/reaper	1031.91	1684.03	5215.91	11603.17	20666.67	4283.33
Harvester combine	0.00	4166.67	28409.09	85714.29	66666.67	20196.08
Harrow	4968.09	11541.67	20170.45	29428.57	40407.41	14345.10
Seed drills	1718.09	4454.86	9039.77	19174.60	25000.00	7143.14
Fodder cutter	4394.15	5791.66	7090.91	8936.51	11055.56	6167.84
Spray pumps	1127.13	2437.50	5235.23	10054.76	13555.56	3966.76
Iron and wooden ploughs/ yokes	2968.09	5337.50	9142.05	11968.25	19185.19	6672.75
Cart	3231.91	4618.06	5869.32	5936.51	7851.85	4657.06
Farm generator	4659.57	10142.36	27414.77	33095.24	51925.93	16149.02
Rotavator	824.47	5812.50	14488.64	45873.02	62407.41	13415.69
Straw reaper	1329.79	3104.17	15113.64	19206.35	30740.74	7974.51
Others*	1058.50	3274.31	8431.82	18698.41	41370.37	7269.61
Sub-total	**3130162.93**	**6679190.76**	**13531451.25**	**27595170.79**	**50925087.04**	**11479441.02**
(C) Livestock Assets						
Buffaloes in milk	67356.38	91145.83	110556.82	125730.16	248851.85	98347.06
Buffaloes not in milk	10031.91	14256.94	16681.82	15777.78	33814.81	14341.18
Cows in milk	18101.06	17020.83	28102.27	42603.17	29888.89	23172.55
Cows not in milk	1952.13	1683.89	2079.55	2492.06	3148.15	2015.69
Young stock of cattle	9875.00	12805.56	16676.14	20880.95	21185.19	13834.31
Bullock/ox	2154.79	3025.69	2761.36	2611.11	3055.56	2609.41
Others**	0.00	0.00	2318.18	6349.21	5555.56	1478.43
Sub-total	**109471.28**	**139893.75**	**179176.14**	**216444.44**	**345500.01**	**155798.63**
Household Assets (A+B+C)	**4035395.88**	**8059475.48**	**15612272.84**	**30649956.82**	**56329964.83**	**13225402.43**

Source: Field Survey, 2015-16

*Others include paddy transplanter, kaddu palter, solar tubewell, sealers, potato planter and potato digger machines, etc.

** Others include goats, horses, hens, etc.

Table 2

Estimated Per Capita Values of Household Assets of Farmers

(In Rs.)

Assets	Marginal Farmers	Small Farmers	Semi-medium Farmers	Medium Farmers	Large Farmers	All Sampled Farmers
(A) Household Durable Assets						
Homestead land and residential building	126702.05	177828.28	240418.97	518856.81	471529.68	216225.39
Buildings used for commercial purpose	1109.91	757.58	128.91	3002.31	0.00	1029.16
Beds	1198.60	1398.11	1696.13	2222.86	2995.43	1632.62
Almirahs	832.22	1041.04	1356.17	2122.40	3315.07	1364.73
Wooden and steel boxes	927.16	1051.52	1258.38	1767.90	2417.81	1259.52
Tables/chairs	334.21	377.02	490.06	590.30	781.28	446.50
Dressing table	309.27	401.52	537.75	894.00	1171.23	528.21
Dining table/watches and clocks	115.15	146.78	167.31	379.15	679.91	215.10
Sofa	693.97	1044.82	1342.54	1562.36	2255.71	1156.43
TVs/LCDs/radio/VCR/CD/ DVD player	887.23	1096.47	1289.68	1520.33	2009.14	1197.38

Refrigerator	1049.46	1167.30	1263.90	1409.93	1817.35	1232.66
Coolers/fans/ACs	1497.25	1816.92	2207.00	3127.48	5619.18	2268.15
Geyser	112.61	201.26	315.84	475.06	710.05	273.28
Inverter/generator	1062.28	1315.40	1582.87	1736.72	1977.17	1396.95
Sewing machine/electric iron	332.27	361.49	394.11	411.09	461.41	373.13
Washing machine	644.72	802.78	872.74	963.28	1164.38	816.50
Microwave oven/ mixer/juicer	77.42	101.01	133.43	257.62	373.75	143.29
Computer/laptop/printer	235.99	160.35	478.82	630.48	1337.90	402.06
Cots	1373.92	1510.61	1609.58	1689.61	2009.13	1549.57
Utensils	1437.50	1595.58	1677.35	1815.24	2360.73	1650.60
Bedding and clothing	1639.01	1798.61	1909.76	2295.61	2995.43	1932.25
Gas connection	709.38	742.17	765.01	783.14	809.13	747.10
Ornaments	8301.19	12420.45	17679.56	23360.28	36465.75	15520.24
RO	258.62	458.96	555.43	675.52	898.63	478.35
Cellular/landline phones	942.89	1348.74	1959.48	2344.80	3447.49	1638.94
Bicycles	253.13	276.58	312.15	330.95	366.21	290.55
Motorcycles/scooters/ Mopeds	5035.02	5813.13	6602.21	8482.68	8995.43	6348.03
Jeeps/cars	2997.84	8301.77	19180.48	28568.13	56118.72	15242.54
Commercial vehicles	140.09	189.39	0.00	692.84	8675.80	850.77
Sub-total	**161210.34**	**225525.63**	**308185.64**	**412968.87**	**623758.90**	**278210.30**
(B) Farm Assets						
Land	593669.18	1143150.25	2073941.07	3856466.51	6083105.02	1915780.45
Farm buildings	1441.81	2718.43	3425.41	5357.97	7648.40	3206.17
Axes/sickles/spades	156.28	189.48	228.38	257.99	336.76	207.40
Electric tubewells	12098.60	18939.39	26933.70	34364.90	46369.86	22602.92
Diesel tubewells	1287.72	517.68	294.66	392.61	890.41	730.70
Diesel engines	391.16	705.56	862.80	883.60	1121.00	692.42
Leveller	404.63	648.99	1593.92	1665.13	1737.90	979.97
Tractor	16580.82	30574.49	49110.50	59549.65	72602.74	37033.96
Trolley	2564.66	5614.90	11331.49	12459.58	16438.36	7538.59
Thresher/reaper	209.05	306.19	845.30	1688.22	2547.95	749.40
Harvester combine	0.00	757.58	4604.05	12471.13	8219.18	3533.45
Harrow	1006.47	2098.48	3268.88	4281.76	4981.74	2509.78
Seed drills	348.06	809.97	1465.01	2789.84	3082.19	1249.74
Fodder cutter	890.19	1053.03	1149.17	1300.23	1363.01	1079.11
Spray pumps	228.34	443.18	848.43	1462.93	1671.23	694.01
Iron and wooden ploughs/ yokes	601.29	970.45	1481.58	1741.34	2365.30	1167.44
Cart	654.74	839.65	951.20	863.74	968.04	814.79
Farm generator	943.97	1844.07	4442.91	4815.24	6401.83	2825.39
Rotavator	167.03	1056.82	2348.07	6674.36	7694.06	2347.17
Straw reaper	269.40	564.39	2449.36	2794.46	3789.95	1395.20
Others	214.44	595.33	1366.48	2720.55	5100.45	1271.87
Sub-total	**634127.84**	**1214398.32**	**2192942.38**	**4015001.76**	**6278435.39**	**2008409.92**
(C) Livestock Assets						
Buffaloes in milk	13645.47	16571.97	17917.13	18293.30	30680.37	17206.52
Buffaloes not in milk	2032.33	2592.17	2703.50	2295.61	4168.95	2509.09
Cows in milk	3667.03	3094.70	4554.33	6198.61	3684.93	4054.20
Cows not in milk	395.47	297.98	337.02	362.59	388.13	352.66
Young stock of cattle	2000.54	2328.28	2702.58	3038.11	2611.87	2420.41
Bullock/ox	436.53	550.13	447.51	379.91	376.71	456.54
Others	0.00	0.00	375.69	923.79	684.93	258.66
Sub-total	**22177.37**	**25435.23**	**29037.75**	**31491.92**	**42595.89**	**27258.08**
Household Assets (A+B+C)	**817515.55**	**1465359.18**	**2530165.77**	**4459462.55**	**6944790.18**	**2313878.30**

Source: Based on Table 1 and family size of the different farm-size categories

Table 3

Distribution of Household Assets

Cumulative Percentage of Farm Households	Marginal Farmers	Small Farmers	Semi-medium Farmers	Medium Farmers	Large Farmers	All Sampled Farmers
10	4.73	5.94	5.52	5.07	4.82	1.86
20	10.80	12.72	11.74	11.09	9.99	4.54
30	18.21	20.14	19.22	17.81	18.60	7.80
40	26.59	28.07	27.30	24.94	27.61	11.90
50	35.91	36.61	36.24	32.59	37.73	16.99
60	45.68	45.91	45.99	40.98	48.49	23.41
70	56.22	56.49	56.64	50.36	59.88	31.72
80	67.71	67.94	68.02	62.95	72.86	43.52
90	81.02	81.05	80.57	77.81	88.60	61.39
100	100.00	100.00	100.00	100.00	100.00	100.00
Gini Coefficient	**0.2063**	**0.1903**	**0.1975**	**0.2528**	**0.1628**	**0.4937**

Source: Field Survey, 2015-16

Table 4

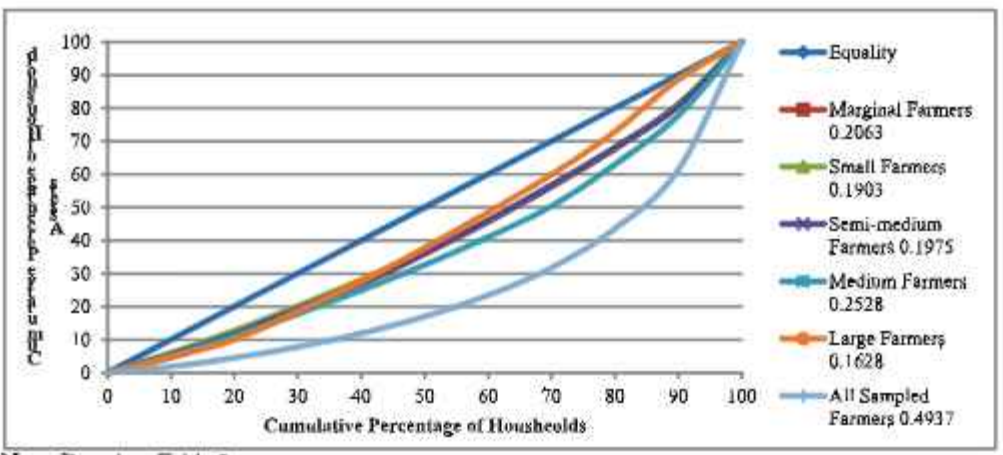
Distribution of Per Capita Assets

Cumulative Percentage of Persons	Marginal Farmers	Small Farmers	Semi-medium Farmers	Medium Farmers	Large Farmers	All Sampled Farmers
10	4.24	4.20	4.30	3.54	4.40	1.88
20	9.54	10.09	9.67	8.50	10.02	4.80
30	15.86	17..07	16.07	14.27	16.73	8.69
40	23.47	25.04	24.12	21.35	24.29	13.53
50	32.07	33.80	32.96	30.12	32.49	19.26
60	41.78	43.46	42.78	39.51	41.59	26.39
70	52.95	54.16	53.63	49.66	51.80	35.67
80	65.63	65.67	65.62	61.98	63.86	48.07
90	80.39	79.36	79.70	76.47	78.28	66.13
100	100.00	100.00	100.00	100.00	100.00	100.00
Gini Coefficient	**0.2481**	**0.2343**	**0.2423**	**0.2892**	**0.2530**	**0.4511**

Source: Field Survey, 2015-16

Figure 1

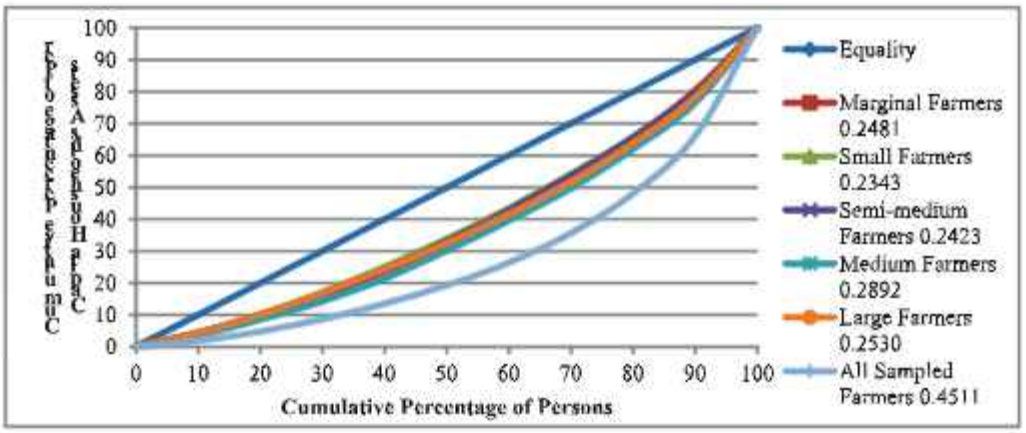
Concentration of Household Assets among Different Farm-size Categories



Note: Based on Table 3

Figure 2

Concentration of Per Capita Assets among Different Farm-size Categories



Note: Based on Table 4

References

Government of India. (2012). Report of the working group on animal husbandry and dairying (11th Five Year Plan, 2007-12). New Delhi.

Government of Punjab. (2015). Statistical abstract of Punjab 2014 (Publication No. 948). Chandigarh: Economic Adviser.

Government of Punjab. (2020). Punjab economic survey 2019-20. Chandigarh: Economic and Statistical Organisation.

Grewal, S. S., & Rangi, P. S. (1981). An analysis of agrarian structure in Punjab. Indian Journal of Agricultural Economics, 37(4), 173-183.

Gulati, A., Roy, R., & Hossain, S. (2017). Getting Punjab agriculture back on high growth path: Sources, drivers and policy lessons. New Delhi: Indian Council for Research on International Economic Relations.

Kaur, P. (2015). Land ownership, poverty and indebtedness in rural Punjab. (Doctoral dissertation, Punjabi University, Patiala, Punjab, India).

Kaur, P. (2016). Socio-economic conditions of farmers in rural Punjab. Patiala: Twentyfirst Century Publications.

Kaur, P. (2017). Composition of farm assets of farmers in rural Punjab. International Journal of Research and Management, Economics and Commerce, 7(9), 42.

Kaur, R. (2008). Indebtedness among farmers in rural Punjab. (Doctoral dissertation, Punjabi University, Patiala, Punjab, India).

Ladejinsky, W. (1969). The green revolution in Punjab: A field trip. Economic and Political Weekly.

4(26), A-73.

Moser, C., & Dani, A. A. (2008). Assets, livelihoods, and social policy. Washington, DC: The World Bank.

National Sample Survey Office. (2014). Key indicators of debt and investment in India (Report No. NSS KI 70/18.2). New Delhi: Ministry of Statistics and Programme Implementation, Government of India.

National Sample Survey Office. (2016). Household assets and liabilities (Report No. 570. 70/18.2/1). New Delhi: Ministry of Statistics and Programme Implementation, Government of India.

Sarma, M., Saha, P., & Jayakumar, N. (2017). Asset Inequality in India: Going from bad to worse (SSER Monograph 17/1). New Delhi: Society for Social and Economic Research.

Sharma, N. (2010). Anti-poverty programmes in rural India. New Delhi: Deep & Deep Publications.

Singh, G, Dharampal, Kaur, V., Kaur G., & Jyoti. (2019a). Socio-economic conditions and political participation of rural woman labourers in Punjab. Patiala: SLM.

Singh, G., Anupama, Kaur, R., Kaur, G., Kaur, S. (2019b). Levels of living of farmers and agricultural labourers in rural Punjab. Journal of Rural Development, 38 (1), 78-101.

Singh, G., Uppal, A., & Kaur, G. (2017). Indebtedness among farmers and agricultural labourers in rural Punjab: A field survey. Republic of Moldova: LAP LAMBERT Academic Publishing.

Singh, S. (2000). Crisis in Punjab agriculture. Economic and Political Weekly, 35(23), 1889-1892.

Singh, S. (2016). Rural indebtedness in Punjab: An empirical analysis. (Doctoral dissertation, Punjabi University, Patiala, Punjab, India).

Singh, S., & Dhaliwal, T. K. (2011). The status of commission agent system in Punjab agriculture. Indian Journal of Agricultural Economics, 66(4), 664.

Singh, S., & Singh, G. (2020). Disparities in the ownership of assets, income and consumption expenditure among farm and non-farm households in Hoshiarpur district of rural Punjab. Indian Journal of Economics and Development, 16(SS), 7-16.

Singh, S., & Singh, J. (2017). An empirical analysis of distribution pattern of household assets among MGNREGS beneficiary households in Punjab. Indian Journal of Economics and Development, 13(4), 683.

Singh, S., Toor, J. S., & Tiwana, B. S. (2016). Structure of assets among households in rural Punjab: An empirical analysis. Indian Journal of Economics and Development, 12(2), 255-264.

Tatwangire, A. (2011). Access to productive assets and impact on household welfare in rural Uganda. (Doctoral dissertation, Norwegian University of Life Sciences, Norway). Retrieved from: http://hdl.handle.net/11250/2434107.

Toor, J. S., Singh, G., & Kumar, N. (2018). Asset inequalities among farm households in rural Punjab. Indian Journal of Economics and Development, 14(1a), 336-346.

Weiss, M. G., & Curley, J. (2003). Individual development accounts in rural communities: Implications for research (Working Paper No. 03-21). St. Louis, MO: Centre for Social Development, Washington University.

Human Sufferings along the Frontiers of Jammu and Kashmir: An Empirical Study of Vulnerability in Poonch District

Kamran Zarri and Priyanka Sharma***

ABSTRACT

This article presents an eclectic review of the empirical study of conflict and its impact on the lives of border people of the Poonch district. Decades of conflict between India and Pakistan has the implication of serious nature for the erstwhile state of Jammu and Kashmir. Their bilateral relations have always been jeopardized by the Kashmir issue. These hostilities often resulted in full-fledged war between two countries (the war of 1947-1948, 1965, 1971, and Kargil war of 1999) and several border skirmishes even in the normal times keeping it ever volatile. This hurly burly situation creates a state of chaos among the border residents of Indian frontiers as well as their counterparts. In the present study, border district Poonch has been taken, which remained a victim of cross border terrorism since independence. The study area shares a boundary of approximately 113 km with Pakistan occupied Kashmir spread over tehsil Haveli, Mendhar and Balakote. This research article is an analysis of qualitative as well as quantitative aspects with the help of secondary source of data collected from different published and unpublished official records.

Key Words: Conflict, Militancy, Ceasefire, Education, Displacement.

Introduction

Borders are not merely the physical lines that define the state's sovereignty and the territorial integrity but it is a psychological symbol that divides people and their sense of identity between us and them (Elaine Correa, 2011). The most important of which are "foreign policy discourse, educational and popular culture". All of these serve to emphasize the concept of a homeland that is comprised of a territory and a boundary (Wastl-Walter, 2011). Therefore, the process of defining national identities is linked with the process of defining the state's borders. Thus, by definition, borders are limiting, restrictive, and constraining (Wilson and Donnan). The ideology of state border is characterized by its fixed nature and permanence (Paula Banerjee, 2011). A border is a place where states meet but individuals separate, and in most cases, this separation is imposed rather than voluntary. This indicates that borders are not only dividing lines segregating Nation-States from one another but also influence our viewpoints and identities (Shekhawat & Mahapatra, 2009). In other words, physical borders determine the geographical boundaries of Nation-State, whereas social and psychological borders divide human beings. However, as emphasized by anthropologists, cultural and social studies, borders can be viewed as constructs that are not only capable of being defined and redefined but can also be traversed. However, the 9/11 terrorist attacks have caused a paradigm shift in the overall understanding of borders. The fear of terrorism has engulfed the entire globe and as a result,

*Research scholar, DSRS, University of Jammu, Jammu, India
**Assistant Professor, DLL, University of Jammu, Jammu, India

security and securitization have taken primacy. In the context of Jammu and Kashmir, the erstwhile state is spread over an area of 2,22,236 square kilometers. Out of this total area, Pakistan controls 78, 114 sq. km. while 5,180 sq. km. is controlled by China. The erstwhile state has to deal with a multifaceted problem pertaining to its border. The border covers a significant portion of its territory, whether in the form of an International Boundary (IB) or a Line of Control (LoC). The Line of Control was also known as Ceasefire Line was established in 1949 after the war between India and Pakistan.

Methodology

The present article mostly relies on secondary sources of data collection. The data was collected through analysis of printed and written documents in the form of published academic works, press statements, reports, journals, monographs, newspapers, etc. In addition, the internet will be extensively used to access the relevant information.

Results and Discussion

Jammu and Kashmir became a source of contention between India and Pakistan after 1947. The roots of conflict can be traced to the very moment of Accession, which take place on 26 October 1947, under abnormal conditions when most of the part of the state was facing tribal invasion on the one hand and internal rebellion on the other. The lack of decisiveness on the part of the ruler created a state of political uncertainty, which was further compounded by internal turbulence and external pressure. At this point, the conflict in Kashmir becomes more complex. Pakistan's opposition to the Accession of the state with India, its control over one-third part of the state and the military confrontations between India and Pakistan had significant implications for the people of the state. The conflict at this time has attained international dimensions since India has approached the United Nations (UN) claiming Pakistan as the aggressor and it was only through the UN's interference that the ceasefire could take place and the Ceasefire Line, later come to be known as Line of Control.

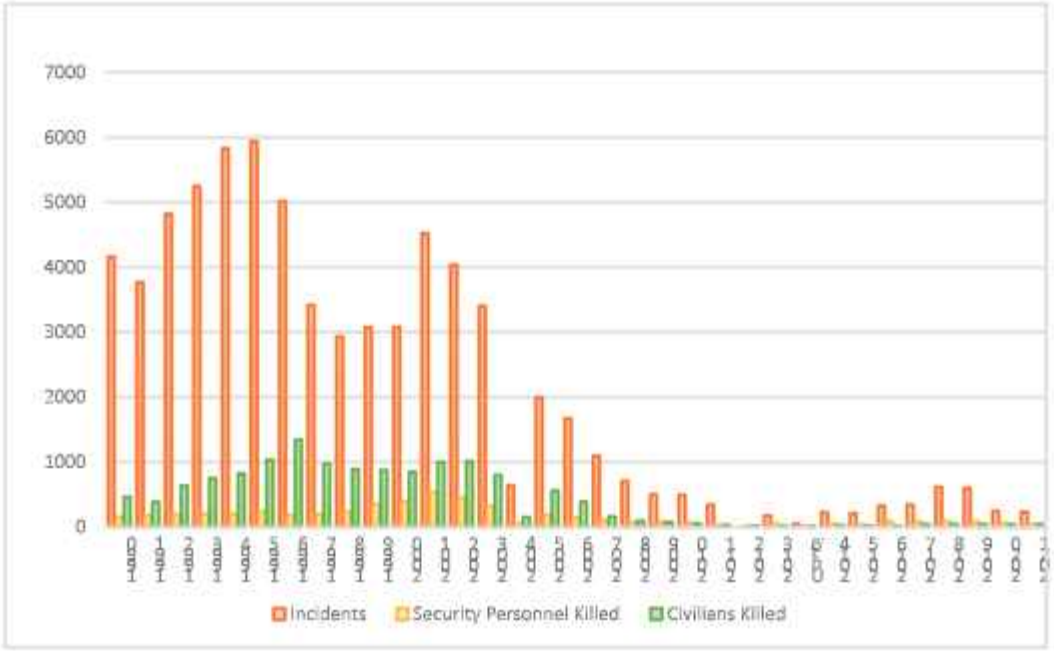
In recent decades, apart from wars and border clashes, the conflict in Kashmir has been reflected in the very phenomenon of cross-border terrorism. However, the manifestation of militancy in Kashmir in 1989 cannot be seen as an isolated political phenomenon but rather must be understood within the historical context of the conflict situation in the erstwhile state. The origin of conflict can be traced back to the partition of the Indian subcontinent in 1947. The explicit support provided by Pakistan had helped the Militancy to sustained. The militancy was started immediately after the 1987 state elections, which many people believed were heavily rigged. Moreover, soon after the election, a large number of people went across the LoC, which serves as the de facto border dividing the border between India and Pakistan for initiating a violent struggle in Kashmir. In addition to the manifestation of violence during this period, militancy had multifaceted implications for society, politics and the economy. In addition to the manifestation of violence during this period, militancy had multifaceted implications for society, politics and the economy.

The origin and growth of militancy in the Jammu region were different from Kashmir. It was started much later in the Jammu region and persisted even after it visibly declined in Kashmir. Its character, composition, and objectives in two border regions (Rajouri and Poonch) of Jammu is also varied. However, as far as Poonch district is concerned. Poonch district falls between 32° 25' to 3° 01' North latitude and 73° 58' to 74° 35' East longitude. Poonch district has a population of 476,835 as the estimate made in the 2011 Census. Poonch district and Rajouri district (twin district of Pir Panjal) touches 223 km-long Line of Control (LOC) with Pakistan. After Kashmir valley, the Poonch district was becoming the most active theatre of the Kashmir war. Since both are Muslim dominant districts

and lie along the side of 250 km of hilly border on the Line of Control (LOC). The single largest ethnic community in the district is the Gujjars, which constitute 36.9 % of the population. The dominant language in the district is Pahari, a dialect of Punjabi. Because of ethno-linguistic differences from the valley, was the reason for the delayed response to militancy in the region but it did not take long to become a hotbed of militancy and counter-militancy operations (Bose, 2003). Secondly, because of their location on or near the border, the people of the district suffer greatly in the India-Pakistan conflict of 1947, 1965, 1971, and 1990. The Pir Panjal range of the Poonch district has been transformed into the most active zone of militancy (Chowdhary, 2010). Thirdly, the 250 km of the Line of Control running on a North-South Axis in Poonch and Rajouri have been a major route of infiltration into India's Jammu and Kashmir since 1990 is another reason for the emergence of militancy. Thus, the Poonch district of the Jammu region was a footnote to Kashmir's turbulent history of Partition, militancy, and militarisation (See Table 1).

Most of the area is cut-off, mountainous, and inaccessible with merger infrastructure available. Due to the disadvantage caused by geographical conditions, existence on the Line of Control, continuous cross-border firing, and shelling across the border for many years has pushed the people of these districts into economic and educational backwardness.

Table: 1 However, the trends of terrorist-related violence in Jammu and Kashmir during the last two decades (1990-2021) are given below



Source: Author Depiction Ministry of Home Affairs, Government of India, Annual Reports (1990-2021)

These hostilities between India and Pakistan often resulted in a full-scale conflict between two nations (the war of 1947, 1965, 1971 and the Kargil war of 1999). However, the borders have remained volatile not only during war time but also during normal periods when no such conflict has been declared. However, the data obtained from the South Asian Terrorism Portal (SATP), the total

number of terrorism-related incidents in Jammu and Kashmir from the year 2022 and 2023 are:

Table: 1.1

Years	Incidents	Security Personal Killed	Civilian Killed
2022	151	30	30
2023	27	11	09

Firing and Shelling

Since 1947 people of the Poonch district have been living lives of uncertainty, experiencing violence on a daily basis and continuously facing the problems of displacement and rehabilitation. Furthermore, a significant number of families have been separated between the two sides of the Line of Control and have been not able to meet with each other due to strict border regimes. The violations of the ceasefire agreement of 2003 were felt in this region. The region has become the hotbed of insurgency and counter-insurgency operations. the people of Poonch districts have been facing the grave consequence of conflict between India and Pakistan. Since the 1990s, the region has witnessed a sharp increase in militancy inflicted violence which was considerably reduced during the period of ceasefire agreement of 2003, but it has a socio-psychological impact that can be felt. However, the process of infiltration was accompanied by firing and shelling and whenever any effort was made by the militants to cross the border tensions erupted. A simple suspicion of someone at the border might cause an increase in tension, which can then lead to an exchange of fire take place.

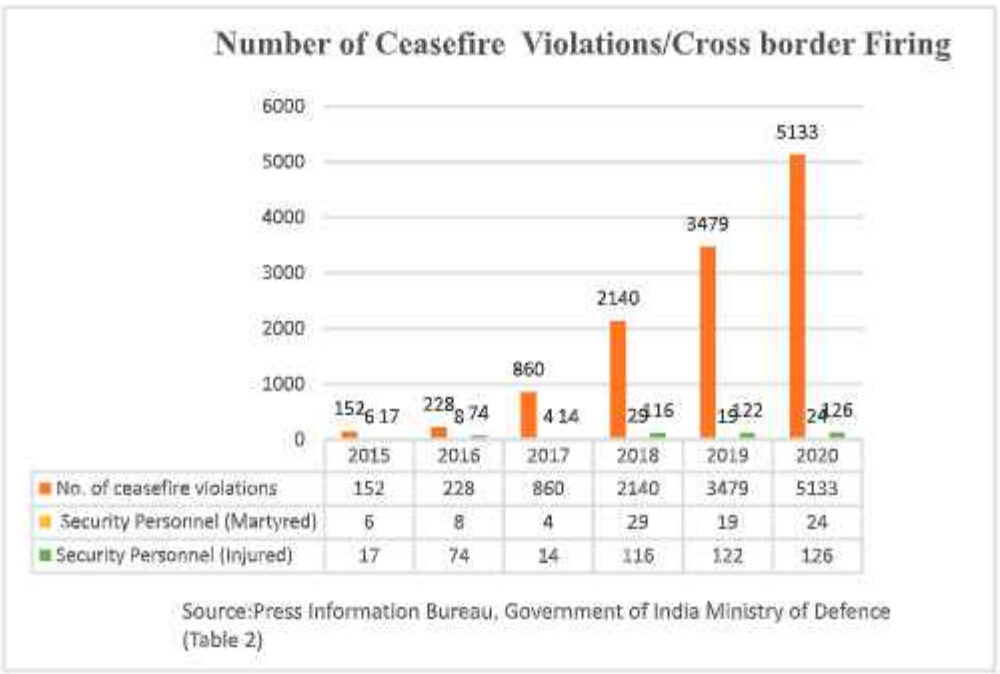
These people since 1947 have been living lives of uncertainty, experiencing the horrors of war on a day-to-day basis and continuously facing the problems of displacement and rehabilitation. In addition to these people, there are a large number of families which divided between the two sides of the Line of Control (LOC) and have been unable to interact with each other due to the stringent border regimes. The violations of the ceasefire agreement of 2003 were felt in this region. The region has become the hotbed of insurgency and counter-insurgency operations. The conflicts between India and Pakistan had implications of serious nature for the people of this erstwhile region. Since the 1990s, the region has witnessed a sharp increase in militancy inflicted violence which was considerably reduced during the period of ceasefire agreement of 2003, but it has a socio-psychological impact that can be felt.

The violation of Ceasefire and attempts to infiltrate in the territories had adversely affected the people on both sides of LOC. The continuous violation of the ceasefire and uninterpreted firing and shelling across the LOC in the Poonch sector and other parts seem to be a calculated move by Pakistan to dishonours the Ceasefire Agreement of November 2003. The situation becomes further complicated when the battlefields are brought to the people, making them pawns in the hands of states involved. This is exactly the case of the border people of Poonch district. For example, the Khetan village of Poonch district of the Jammu region provides a very interesting facts of the border life. The Khetan village looks like a heavily guarded military outpost rather than a typical rural community. A three-tiered fence system that is known as the Anti-Infiltration Obstacles System (AIOS) has been constructed in the village. This system blocks the dirt-track road that goes up to the village on the Line of Control, which is the de-facto border that divides India's Jammu and Kashmir from Pakistan's occupied Kashmir. The local people of this village are trapped between AIOS on the one

side and death traps in the form of hidden landmines on the other. Whenever the people have to move out of the village, they have to follow a strict security check at the first gate of the fence, which is guarded by the Army. The last gate of the fence is situated around three km distance, at the outskirt of their panchayat, Kosaliyan. The resident of the village has to submit their smart identity cards and cell phones at the check-post before they are permitted to go outside of the AIOS (Ashutosh S, 2021). These rundown garrison villages have come to represent the seven-decade-old border conflict between India and Pakistan.

Nevertheless, the current tensions between India and Pakistan are the reminiscent of 2015, a year marked by some of worst incident of ceasefire violation. Following the Uri attack in September 2016, India blamed Pakistan. The indiscriminate firing from across the border poses a great threat to the lives and properties of people on both sides of the border. It frequently causes "superfluous injury or unnecessary firing" and "severe and long-term damage to the environment". The border resident gets displaced whenever tensions between India and Pakistan escalate. The displacement along the border is a regular feature and even a small trigger from either side cause displacement. They bore the costs of the conflict in multiple ways in terms of loss of life, property, etc. There were 5, 133 instances of ceasefire violations along the Line of Control (LOC) with Pakistan in 2020, which resulted in 46 fatalities. There were 299 violations till 28 January 2021 this year, and one fatality was reported. However, according to the Ministry of Defence only three (03) minor incidents of 'violations' were recorded along the Line of Control in Jammu and Kashmir after Indian and Pakistani armies agreed to observe a ceasefire in the year February 2021.

Table: 2 The Number of Ceasefire Violations or Cross-Border Firing in Jammu and Kashmir from the year 2017-2020 is given below



Source:Press Information Bureau, Government of India Ministry of Defence (Table 2)

Source: Author Depiction

Education

Apart from human lives, education is another casualty in cross-border firing areas of Poonch district. Violence has a pervasive impact on all members of society. But children and women are more vulnerable than adults because they are suffering physically, mentally emotionally and morally. Children living along the frontier are regularly exposed to conflicts, which endangers their childhood and future. The exposure to extreme violence makes it difficult for children to plan for the future. It has become a barrier for teachers to teach and for children to learn. Every year, villages in border regions are severely disrupted by cross-border firing which has a negative impact on everyday life. The incidents of violations have significantly affected the lives and livelihood of the residents and also hampered the educational progress of children residing in these areas. There are over 250 schools situated along the Line of Control in the Poonch district.

Further, the educational infrastructure has been destroyed several times, and the current quality of schools and other associated facilities in these places is not up to mark. Which ultimately directly or indirectly impedes the education process of students. Similarly, infrastructure facilities such as relief camps, bunkers, and huge military presence to cope with emergency situations, and the fundamental survival needs of the people are insufficient to ensure the well-being of children and common people. The prevalent condition frequently instills fear, insecurity, and lack of confidence in children and the community at large (Daily Excelsior: 2020).

Displacement

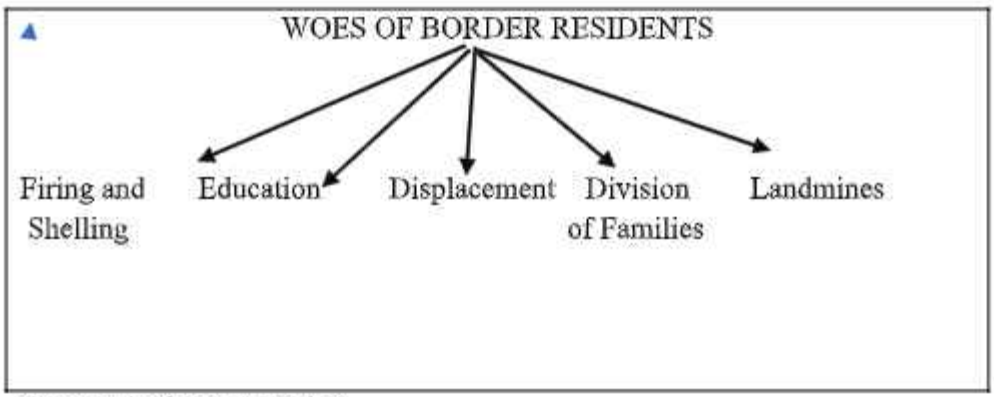
Whatever the level of conflict between two countries along the border, some degree of displacement takes place. Dislocation is the indicator of political instability, and it often includes some kind of physical and psychological enmity. Forcing people to leave their homes, being deprived of land, and denying them access to education and healthcare may all have a negative impact on communities. As a result of displacement, many people leave their homes induced by frequent incidences of cross-border firing between two countries, and in the process suffer socioeconomic and psychological consequences. Thus, people living on the border get displaced whenever the disturbances on the border increase. The emergence of armed conflict, firing, shelling and the deployment of security forces along the border led to the dislocation of the people. The peculiarity of displacement of the people is that it is temporary but recurring (Shekhawat & Mahapatra, 2009).

Displacement, thus is a part and parcel of the life of the border people as they keep shuttling between their native place and the relief camps, whenever the border is disturbed or even it is apprehended to be disturbed in the near future (Shekhawat & Mahapatra, 2009). Not only wars but also hostilities between two countries lead to the displacement of these people. For instance, the number of such violations of the ceasefire in Jammu and Kashmir is 3 in 2006, 21 in 2007, 77 in 2008, 28 in 2009, 44 in 2010, 62 in 2011, 114 in 2012, 347 in 2013, 583 in 2014 (The Hindu) lead to the displacement of thousands of people from the border area. The occurrence of several border skirmishes poses significant challenges to the daily lives of those residing in the affected areas. They cannot celebrate social, religious, and cultural functions as the way they might wish to. These activities are always impeded by the cross-border firings and the relatives living away from them prefer not to visit.

The people affected by displacement often live in abject poverty and are kept together in camps. The problems faced by these people include a wide range of challenges, including homelessness and inadequate access to basic facilities. Further, they experience a loss of traditional means of livelihood to a decrease in income. These circumstances have a negative impact on their

sociocultural well-being and contribute to an increase in health-related problems, from lack from lack of educational facilities and essential services like communication and transport to loss of identity and prospects of leading a dignified life. In spite of being removed from their natives' places, they are dependent on the government for relief that which is often insufficient and irregular. The end of border skirmishes enables the displace to return to their native's places but this does not mean that their suffering will end with the end of displacement. When they return to their homes, they find another set of problems waiting for them. The people living within 5-7 kilometers of the LoC are subjected to frequent incidents of firing and shelling from across the border. Even without apparent reasons many times, an exchange of firing takes place. The pain of those living near the border is increased by intermittent violence. The Kashmir conflict like many other conflicts has continued for decades and as such it has serious, long-term, social, economic and political consequences for the people living on the border.

Table: 03



Source: Authors Depiction

Conclusion: The present study aims to examine 'border' from the perspective of people living around them. The issue concerning border people does not get enough attention and has been remained invisible in the high-profile context of conflict. Over the last two decades, infiltration and militancy have impacted this region drastically. The increased military maneuvers on both the sides pose a new kind of challenges. The ceasefire violence which now occur between one fifth and one third of the days in a calendar year have generated their own kind of problems. CFVs are caused not only by local circumstances but also represent the state of bilateral relations between India and Pakistan. The most significant issue that the people of borders are facing is the one that emanates from the unpredictability and uncertainty of borders. Another driver of CFVs is militant infiltrations. These infiltrations are multifaceted and not unrelated to bilateral relations. The intensification of military operations in Jammu and Kashmir indirectly contributes to infiltrations and therefore to CFVs.

The borders are not necessarily peaceful even during normal times when peace is a major narrative and when there is overall improvement in the relations between India and Pakistan. Having already experienced the hardships of violence and forced migration from their own areas, these people were unable to escape the threats of conflict in this hostile belt nor could they have the satisfaction of settle life.

References

Axworthy, L. (2001) Human Security and Global Governance. Putting People First. Global

Governance. Vol. 7 (1), Pp 359-382

Bhalla, Abhishek (2020) War in Peace at LoC: How Children bear the brunt of Conflict, India Today, [online] available at https://www.indiatoday.in/india/story/kashmir-jammu-line-of-control-loc-war-peace-children-brunt-conflict-1634849-2020-01-08

Bose, S (1999) "Sources of Conflict, Dimensions of Peace", Economic and Political Weekly. Vol. 34, No. 13, pp. 762-768

Bose, S. (2005). Kashmir: Roots of conflict, paths to peace. Harvard University Press.

Census of India 2011, Ministry of Home Affairs, Government of India.

Chandran, Suba (2013) "Pir Panjal International Festival: Marketing Rajouri, Poonch, Bhaderwah and Basholi", Institute of Peace and Conflict Studies.

Chowdhary, Rekha (2010) Identity Politics in Jammu and Kashmir, Delhi Vitasta

Correa, E. (2016). Borderlands: Risky Spaces or Safe Places?'Real and Imaginary'Borders–(Re) Framing Identity and Privilege. In National Solutions to Trans-Border Problems? (pp. 189-204). Routledge.

Daily Excelsior (2020) Border Children in Times of Conflict and Coronal [online] Available at https://www.dailyexcelsior.com/border-children-in-times-of-conflict-and-corona/

District Statistical Handbook Poonch (2011) Directorate of Census Operation, Government of Jammu and Kashmir. Pp. 01-112

Dutta, Nayak Amrita (2019) what's so Strategic about J&K's Rajouri-Nowshera region that makes LoC hottest here, The Print [online] Available at https://theprint.in/defence/hindu-population-border-topography-makes-jammu-region-pakistans-new-killing-fields/219298/

Ganguly, Sumit (1999) The Crisis in Kashmir: Portents of War, Hopes of Peace. Cambridge University Press

Hussain, Masood, (2002) "India, Pakistan mine LoC, Border", Economic Times

Jacob, Happymon (2018) Line on Fire: Ceasefire Violations and India-Pakistan Escalation Dynamics. Oxford University Press

Mahapatra & Shekhawat (2007) "Kashmir Across LOC", Gyan Publishing House: New Delhi

Mahapatra & Shekhawat (2008) "The Peace Process for Economic Reconstruction in Kashmir", The peace and conflict review, vol. 3(1), ISSN:1669-499

Mahapatra, Debidatta Aurobinda (2011) "Positioning the People in the Contested Borders of Kashmir", Centre for international border studies research: p.21

Maini, K.D (2009): A Complete History of Poonch. New Delhi, J&K Offset Printers. Pp. 3-15

Maini, K.D (2010) "Rajouri and Poonch: Identifying Early Warning Signals and Addressing New Challenges", Institute of Peace and Conflict Studies Issue Brief, No. 148

Maini, K.D (2012) Poonch: The Battlefield of Kashmir. Gulshan Books.

Malik, S. Ahmed (2013) "Development of Difficult Region Through Travel, Trade, and Tourism: A Case Study of Twin Border Districts Rajouri and Poonch", vol. 2, No.2, ISSN 227-6788

Ministry of Home Affairs, Government of India Annual Report 1990-2021

Official Website of Poonch Historical Background of Poonch. [online] Available at www.Poonch.nic.in.

Official Website of South Asian Terrorism Portal [online] Available at datasheet-terrorist-attack-fatalities (satp.org)

Wastl-Walter, D. (Ed.). (2016). The Routledge research companion to border studies. Routledge.

Wilson, T. M., & Donnan, H. (Eds.). (1998). Border identities: Nation and state at international frontiers. Cambridge University Press.

Wirsing, R. G. (1994). India, Pakistan, and the Kashmir dispute: On regional conflict and its resolution (p. 337). New York: St. Martin's Press.

Understanding use of Open Educational Resources (OERs) by Preservice Teachers

Ilfa Zaidi, Roohi Amir** and Harjeet Kaur Bhatia****

ABSTRACT

Open Educational Resources is the revolutionary movement which has surprised and transformed the education systems around the world and has the potential to change the domain of education in India. The present study aimed to investigate preservice teachers' use of open educational resources (also referred to as OERs), including their preferences for the types of OERs used by them and their perceptions of OER practices during their training. Data was gathered from 102 participants from Jamia Millia Islamia university using questionnaire. The study's findings indicated that OERs were occasionally used by the majority of the population, despite the fact that the frequency of faculty referring to OER was quite high. Results also indicated that preservice teachers preferred to utilise OERs for a variety of reasons, including getting support with their studies or teaching, gathering knowledge about their teaching subjects, and completely understanding of any idea.

Key Words: Open educational resources (OERs), Preservice teachers, Use of OERs

Introduction

Open educational resources (OERs) have emerged as a key contributor for education, research, and training in the global scenario. India has also seen an unprecedented rise in open educational resources (OER) in recent years. Although, the concept of OER was recognised formally in 2008 (Padhi, 2018). Now, universities are establishing OER portals and making their educational resources available countrywide. Open Educational Resources (OER) are educational materials that are publicly available and openly licenced and can be used for teaching, learning, research, and other educational purposes. These resources may be in the form of textbooks, lectures, lesson plans, videos, etc. UNESCO (n.d.) defined OER as "learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others". Zaidi (2022) mentioned that OER helps pre-service teachers for better classroom teaching and makes it easier for them to stay up to date with technology. According to CEMCA (2017), there are thousands of teacher training colleges in India, but it is not common to use OERs in teacher education. However, the potential for OERs to achieve both quality improvement and cost-effectiveness of teaching and learning is enormous. Kumar and Singh (2019) stated that for feeding the information hunger of the society, it is need of the hour to develop OER so that end-users can have easy access without any hindrances such as location, enrolments, etc.

---

* Research scholar, Department of Educational Studies, Jamia Millia Islamia, New Delhi, India
** M.Ed. student, Department of Educational Studies, Jamia Millia Islamia, New Delhi, India
*** Professor, Department of Educational Studies, Jamia Millia Islamia, New Delhi, India

Context of the Study

This research was done on D.El.Ed. students of the Department of Teacher Training & Non-Formal Education at Jamia Millia Islamia. It is an Indian central university in New Delhi. It offers different teacher training courses, i.e., D.El.Ed., B.Ed. (General), B.Ed. (Special Education), and B.Ed. (Nursery Education). Diploma in Elementary Education (D.El.Ed.) is a two-year programme to prepare teachers for the elementary level, i.e., classes I to VIII.

Need for the Study

As part of the digital India initiative, the government of India has taken a strong interest in the OER movement and has worked hard to promote it. In India, OER in digital form was started in 2003 with the launch of the National Programme on Technology Enhanced Learning (NPTEL). Initially, NPTEL provided education and educational resources to the students of engineering field only. However, as of March 2014, it began offering open online courses to all students (Jha & Kampa, 2022). In 2007 National Knowledge Commission embarked on a "national e-content curriculum initiative" for Indian universities to produce, adapt, and use OER. Additionally, in 2013, the National Repository of Open Educational Resources (NROER) was established (Padhi, 2018). Likewise, Consortium for Educational Communication (CEC) was also established by UGC to create, promote, and distribute educational materials through various media platforms such as television, radio, and digital platforms. Furthermore, primary goals of NEP 2020 are to ensure affordability, equity, and access (NEP, 2020). These goals can be accomplished through open educational resources. National Council for Teacher Education has also launched an online portal for open educational resources for teacher education in 2021. Thus, Open Educational Resources (OERs) enable realistic outreach in teaching and learning, therefore preservice teachers must be equipped with ICT skills to effectively use OERs, required for transformation (Okonkwo & Ikpe, 2013). Kwak (2017) emphasised the need of incorporating OER into teacher education and professional development in order to give guidance on how to utilise OER effectively. Kelly (2014) found that incorporating OER materials into preservice teacher training can improve students' understanding of OER ideas and contents.

Thus, after going through different initiatives and studies on open educational resources (OERs), a need was felt to conduct research on the extent to which preservice teachers use OERs, the types of OERs used by them, and the status of OER utilisation by their faculty and institution where they are studying. Since preservice teachers are the future educators, it seemed relevant to carry out the present research so that they can make good use of open educational resources.

Research Question

Q. How does pre-service teachers use Open Educational Resources?

Objectives

1. To study the use of OERs by preservice teachers
2. To study the preservice teachers' preferences for using OERs
3. To study the perception of preservice teachers on OER practices during their training

Research Methodology

Population

Population of present study consisted of all pre-service teachers enrolled in different educational institute in Delhi.

Sample

Based on convenience sampling, 102 students were selected from both mediums (Hindi & Urdu) of the D.El.Ed. course from Jamia Millia Islamia. It is a two-year programme offered by the Department of Teacher Training & Non-Formal Education.

Questionnaire

For data collection, the researchers constructed a questionnaire after going through various researches related to preservice teachers' use of open educational resources (OERs). So, permission was taken from the authors whose studies helped in choosing the questions. The questionnaire was divided into two parts. First part was related to participant's background information such as age, gender, teaching experience, teaching subject etc., and second was about the use of open educational resources. In the second part six questions were asked from preservice teachers.

Analysis of data

Collected data was analysed using frequency of responses and percentages. Table and graphs were used to represent the analysed data.

Findings

The responses collected are organised in the following table with a graphical representation of the analysed data to have comprehensive background information of the participants.

I. Background information of the participants

Table 1: *Analysis of background information of the participants*

Gender: In the total sample of 102, 67.6% were females and rest 32.4% were males.

Age: All participants were categorised by age as young adults from their mentioned age groups. Majority of the respondents (57.8%) were in between 20 years to 25 years of the age group, whereas only 1% of the respondents there were lying in the age group above 30 years old.

Teaching Experience: More than half (56.9%) of the participants were having teaching experience before or during their course, while 35.3% of the respondents stated that they do not have any teaching experience.

Highest Academic Degree: 59.8% of the preservice teachers were intermediate (12th passed), while 34.3% were having graduation degree. Only 5.8% participants mentioned that they have masters as their highest academic qualification.

Teaching Subject: Most of the preservice teachers have languages (34.3%), social sciences (39.2%), Science (22.5%) and mathematics (18.6%) as their main teaching subjects. While few have chosen operational research, art and craft and games as their teaching areas.

From the above data, investigators concluded that most of the participants were young adults having intermediate/ senior secondary as their highest academic qualification with some teaching experience as common tutors.

II. Use of open educational resources (OERs)

Objective 1: To study the use of OERs by preservice teachers

This objective consists of three questions related to frequency and types of OERs. So, responses of preservice teachers are as follows:

Here, Figure 1 shows the OERs that preservice teachers accessed during their teaching-learning. The widely accessed OERs were YouTube (71.6%), followed by ePathshala (52%), eGyankosh (24.5%), SWAYAM (17.6%), Khan Academy (13.7%), Shodhganga (9.8%), NPTEL (5.9%) and NROER (5.9%). Whereas it is also found that other OER platforms like Consortium for Educational Communication (CEC) and INDUSPATI were less accessed (1%) for the educational purpose. While there were some of the OERs like Vidyanidhi, and MIT-OCW, which has never been visited by the participants.

Figure 2: Frequency of OERs accessed by participants

Figure 2 illustrates that 53.9% means more than half of the participants occasionally accessed OERs while 5.9% respondents have never accessed and used any OERs. Whereas 24.5% participants claimed that they use OERs on regular basis.

Figure 3: Types of OERs used by participants

Figure 3 reveals that the video resources (77.5%) were most commonly used as the type of OER. Besides that, it is found that the participants understand ICT and other digital resources as they use eBooks/open textbooks (45.1%), online tutorials (34.3%), free stock images/graphics (31.4%), open access articles and audio resources (28.4%). Only 3.9% of the respondent stated that they do not employ any OER in their teaching-learning.

Objective 2: To study the preservice teachers' preferences for using OERs

Figure 4: Participants' preferences to use OER

The Figure 4 shows that preservice teachers use OERs to get help for their studies or teaching (62.7%). In addition, 49% participants reported that they use OER to gather information about their teaching subjects and to understand any concept thoroughly. Whereas, using OER to gather information about their subjects was selected 49% by the participants.

Objective 3: To study the perception of preservice teachers on OER practices during their training

Figure 5: Participants responses on if their university offering OER

The data analysis from the Figure 5 indicates that 42.2% of the participants were unsure whether their university offers OER or not. Whereas 37.3% of the respondents have affirmed positively that their university provides OER. Meanwhile, 20.6% said that no OER has been offered by the university.

Figure 6: Participants responses on if their faculty refer them to use any kind of OER in their teaching practice

The above figure 6 shows that 89.2% of the respondents stated that the faculty members referred and suggested some kind of OER, which shows that the faculty members were encouraging the students to utilise the benefits of OER to enhance the outcomes and performance in their teaching practises. Whereas 10.8% pre-teachers denied of having any experience of OER with the faculty.

From the findings, investigator concluded that the majority of the preservice teachers have accessed OERs, means that they have some exposure and knowledge of OERs and its utilisation in teaching-learning.

Discussion

The results of the present study pointed out that YouTube, eGyankosh, ePathshala were the highly accessed OERs, which could be due to availability of content in native and local languages on

these platforms. But, on contrary some respondents admitted that they use OERs occasionally. So, steps should be taken to encourage preservice teachers for adopting OER regularly. In addition, it is found that the major reasons for preferring the use of OER were to get help in study/teaching, to understand any concept well and to collect relevant information about the subject. These findings are consistent to some extent with those of Padhi (2018) where participants expected to use OER to increase their performance. Findings also revealed a vast reception and utilisation of video resources and eBooks by the preservice teachers. These results show consistency with Bansal and Joshi (2016), where the participants were unfamiliar with the concept and notion of OER, but they did search for teaching resources, like e-books, and read open access journals, which are examples of OERs. Respondents were also asked questions about their exposure to open educational resources during their teacher training courses, to which the result revealed that the faculty members did refer to use OERs during their teaching practice, which indicated that preservice teacher were exposed to OERs. Further, it can be stated that respondents were unsure and unaware if their university offers OERs. These results are similar with the study of Jain and Shiloh (2019) who found that many participants are unaware that universities also provide open educational resources.

Conclusion

According to the findings of this study, it is concluded that preservice teachers access different OER platforms for using different types of open educational resources such as, eBooks/open textbooks, audio/video resources, online tutorials, etc. But, on the other hand, some participants reported that they do not know if their university facilitates OERs. Hence, training support and promotion of OER practices can serve as an effective tool in the development of preservice teachers, as its integration with the pedagogical strategies will help the preservice teachers in achieving the desired teaching and learning goals. Moreover, it is good to say that OER has the potential for long-term growth in enhancing educational access and quality by allowing the open use and repurposing of high-quality learning resources, as majority of participants preferred the use of OER to get help in study/teaching. So, findings of this study can be used by the government for developing OER policies and procedures. It is assumed that such policies will have the potential to raise OER awareness and understanding of using OERs in educational communities.

Suggestions For Future Studies

Future study can be conducted on OER usage by taking different population or on subject-specific resources. Also, a comparative research may be carried out on the parameters of location, highest education, teaching experience, teaching subjects, teacher training courses and among various OER platforms.

References

Bansal, T., & Joshi, D. (2016). OER and Teacher Educators: Awareness and Barriers. Indian Journal of Open Learning. Retrieved from http://egyankosh.ac.in/bitstream/123456789/64150/1/Pg-59-68.pdf

CEMCA. (2017). Promoting Use and Contribution of Open Educational Resources. Commonwealth Educational Media Centre for Asia. Retrieved from http://cemca.org.in/ckfinder/userfiles/files/CEMCA_OER%20Monograph.pdf

Consortium For Educational Communication (CEC). Retrieved from https://cec.nic.in/cec/

Das, A. K. (2011). Emergence of open educational resources (OER) in India and its impact on lifelong learning. Library Hi Tech News, 28(5), 10-15. doi: 10.1108/07419051111163848

Jain, S. J. & Shiloh, J. V. (2019). Students' Attitude towards Open Educational Resources (OERs) in University of Madras. Retrieved from https://www.researchgate.net/publication/342493733_Students'_Attitude_towards_Open_Educational_Resources_OERs_in_University_of_Madras

Jain, S. J. (2019). Faculty and Student Perceptions of Open Educational Resources in University of Madras. Retrieved from https://www.researchgate.net/publication/342493396_Faculty_and_Student_Perceptions_of_Open_Educational_Resources_in_University_of_Madras

Jha, S. S., & Kampa, R. K. (2022). NEP-2020: OER and M-learning in Higher Education. Retrieved from https://ir.inflibnet.ac.in/bitstream/1944/2371/1/14.pdf

Kelly, H. (2014). A path analysis of educator perceptions of open educational resources using the technology acceptance model. The International Review of Research in Open and Distance Learning, 15(2). doi:10.19173/irrodl.v15i2.1715

Kumar, A. & Singh, M. (2019). Exploring the Use and Practice of Open Educational Resources (OERs) in Social Science Discipline with Special Reference to University of Delhi, Delhi. Library Philosophy and Practice (e-journal). Retrieved from https://digitalcommons.unl.edu/libphilprac/2664.

Kumar, A. (2017). Open Educational Resources (OER): Changing the Learning Landscape in Digital Environment. Proceedings of the NACLIN-2017, DELNET: Delhi.

Kwak, S. (2017). How Korean language arts teachers adopt and adapt open educational resources: A study of teachers' and students' perspectives. International Review of Research in Open & Distance Learning, 18(4), 193-211. doi:10.19173/irrodl.v18i4.2977

National Council for Teacher Education (2021). NCTE's Initiative to Provide Quality Educational Resources during the times of COVID 19: Journey so far. Retrieved from https://ncte.gov.in/Website/OER.aspx

NEP 2020 (2020). National Education Policy 2020. Government of India. Retrieved from https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

NKC (2007). National Knowledge Commission: Report to the Nation 2007. Government of India. Retrieved from http://www.knowledgecommission.gov.in/recommendations/oer.asp

Okonkwo, C.A., & Ikpe, A. (2013). Assessment of pre-service teachers' information and communication. Proceedings of the Pan-Commonwealth Forum on Open Learning PCF7 Conference, 2-6 December, Abuja, Nigeria. Retrieved from http://pcfpapers.colfinder.org/bitstream/handle/5678/108

Padhi, N. (2018). Acceptance and usability of OER in India: An investigation using UTAUT model. Open Praxis, 10(1), 55-65. Retrieved from https://files.eric.ed.gov/fulltext/EJ1171142.pdf

United Nations Educational, Scientific and Cultural Organization (n.d.). UNESCO. Retrieved from https://www.unesco.org/en/open-educational-resources#:~:text=Open%20Educational%20Resources%20(OER)%20are,adaptation%20and%20redistribution%20by%20others

Zaidi, I., Amir, R. & Bhatia, H. K. (2022). Benefits And Barriers to Open Educational Resources (OERs): Preservice Teachers' Perception. The Online Journal of Distance Education and e-Learning (TOJDEL), 10(2), 180-188.

Table 1: Analysis of background information of the participants

Basic characteristics	f	%
Gender		
○ Male	33	32.4
○ Female	69	67.6
Age		
○ Between 15 years to 20 years	36	35.3
○ Between 20 years to 25 years	59	57.8
○ Between 25 years to 30 years	6	5.9
○ Above 30 years	1	1
Teaching Experience (Before or During D.El.Ed.)		
○ No	36	35.3
○ Yes	58	56.9
○ Other (as Tuition Tutor)	8	7.8
Highest Academic Degree		
○ Intermediate	61	59.8
○ Bachelors	35	34.3
○ Masters	6	5.9
Teaching Subject		
○ Mathematics	19	18.6
○ Science	23	22.5
○ Social Science/ Social Studies	40	39.2
○ Language (Hindi/Urdu)	35	34.3
○ Other	15	14.7

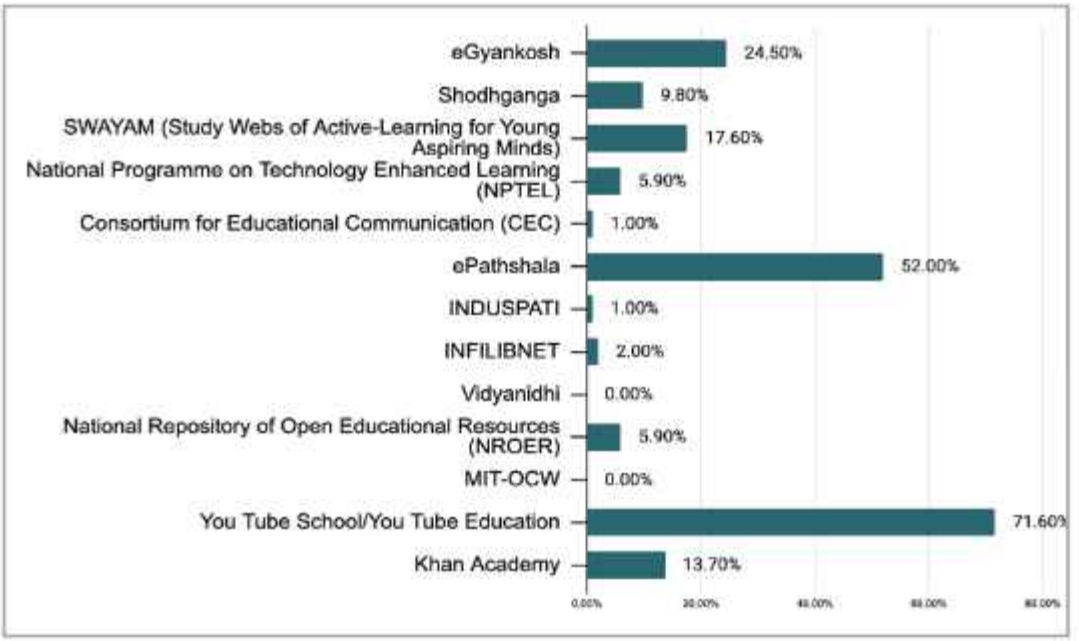


Figure 1: OERs accessed by the participants

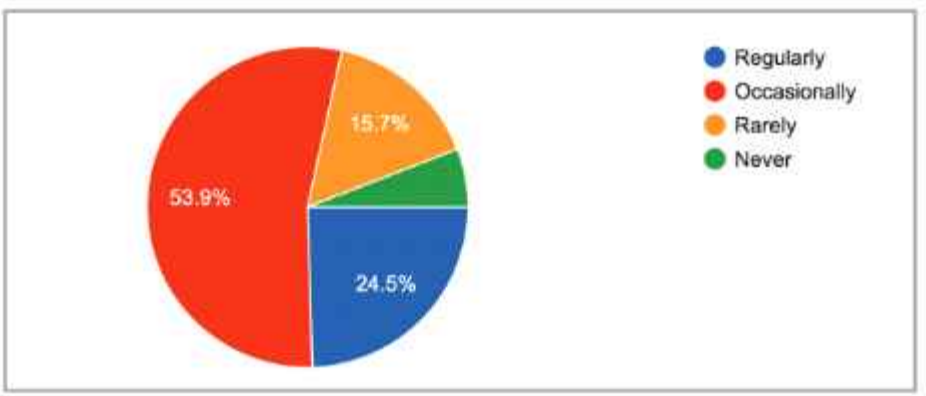


Figure 2: Frequency of OERs accessed by participants

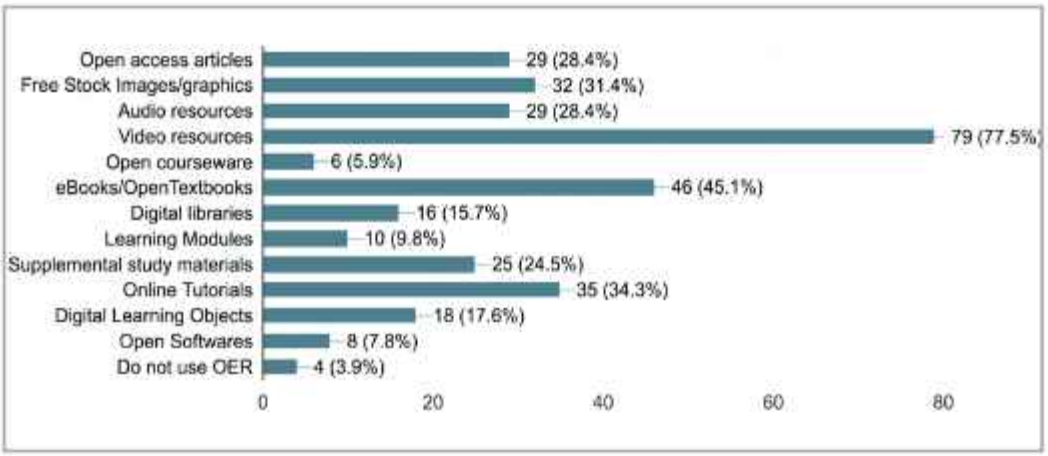


Figure 3: Types of OERs used by participants

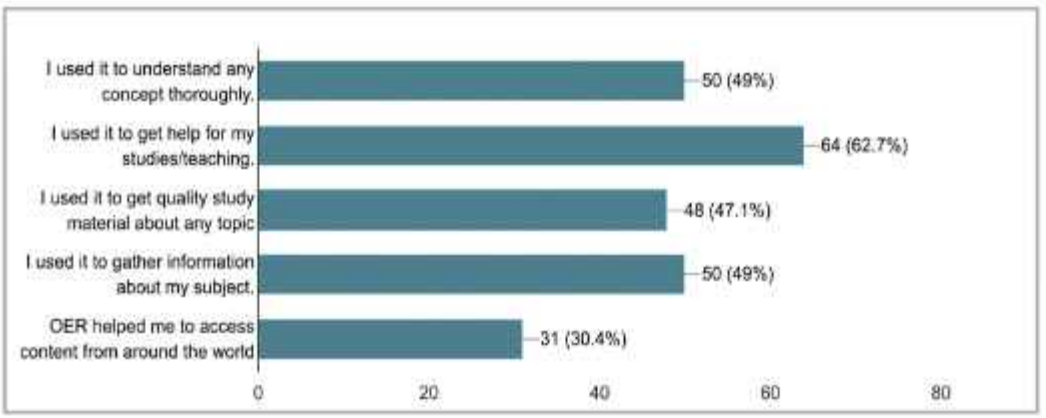


Figure 4: Participants' preferences to use OER

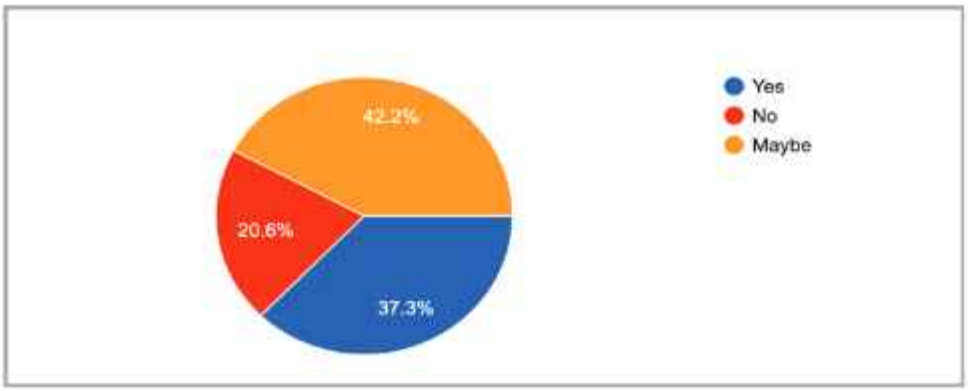


Figure 5: Participants responses on if their university offering OER

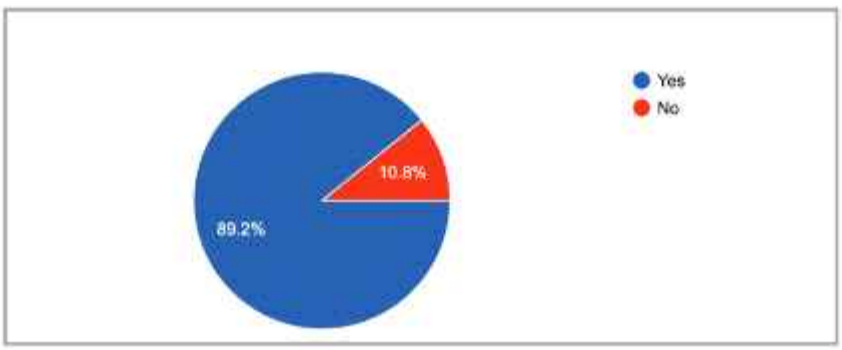


Figure 6: Participants responses on if their faculty refer them to use any kind of OER in their teaching practice

Skill Gap and Youth Employability in Industry 4.0

*Vibhuti Sharma**

ABSTRACT

The transition of educated youth is important for getting suitable employment throughout their life course. This study investigates the extent of the skill gap in educated youth's educational and vocational educational attainment. A large number of studies help to build a theoretical framework on skill gap & employability. However, substantial research lacks in investing a skill gap & youth employability. Therefore, there is great importance in finding current knowledge in this field. Thus, this paper carries out systematic reviews in appropriate manner including, the skill gap in general & vocational education, Employability and Labour Market Participation, Skill development opportunities (VET) for youth employment and aIndustry 4.0 role in educated youth employability. This paper analyses the skill gap & youth employability. The purpose & contribution of the paper is to provide a clear picture of the skill gap among educated youth & causes of delay in labour market transition. A systematic review in this area of specialisation attracts the attention of the government in finding loopholes in the education system & creating the bulk of employment generation for educated youth.

Key Words: Industry 4.0, skill gap, skill development opportunities, VET, employability, Labour market participation

Introduction

One of the important goals of our education systems is to inculcate skills and knowledge among youth for labour market success. Thus, there is a great need to examine different paths among youth from high school to labour market participation in the labour market (Lindsay,2016) During the transition from adolescence to adulthood, most youth move from economic dependence on their parents to their independence. (Hartman, 2016). In the past, youth after finishing school education starts their first full-time job, married and then start a family (Marini,2016). However, this pattern has changed due to the nature of the changing pattern of technology, learning a new skill has changed the transition of youth. So, there is a rapid growth of mass higher education with the new pattern of skills (Wanner, 2015) and there is an essential demand for new skills & technical know-how in the youth employability. We learned from the previous literature that youth transition pathways such as leaving the parental household, completing education, acquiring a stable job, and family formation are complex, interlinked, and associated with changes in values and ideals (Furstenberg, Rumbaut and Settersten, 2015).

The term youth can be defined as the period between childhood and adulthood when spending a longer period in education and training (Furlong, 2012). It is the transition in youth from school to suitable employment (Threadgold, 2020). Its success is seen and measured by getting employment and by having new skills (Pham & Jackson, 2020). Educational attainment of educated youth with appropriate skills plays an important role in shaping their life, transitions and participation in the labour

* Research scholar, Department of Economics, University of Jammu, Jammu, India

market (Partanen,2020), which impacts risks and uncertainties towards work (Myllylä, 2020). Youth transitions to the labour market have been complex and uncertain. Social, economic, and political changes significantly impact youth's lives by providing suitable skills. Youths are 'at risk' or 'vulnerable', therefore, systemic, institutional and structural responses are needed for increasing youth employability (Tåhlin & Westerman,2020).

With the pace of technological change and new working methods, the use of artificial intelligence is termed a "great job-creating machine" (Scheau, Arsene, 2018). Educated urban youth have future goals, and fight for their rights in education and employment. Major problems seen are unemployment, inadequate knowledge &experience, and skill gap (Nair, 2016) and face sorrow and misery of unemployment after spending a lot on education and over education (Choudhary, 2016).

The future of Indian youth is dark due to the non-job-oriented education system, lack of basic skills and ineffective government policies and programs for transitioning educated youth into the labour market. As compared to a developed nation, problems faced by Indian youth in the labour market transition include skill gap, lack of vocational and market-oriented skills, poor school-to-labour market transition, and the poor performance of schools/ institutions in vocational education, NEET. (UNDP, 2021). Employability helps youth to gain financial independence and social integration, and develop knowledge and skill (OECD,2015). India is one of the youngest populated countries around the world as out of 65 % of the working population majority are youth (UNEPA, 2020) who suffer from inadequate access to education, unemployment, lack of skills training, technical know-how, and skill gaps in the labour market. (Brunello,2021) if does not invest more in education and training, the system might face worse youth unemployment (Wruuck, 2021).

Objectives of the study

The objectives of this systematic review are:

- To find out the skill gap in general & vocational education, employability and Labour Market Participation.
- To examine skill development opportunities (VET) for youth employment
- Industry 4.0 role in educated youth employability.
- Suitable policy suggestions

These reviews help in the development and implementation of educational and vocational training policies and bridge skill gaps and the finding of the study that helps in creating employability among educated youth.

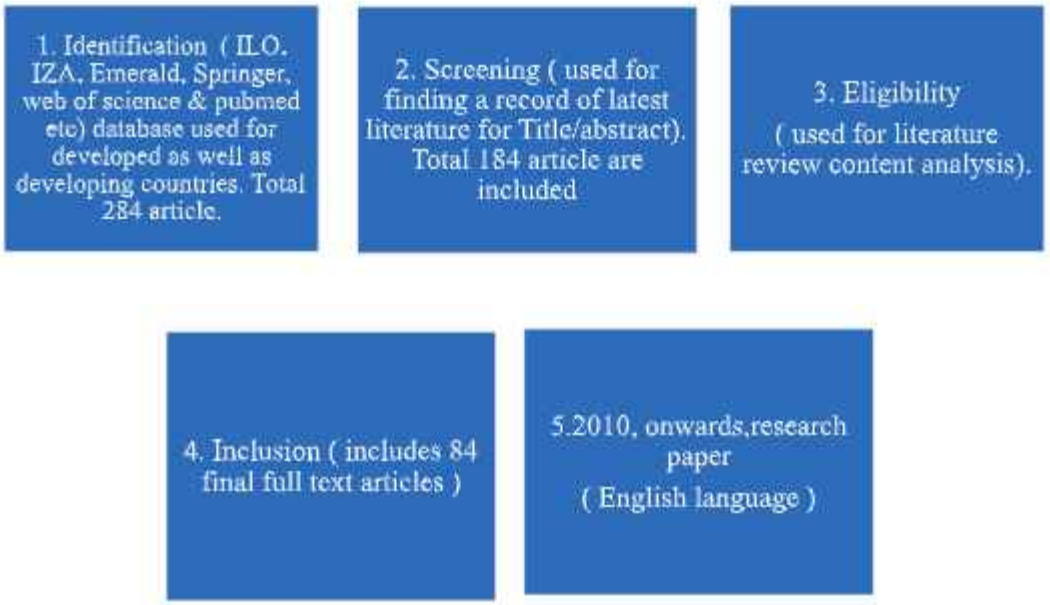
Methodology

The author of this paper studies reviews on the skill gap among educated youth & employability. The objective is to find out skill gaps in educated youth employability in industry 4.0, which will help in future research directions in this field. In addition, this paper aims to develop an understanding of local, national and international employability skill that increases labour market participation & employment opportunities among youth in industry 4.0.

The foremost important research question is 'What are the skill gaps in educated youth & become a hindrance for industry 4.0 employability'? The main need is to first focus broadly and then scrutinize the literature part and find evidence from a national as well as international perspective, a systematic approach is used for the review process by applying the (Identification, Screening, Eligibility and Included) criteria ((Whittemore & Knafl 2005;), Grant & Booth 2009). Specific literature review supports the flexibility and uniqueness of the context. It is used in a systematic & review manner by analysing information on the challenging social issue of skill gap and employability.

A total amount of 284 papers have been found on systematic review databases like ILO, IZA, Emerald, Springer, web of science & PubMed etc. for the documentation of data of developed as well as developing countries. 184 are used as research content like title, abstract & keywords and are more consideration for the researcher & practitioners. A final full-text article of 84 documents is used for the literature review & analysis part. These documents have been weighed in two ways, first 32 recent documents are used for the analysis of titles, abstracts and keywords. After reading the entire text final 52 documents are used for the up-to-date literature review analysis. The selection process of paper (for the year 2010), onwards with (English language) is used for the significance of documents

for the study.



Discussion

The skill gap in general and vocational education

Today's youth face a very terrible skill gap problem, which reduces their probability of employability. Skill gap refers to the difference between the skills required for a job & the skills employers possess. Skill gap threatens long term economic prosperity of nation & there is need of high-quality workforce for business success. There is a crucial need for employability skills possessed by youth including communication, teamwork, problem-solving, planning & organising, self-management, learning skill & technology. There is a scarcity of youth with good technical and soft skills required for suitable employment. As a result, youth work in a turbulent environment that demands new and developing skills to set up in global competitiveness. (Malik, 2017). Vocational education is a core of school knowledge as education for jobs, and work. Education for jobs carries a direct link between the curriculum and actual jobs in the labour market. On the other hand, in the context of general education, youth-only study for degree/diploma, there is no practical know-how for the job. To desire a job, youth must have to face stiff competition for getting a suitable job (Venkatraman, 2017)

According to research by Boston Consulting Group, estimated in 2020 India have a surplus of the active population ((in the working-age group of 15-50 years) - about 47 million people in total. The skill gap appears to be staggering - 75% of IT graduates are deemed 'unemployable', 55% in manufacturing, 55% in healthcare and 50% in banking and insurance, according to higher education in India: Vision 2030, a report produced by international consultants Ernst and Young for the Federation of Indian Chambers of Commerce and Industry, or FICCI." (Mishra, 2016))

Sectoral analysis of skill gap, 2022. The biotechnology sector in India is growing at a rate of 37.5 per cent annually. The Drugs & Pharmaceutical industry at the global level has grown at a rate of 7% while India's drug sector grew by 10% but a vast population of this segment lacks the skills

required. The Indian IT/ITES have created 3 million job opportunities as it is the topmost destination for IT/ITES outsourcing firms but has a manpower shortage due to the core issue of skill gap. (Malik & Venkatraman, 2017)

Employability and Labour Market Participation

Labour force participation is the measure to evaluate the working-age population in an economy. The participation rate refers to the total number of people currently employed or in search of a job. Labour force in a job with sex and age group gives a profile of the distribution of the working population (Mattos, 2016) and its level and pattern depends on employment opportunities, income, age, marital status and level of education and used as an indicator in labour market behaviours (ILOSTAT, 2018). Employability is correlated with Labour market participation. Fewer job availability causes a lower participation rate and high job availability causes a high participation rate in the labour market and is significant in understanding unemployment (Chaudhary,2016).

The Global Labour force participation rate among youth is 42%, due to an increase in educational enrolment and greater employment opportunities (ILO, 2018). According to world employment and social outlook, the worldwide gender gap in labour market participation is 27% (ILO, 2020). In India, Youth participation in the labour market of males is 38% and that of females is 16% during 2017-18, which is quite low than males due to a lack of vocational education, skill and training, a rise in inactive female youth (Sahu and Kumar, 2021). Labour force participation creates new challenges and opportunities regarding the organization of work and distribution of resources. (ILO, 2018a).

Different labour market situation faced by youth in a country like India, having a strong economic growth rate, continues to be dominated by the unorganized sector (Giri, 2017). Labour force participation plays an important role in labour market equality in terms of gender and helps achieve human development goals, eradicate poverty, and increase production, and output in an economy. (Verma,2017). Labour force participation among women provides a choice to work in the labour market (Ahmed, Chinembiri, & Gillwald, 2021) and is generally lower among females than males. Women tend to leave the labour force to handle their families, children but in developed economies, the profile of female participation is similar to that of men (ILO, 2021) Higher educational attainment among women faces disparity concerning employment opportunities, skills and training, working conditions, job security, discrimination in a job, pay scale, sexual harassment in the labour market (Behera, 2021) and thus, falling labour market participation.

Employability varies in educated youth with General and vocational education. Vocational education plays an important role in labour market job opportunities (Baert,2015). and has more chances of employment and more likely to have a permanent first job as compared to general education (Brunello, 2015) and causes a short-term real wage advantage over a long period and age whereas long term disadvantage to youth with general education (Rocco, 2015). Vocational education yields higher expected long-term utility than general educated youth with higher education (Verhaest, 2015). Youth with vocational education are more likely to earn higher wages, and higher labour force participation (Manfredi, 2011). Various educational training programmes and apprenticeships help in provide skills to youth for labour market entry and successful professional carrier (Quintin, 2011)

Skill development opportunities (VET) for youth employment

Skill means the learned ability to perform an action, training or practice and skill development

is the method of finding skill gaps and improving the ability to perform a skilful job (Muller, 2019). Skill Development means developing skills which add value to the organization and career development. Learning and developing such skills require pieces of training or on-the-job opportunities (Katole,2020). The development of skills can contribute to structural transformation and economic development by enhancing employability and labour productivity. The creation of employment opportunities among youth improves their well-being and increases their future earnings, self-esteem, social identity and belongingness (Bahl,2021)

Vocational education is a solution to address youth employability (Bhatt,2021). Vocationally trained youth have a smoother transition to the labour market (Sharma, 2021) Occupation-specific skills make them more attractive to employers (Blommaert, 2020).) at the start of a career but later disadvantageous in life due to workers' inflexibility and inadequacy for changing job content due to technological innovations in contemporary labour markets (Wolbers, 2020). Vocational education is advantageous for labour market allocation (Gesthuizen, 2020) due to faster job absorption (Muja, 2020) and lowers unemployment probability at the start of their career (Carruthers,2020). due to ownership of occupation and sometimes even firm-specific skills (Jepsen, 2020). Vocational education develops job-related skills in specific occupations (Verzillo, 2016). Vocational education increases the chances of early working life with a modest income premium (Vacca, 2016).

However, new technological innovations demand contemporary skills in labour markets (Rainie 2017) and occupation-specific skills are likely to become obsolete with changes in job content(Anderson, 2017). Vocational education and Skill development training smoothen school-to-labour market transitions (Vincent & Rajasekhar,2021). Skill underutilization and work experience in unskilled jobs may delay future jobs (Pilz,2016). On-the-job human capital accumulation in unskilled labour may be of a lower "market value" compared to skilled positions (Tåhlin & Westerman, 2020).

Unskilled unemployment tends to persist throughout an individual's career (Buchs,2016). Similarly, entering the labour market during recessions crucially hampers future occupational and social positioning (Helbling,2016). Less participation of youth in industrial training and youth training programmes fails to meet the firm's job requirements related to abilities and skills (Panth, 2020). Skill development is helpful in the acquisition of knowledge and competitive skills (Maclean,2020) and successful in a smooth transition from school to post-secondary education for employment generation (Watanabe,2019).) and also improves employment outcomes for youth (Betcherman & Khan, 2018). It is also helpful in generating employment and labour market requirement for entrepreneurial tasks, enhanced employability and high future earnings for participants (Carnoy,2020)

Skill development affects employment and emerges as positive and significant for employment-generating schemes with higher employment and cost-effectiveness (Agrawal, Singh & Thakur, 2020). The value of Skill development is measured in earning differentials (Carnoy,2020) and payoff to education and increase in wages (Khan, 2018). Youth with low prospects of decent work at their entry into the labour market will face undesirable labour market outcomes in the long run such as lower earnings, unemployment, lower health and low job satisfaction (Sumberg,2017). Most of the skills training and microfinance programmes have failed to deliver decent work and poverty reduction (Güney,2017) not absorbing new entrants into the labour market and marking high rates of underemployment. The relationship between skill development and labour-market outcomes is evident (Ansari & Khan,2018). The educational system must adopt skill development programmes and reduces the skill mismatch in labour markets (Papakitsos, 2016).

World Skill Declaration Report, 2019 emphasizes that skill is important for employability which

includes certain basic, cognitive, digital, socio-economic, and cultural skills. In the global economy, there is a need for versatile skills and vocational education & training with a special focus on apprenticeship and lifelong professional learning skills in the labour market. Vocational education is acquired through knowledge, skills and competencies specific to the particular profession (Global Education Future, 2020).

In India, the Demographic profile of youth faces the problem of a skilled workforce. According to the Government of India estimates, 93% of the workforce is in the unorganized or informal sector, which is not supported by a structured skill development system (Giri & Verma, 2017). No training on employable skills is given to youth with employment opportunities as per the current education system. India's labour force has a high number of the labour force with outdated skills. The skill development environment in India is quite complex. To capitalize on the demographic dividend, India will need to empower its workers with skills (Aggarwal, 2016).In the National Policy for Skill Development and Entrepreneurship 2015, the main aim was to promote entrepreneurship as the key to a successful skills strategy. The Vision of this Policy is "to create an ecosystem of empowerment by Skilling with high Standards and to promote a culture of innovation-based entrepreneurship which can generate wealth and employment to ensure Sustainable livelihoods for all citizens in the country" In India,2.3% of the total workforce is informal skill & training as compared to 63% UK, 75% in Germany, 52% USA, 80% in Japan & 96% in South Korea (GOI, 2015).

Industry 4.0 role in educated youth employability

In the fourth industrial world and digitalisation, industry 4.0 plays an important role in the 21st century. Industry 4.0 is a term used for technologies (Artificial Intelligence) and concepts realized in industrial production. Industry 4.0 is referred to as exploiting the power of communication technology and innovative inventions fostering the development of the mechanized industry (Tyenge and Martinsen, 2018). Five key capabilities that are highly relevant in Industry 4.0, are namely self-reflective learning, creativity, problem-solving, cooperation and communication. Within the Smart Factories of Industry 4.0, the cyber-physical system (CPS) monitors physical processes, creates a virtual copy of the physical world and makes decentralized decisions. Over the Internet of Things, CPS communicate, cooperate and humans in real-time and cross-organizational services are accessible and utilized by participants of the value chain. People's employability depends upon their competence to gain the desired job and is no longer dependent on what they earlier know but on what they are expected to learn more for a new job (Biggs, 2013).

Industry 4.0 is a big challenge for educated youth as our society has changed from an industrial to information society (Ras & Wild, 2017). Now there is a demand for youth who learn quickly and self-organise the core content of specific knowledge fields, manage and master the vast amount of information, and the influence of technology on life. There is a need to develop competencies like critical skills, critical thinking, lifelong learning and teamwork among youth so that they can adjust to the labour market (Bailey & De Propris,2019). Critical skills include communication, teamwork, problem-solving, self-management, planning and organizing, technology, life-long learning, and enterprise skills (Stentoft, Adsbøll, & Haug, 2021). These critical skill helps youth to adapt changes and to improve career opportunities and also helps in employment with changing job (Khandelwal, & Martini, 2020) Industry 4.0 scenarios "only" highlight the need for employees to master the skill so that it will help in getting suitable employment.

Findings of the study

There are several key findings which are found in this paper, as discussed in brief.

- Firstly, the macroeconomic effects of Industry 4.0 become a major challenge for political, economic and company levels. There is a vital need to strengthen the industry digitally so that basic skills such as conceptual thinking, soft skills, communication skills and all other basic skills generate employability in youth.
- The effects of Industry 4.0 are very rigorous on the economy such as the effect on job losses and new jobs being created with new skills, new products, macroeconomic interrelationships, adjustment of supply and demand of labour, price and quantity reactions that changing requirements of the employer.
- This directly influences youth employability. This situation causes an increase in value creation, increasing productivity and higher requirements for youth causing growth in wages.
- The employment in Industry 4.0 comprises 54 industrial fields and 63 economic sectors 490,000 jobs are lost while in other areas 430,000 jobs are newly generated within ten years beyond the baseline scenario. In particular professions, there is a decline in the manufacturing sector.
- There are increases in the service sector like IT and scientific professions. In terms of qualification levels, the demand for high -qualified & skilled youth increases. As a whole, it is observed that the effects of Industry 4.0 create imbalance, Shortages & skill gaps in the field of vocational & training youth.

Policy suggestions

Government should implement new policies for the safe employability of youth in industry 4.0.

- First, Live Guidance for Advanced Manufacturing, recording/enactment technology for the supervision of learning new skills and training at the workplace knowledge-intense rich media and artificial intelligence (deep learning) approaches.
- Performance Analytics: Skills Metrics and Prediction Performance skills are in practice by youth. So, there are more chances of change , learning new skills and employment can be easy for a newcomer.
- All stakeholders (i.e., industry, policymakers, and academics) need to frame positions for quantifying and benchmarking human performance against underlying competency, linking key business performance indicators with indicators of effective and efficient learning and job execution .
- New Learning and Training Methods for Performance Augmentation Research on learning and training methods are appropriate to the custom and practices of Industry 4.0

Conclusion

To implement a digital roadmap in industry 4.0, new policy implications need to be framed for developing new skills & employability among youth. The aim has to change the education system with technical & practical know-how and boost training providers, content developers, systems developers and scholars in this field. Despite the disturbance of technology that Industry 4.0 brings and impacts change in job demands, technology changes, demand for new skills youth & new opportunities in the employment market. Upskilling & up-gradation of new skills in youth is the only solution for the interruption of technologies. Further, we need to train youth in research and industry for Performance Augmentation for Industry 4.0. Adding an interdisciplinary R&D focus on Human Performance Augmentation would assist to recover productivity costs in various industries Finally, the provision of such a technology will help to improve employability by providing access to better-paid jobs and it will

help in the reduction of the brain drain of ambitious youth.

References

Agarwal, A. (2016). Skill Development Training Programme: A Case Study of IGNOU. Global Journal of Enterprise Information System, 8(4), 66-70.

Aggarwal, S. (2016). A central pillar of employability: Skill development. Imperial Journal of Interdisciplinary Research, 2(3), 386-389.

Agrawal, M., Singh, C., & Thakur, K. S. (2020). Demographic Dividend: Skill Development Evidence in India. SSRN, 3590719, 2-13

Agrawal, M., Singh, C., & Thakur, K. S. (2020). Demographic Dividend: Skill Development Evidence in India. Emerging issue report, 2-12

Ahmed, S., Chinembiri, T., & Gillwald, A. (2021). Future of Work in the global South (FOWIGS): Digital Labour, New Opportunities and Challenges, 45

Ahmed, T., & Chattopadhyay, R. (2016). Return to general education and vocational education & training in Indian context: Policy implications. International Journal of Educational Management, 45-78

Allagh, K. P., Pant, H. B., & John, N. (2017). Factors influencing employment and employability for persons with disability: Insights from a City in South India. Indian Journal of Occupational and Environmental Medicine, 21(1), 36.

Ameratunga Kring, S. (2017). Gender in employment policies and programmes what works for women? International Labour Organization., 34-44

Ansari, T. H., & Khan, M. A. (2018). Role of Education and Skill Development to Promote Employment in India. Skill India Opportunities and Challenges, 208-214.

Antoninis, M., April, D., Barakat, B., Bella, N., D'Addio, A. C., Eck, M., & Zekrya, L. (2020). All means all: An introduction to the 2020 Global Education Monitoring Report on inclusion. Prospects, Global Education Future 49(3), 103-109.

Baanante, M. J., & Ugaz, D. C. Revisiting the steppingstone hypothesis: Transitions from temporary to permanent contracts in Peru. International Labour Review.

Bahl, S., Bhatt, V., & Sharma, A. (2021). Returns to formal and informal vocational education and training in India. International Journal of Manpower. 0143-7720

Bailey, D., & De Propris, L. (2019). Industry 4.0, regional disparities and transformative industrial policy. Regional Studies Policy Impact Books, 1(2), 67-78.

Balarin, M., & Sennett, J. (2017). Vocational and business training to improve women's labour market outcomes in low and middle income countries: a systematic review. Campbell Systematic Reviews, 13(1), 1-195.

Baussola, M., & Mussida, C. (2014). Transitions in the labour market: discouragement effect and individual characteristics. Labour, 28(2), 209-232.

Behera, M. B. (2021) emergence of India as the skill capital of world-possibilities & path ahead. IJIRAQ, 2(1), 15-20

Benes, E., & Walsh, K. (2018). Measuring employment in Labour Force Surveys: main findings from

the ILO LFS pilot studies. ILO. 23 (4). 23-89

Betcherman, G., & Khan, T. (2018). Jobs for Africa's expanding youth cohort: a stocktaking of employment prospects and policy interventions. IZA Journal of Development and migration, 8(1), 1-20.

Biggs, H. C. (2013). Essential elements for recruitment and retention: Generation Y. Education+ Training. Emerald, 3-24

Blommaert, L., Muja, A., Gesthuizen, M., & Wolbers, M. H. (2020). The vocational specificity of educational systems and youth labour market integration: A literature review and meta-analysis. European sociological review, 36(5), 720-740.

Bratti, M., Ghirelli, C., Havari, E., & Santangelo, G. (2022). Vocational training for unemployed youth in Latvia. Journal of Population Economics, 35(2), 677-717.

Brunello, G., & Rocco, L. (2015). The effects of vocational education on adult skills and wages: What can we learn from PIAAC? OECD, 168, 34-76

Brunello, G., & Wruuck, P. (2021). Skill shortages and skill mismatch: A review of the literature. Journal of Economic Surveys, 35(4), 1145-1167.

Buchs, H., & Helbling, L. A. (2016). Job opportunities and school-to-work transitions in occupational labour markets. Are occupational change and unskilled employment after vocational education interrelated? Empirical Research in Vocational Education and Training, 8(1), 1-18.

Budzinskaya, O. V., & Teregulova, N. F. (2021). Labour Market Trends in the Transition to the Digital Economy. In Sustainable Development of Modern Digital Economy.UNDP 45(6), 253-261

Cahuc, P., Charlot, O., Malherbet, F. (2016). Taxation of temporary jobs: good intentions with bad outcomes? The Economic Journal, 130(626), 422-445.

Carnoy, M. (2020). Race earnings differentials.The economics of education. Academic Press, 133-147

Carruthers, C., & Jepsen, C. (2020). Vocational education: an international perspective.Econstor, 8718

Chowdhury, S. R. (2014). Skill mismatches in the Indian labour market: Policy priorities & challenges ahead. The Indian Journal of Industrial Relations, 422-438.

Cieslik, M., & Simpson, D. (2013). Key concepts in youth studies. Sage, 33-77

de Mattos, F. B., & Chaudhary, R. (2016). Women Labour Force Participation in Asia. Transformation of Women at Work in Asia: An Unfinished Development Agenda, 23.

Delautre, G., Gardiner, D., & Verick, S. (2021). Moving towards a life course perspective to labour market transitions: approaches and challenges. ILO, 38-40

Dietrich, J., Parker, P., & Salmela-Aro, K. (2012). Phase-adequate engagement at the post-school transition. Developmental psychology, 48(6), 1575.

Dishon, G., & Gilead, T. (2021). Adaptability and its discontents: 21st-century skills and the preparation for an unpredictable future. British Journal of Educational Studies, 69(4), 393-413.

Doering, L., & Thébaud, S. (2017). The effects of gendered occupational roles on men's and women's workplace authority: Evidence from microfinance. American Sociological Review, 82(3), 542-567.

El-dali, Quintin & Manfredi, (2011). Towards an understanding of the distinctive nature of translation studies. Journal of King Saud University-Languages and Translation, 23(1), 29-45.

Engelbrecht, M., Shaw, L., & Van Niekerk, L. (2017). A literature review on work transitioning of youth with disabilities into competitive employment. African Journal of Disability, 6(1), 1-7.

Furlong, A. (2012). Youth studies: An introduction. Routledge. 312

Furstenberg, F. F, Rumbaut & Settersten (2015). Becoming adults: Challenges in the transition to adult roles. American Journal of Orthopsychiatry, 85(5S), S14.

Giri, R. & Verma, R. (2017). Informality in Indian manufacturing-an alternative explanation to 'jobless growth', Imperial Journal of Interdisciplinary Research, 5-20

Gomis, R., Kapsos, S., & Kuhn, S. (2020). World employment and social outlook: trends 2020. Geneva: ILO.56 (5). 45-99

Gooptu, N. (2018). JSAD special issue on skill development in India. Journal of South Asian Development, 13(3), 241-248.

Grant, M. J., & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. Health information & libraries journal, 26(2), 91-108.

Güney, t. (2017). Youth Employment and Sustainable Development. Unregistered Employment, 148.

Hansen, C. D., Kirkeby, M. J., Kjelmann, K. G., Andersen, J. H., & Møberg, R. J. (2021). A longitudinal study will examine the importance of adverse childhood experiences for labour market trajectories over the life course. BMC public health, 21(1), 1-12.

Hermann, M., Pentek, T., & Otto, B. (2016). Design principles for Industrie 4.0 scenarios. 49th Hawaii international conference on system sciences (HICSS),3928-3937

Ivzori, Y., Sachs, D., Reiter, S., & Schreuer, N. (2020). Transition to employment program (SUPER) for youth at risk: a conceptual and practical model. International journal of environmental research and public health, 17(11), 3904.

Jetha, A., Shaw, R., Sinden, A. R., Mahood, Q., Gignac, M. A., McColl, M. A., & Ginis, K. A. M. (2019). Work-focused interventions that promote the labour market transition of young adults with chronic disabling health conditions: a systematic review. Occupational and environmental medicine, 76(3), 189-198.

Joynes, C., Rossignoli, S., & Amonoo-Kuofi, E. F. (2019). 21st Century Skills: evidence of issues in definition, demand and delivery for development contexts.Emerging issue report, 32-70

Kalil, A., & Ryan, R. (2020). Parenting practices and socioeconomic gaps in childhood outcomes. The future of children, 30(1), 29-54.

Katole, H. (2020). Skill development and economic growth of India. Journal of Applied Economics and Business.2-8

Khandelwal, R., Kolte, A., Pawar, P., & Martini, E. (2020). Breaking out of your comfort zone: archival research on epistemology in inclusive education pedagogy for Industry 4.0. International Journal of Educational Management., 36 (4), 364-380.

Kiesel, M., & Wolpers, M. (2015). Educational challenges for employees in project-based Industry 4.0 scenarios. In Proceedings of the 15th International Conference on Knowledge Technologies and Data-driven Business,1-4

Kyle, W. C. (2020). Expanding our views of science education to address sustainable development, empowerment, and social transformation. UNEPA, 2(1), 1-9.

Lindsay, S., Duncanson, M., Niles-Campbell, N., McDougall, C., Diederichs, S., & Menna-Dack, D. (2018). Applying an ecological framework to understand transition pathways to post-secondary education for youth with physical disabilities. Disability and Rehabilitation, 40(3), 277-286.

Lindsay, S., R. Hartman, L., & Fellin, M. (2016). A systematic review of mentorship programs to facilitate the transition to post-secondary education and employment for youth and young adults with disabilities. Disability and Rehabilitation, 38(14), 1329-1349.

Linnenluecke, M. K., Marrone, M., & Singh, A. K. (2020). Conducting systematic literature reviews and bibliometric analyses. Australian Journal of Management, 45(2), 175-194.

Malik, G., & Venkatraman, A. (2017). "The great divide": skill gap between the employer's expectations and skills possessed by employees. Industrial and Commercial Training. 34 (5), 45-99

Manacorda, M., Rosati, F. C., Ranzani, M., & Dachille, G. (2017). Pathways from school to work in the developing world. IZA Journal of Labor & Development, 6(1), 1-40.

McGowan, M. A., & Andrews, D. (2015). Skill mismatch and public policy OECD, 3 (23), 34-56

Mishra, M. (2020). Blue economy: Emerging global trends and India's multilateral cooperation. Maritime Affairs: Journal of the National Maritime Foundation of India, 16(1), 30-45.

Mullan, J., & Rolleston, C. (2020). Barriers to skills development in India's informal economy. International Journal of Training Research, 18(3), 211-230.

Müller, N.(2019). The interplay between education, skills, and job quality. Social Inclusion, 7(3), 254-269.

Nair, K., vemuri J., Ram J. (2016). Understanding the gender gap in physical literacy among peri-adolescent children. Pediatric Exercise Science, 28.

Nalawade, P. D. V., Panjamurti–Malaysia, P. K., Huvag–Taiwan, K., Nalawade-India, P. D. V., Mahajan, S. Y., Dhondge, V. D., ... & Shikalgar, S. M. (2020). Webinar/FDP Report 2020-21. Policy, 2019, 14

P. Nair, & A. Choudhary (2016). Acculturation gap distress among Latino youth: Prospective links to family processes and youth depressive symptoms, alcohol use, and academic performance. Journal of youth and adolescence, 47(1), 105-120.

Panth, B., & Maclean, R. (2020). Introductory overview: anticipating and preparing for emerging skills and Jobs—Issues, concerns, and prospects. Anticipating and Preparing for Emerging Skills and Jobs, 1-10.

Papakitsos, E. C. (2016). Systemic modelling for relating labour market to vocational education. International Journal for Research in Vocational Education and Training (IJRVET), 3(3), 166-184.

Partanen & J., Myllylä, M. (2020). Quality of life among young Finnish adults not in employment or education. Applied Research in Quality of Life, 15(3), 757-774.

Pham, T., & Jackson, D. (2020). 13 Employability and determinants of employment outcomes. Developing and utilizing employability capitals: Graduates' strategies across labour markets, 22(7), 233-455

Pilz, M. (2016). India: Preparation for the world of work. The education system and school-to-work transition. Springer,45-99

Pilz, M., & Regel, J. (2021). Vocational education and training in India: Prospects and challenges from an outside perspective. Margin: The Journal of Applied Economic Research, 15(1), 101-121.

Quintini, G., & Martin, S. (2014). Same same but different: School-to-work transitions in emerging and advanced economies. OECD, 33 (1), 23-56

Rainie, L., & Anderson, J. (2017). The Future of Jobs and Jobs Training. Pew Research Centre, 23-55

Rao, N. V. J., Sahu, M., & Gouda, S. K. (2021). Employability training gaps in industries: a post-covid scenario of India. Emerging Business Practices And Trends During COVID-19.,65

Ras, E., Wild, F., Stahl, C., & Baudet, A. (2017). Bridging the skills gap of workers in Industry 4.0 by human performance augmentation tools: Challenges and roadmap. In Proceedings of the 10th International Conference on PErvasive Technologies Related to Assistive Environments .428-432.

Scheau, M. C., Arsene, A. L., & Popescu, G. (2018). Artificial Intelligence/Machine Learning Challenges and Evolution. Int'l J. Info. Sec. & Cybercrime, 7, 11.

Shehu, E., & Nilsson, B. (2014). Informal employment among youth: Evidence from 20 school-to-work transition surveys. Geneva: ILO, 6(2), 2-90

Singh, S., & Ehlers, S. (2021). Employability as a global norm: Comparing transnational employability policies of OECD, ILO, World Bank Group, and UNESCO. International and comparative studies in adult and continuing education, 131.

Stentoft, J., Adsbøll Wickstrøm, K., Philipsen, K., & Haug, A. (2021). Drivers and barriers for Industry 4.0 readiness and practice: empirical evidence from small and medium-sized manufacturers. Production Planning & Control, 32(10), 811-828.

Sumberg, J. (2017). Introduction: New perspectives on Africa's youth employment challenge. Institute of Development Studies 48(3), 3-14

Sumberg, J. (2021). Africa's "youth employment" crisis is a "missing jobs" crisis. Development Policy Review, 39(4), 621-643.

Tåhlin, M., & Westerman, J. (2020). Youth employment decline and the structural change of skill. European Societies, 22(1), 47-76.

Threadgold, S. (2020). Figures of youth: on the very object of Youth Studies. Journal of Youth Studies, 23(6), 686-701.

Upadhyay, P. (2019). The linkage between knowledge management practices and organization-based projects for better learning outcome: A conceptual framework. International Journal of Educational Management. 33 (1),166-178

Vacca, G., & Verzillo, S. (2016). Human capital estimation in higher education. Advances in Data Analysis and Classification, 10(4), 465-489.

Verhaest, D., & Baert, S. (2015). The early labour market effects of generally and vocationally oriented higher education: is there a trade-off?IZA, 2-32

Vincent, A., & Rajasekhar, D. (2021). Who participates in vocational education and training in India? An analysis of socio-economic determinants. Journal of Vocational Education & Training, 1-20.

Wanner, T. (2015). Enhancing Student Engagement and Active Learning through Just-in-Time Teaching and the Use of PowerPoint. International Journal of Teaching and Learning in Higher Education, 27(1), 154-163.

Watanabe, T. (2019). A Framework of Skill Training: Is Skill in Training or Learning? In International Conference on Ubiquitous Information Management and Communication. Springer, 501-516.

Weber, E. (2016). Industry 4.0: Job-producer or employment-destroyer? IAB, 2-7.

Whittemore, R., & Knafl, K. (2005). The integrative review: updated methodology. Journal of advanced nursing, 52(5), 546-553.

Wicht, A., Müller, N., Haasler, S., & Nonnenmacher, A. (2019). The interplay between education, skills, and job quality. Social Inclusion, 7(3), 254-269.

BUSINESS STUDIES

Medical Representatives Challenges in the Work Life

Venkata Ramana Karri and N. Udaya Bhaskar***

ABSTRACT

This study explores the challenges faced by medical representatives in their work life. Medical representatives play a crucial role in the healthcare industry as intermediaries between pharmaceutical companies and healthcare professionals. They are responsible for promoting and selling pharmaceutical products, providing accurate and up-to-date information, and building strong relationships with healthcare professionals. However, the work life of medical representatives is not without its challenges. This abstract delves into some of the key challenges they encounter. Firstly, medical representatives face the hurdle of gaining access to healthcare professionals who are increasingly burdened with time constraints and strict gatekeeping measures. Building rapport and establishing meaningful connections can be difficult in such circumstances. Secondly, medical representatives often encounter resistance and skepticism from healthcare professionals who may be inundated with information from various pharmaceutical companies. Gaining trust and credibility becomes paramount, necessitating a deep understanding of the products they promote and the ability to effectively communicate their value. Additionally, medical representatives face the pressure of meeting sales targets and demonstrating the efficacy and value of the products they represent. Balancing the need for sales with the ethical responsibility of providing unbiased information and adhering to regulatory guidelines can be a delicate task. Understanding and addressing these challenges are crucial for pharmaceutical companies and medical representatives alike. By recognizing and strategizing around these obstacles, stakeholders can support medical representatives in overcoming hurdles, improving their work-life balance, and ultimately enhancing patient care.

Key Words: Pharmaceutical companies, Medical Representatives, Personal Selling, Promotional Challenges

Introduction

Pharmaceutical Medical Representatives educate health care professionals about specific pharmaceuticals manufactured by drug firms in order to persuade them to prescribe them to patients rather than a competitor's product or treatment technique. Taking personal responsibility for results is difficult and is part of what makes sales so difficult, yet salespeople must accept these conditions every day. Medical Representatives are generally responsible in sales for determining who to call, how to approach their work, and even when to prioritise certain duties over others. There have been several studies attempted about stress in work life, which is one of the promotional challenges faced

* Research scholar, Department of Management Studies, Sri Y.N. College, Narsapur, India
** HoD, Department of Commerce & Management Studies, Adikavi Nannaya University, Rajmahendravaram , India

by Medical representatives. According to Bema Tandera et.al. (2007) the long time standing at work, driving long distances and lifting heavy equipment were factors which may be related to work related musculoskeletal pain. Sushanta Kumar Mshra and Deepti Bhatnagar (2010) investigated that emotional dissonance is positively related to turnover in the service tensions and negatively related to occupations, emotional well-being. Fernando Jaramillio et.al. (2011) revealed that sales persons' role stress has a positive relationship to a work overload, which in turn can lead to higher interpersonal conflict. Also found that sales people can reduce this interpersonal conflict by working smart. Vasan M (2018) revealed that job performance of the employees has been greatly connected with job stress and job satisfaction. Anjali J Anil and Pradeep B (2019) examined that some stressors such as long waiting hours, irregular food timings, being apart from their family often ar giving trouble in their job life. Gayatri T J and E. Muthu Kumar (2021) revealed that there are variety of ways minimize or at least learn to live with stress without being much affected by its negative impact. Kirti Soodi and Karuna Jain (2020) found that attrition is a serious issue and puts pharmaceutical industries in a huge pressure to retain the employees. This study is considering stress in the work life as one the factor and also focusing on other promotional challenges of medical representatives in dealing in their day to day work life.

OBJECTIVES OF THE STUDY

1. To know the job activities of Medical Representatives in pharmaceutical products promotion.
2. To study the medical representatives challenges in the work life.

RESEARCH METHODOLOGY

Research Design

Questionnaire Design: A self-structured questionnaire was designed and the survey was conducted with 411 respondents of first five highest medical representative populated cities of Andhra Pradesh by using stratified random sampling. Statistical technique used: Chi-square tests for a five-point Likert scale questionnaire, i.e., strongly agree (SA) to strongly disagree (SDA). The expected value of the cell should be 5 or more in at least 80% of the cells to prove hypotheses, and no cell should have an expected value of less than one (3). In the below chi-square results and findings tables, the value of the cells is less than 5, so hypothesis testing can not be possible. Statistical tool used for analysis is SPSS version 22. This study was conducted as part of my Ph.D. work.

Primary Data: Primary data is collected through structured questionnaire from medical representatives of five cities of Andhra Pradesh.

Secondary Data: Secondary data is collected from various journals, books and articles published in business news papers and on internet.

RESULTS AND FINDINGS

Views of Medical Representatives' towards the Work Life

Table No 1. Struggle to achieve targets

			Medical Representatives Working Cities					Total
			Vijayawada	Guntur	Vizag	Kurnool	Rajahmundry	
Struggles to achievable unachievable targets every month	SA	Count	48	36	22	29	15	150
		Expected Count	40.1	32.8	31.0	28.5	17.5	150.0
		% Of Total	43.6%	40.0%	25.9%	37.2%	31.3%	36.5%
	A	Count	29	33	41	29	26	158
		Expected Count	42.3	34.6	32.7	30.0	18.5	158.0
		% Of Total	26.4%	36.7%	48.2%	37.2%	54.2%	38.4%
	N	Count	20	13	14	13	1	61
		Expected Count	16.3	13.4	12.6	11.6	7.1	61.0
		% Of Total	18.2%	14.4%	16.5%	16.7%	2.1%	14.8%
	DA	Count	8	3	5	3	2	21
		Expected Count	5.6	4.6	4.3	4.0	2.5	21.0
		% Of Total	7.3%	3.3%	5.9%	3.8%	4.2%	5.1%
	SDA	Count	5	5	3	4	4	21
		Expected Count	5.6	4.6	4.3	4.0	2.5	21.0
		% Of Total	4.5%	5.6%	3.5%	5.1%	8.3%	5.1%
Total		Count	110	90	85	78	48	411
		Expected Count	110.0	90.0	85.0	78.0	48.0	411.0
		% Of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table No 1 shows the responses of medical representatives to the statement "struggles to achievable unachievable targets every month". Out of the total respondents, a majority (74.9%) of medical representatives across the five cities have agreed with the statement. While 10.2% of medical representatives did not agree with the statement, 14.8% of medical representatives chose to be neutral.

It is clear that out of total 110 respondents from Vijayawada, 48respondents representing 43.6 percent strongly agreed with the statement. While 29(26.4 percent) agreed with the statement, 20(18.2 percent) remained neutral, 8(7.3 percent) disagreed and 5(4.5 percent) strongly disagreed with the statement.

Out of total 90 respondents from Guntur, 36 respondents representing 40percent strongly agreed with the statement. While 33 (36.7percent) agreed with the statement, 13(14.4 percent) remained neutral, 3(3.3 percent) respondents disagreed and 5(5.6 percent) strongly disagreed with the statement.

Out of total 85 respondents from Vishakhapatnam, 22respondents representing 25.9 percent strongly agreed with the statement. While 41(48.2 percent) agreed with the statement, 14 (16.5 percent) remained neutral, 5(5.9 percent) respondents disagreed and 3(3.5 percent) strongly disagreed with the statement.

Out of total 78 respondents representing 100 percent from Kurnool, 29respondents representing 37.2 percent strongly agreed with the statement. While 29(37.2 percent) agreed with the statement, 13(16.7 percent) remained neutral, 3(3.8 percent) respondents disagreed and 4(5.1 percent) strongly disagreed with the statement.

Out of total 48 respondents from Rajahmundry, 15 respondents representing 31.3 percent respondents strongly agreed with the statement. While 26(54.2 percent) respondents agreed with the statement, 1(2.1 percent) remained neutral, 2(4.2 percent) disagreed and 4(8.3 percent) strongly disagreed with the statement.

Table No 2.Superiors keep continuous pressure

			Medical Representatives Working Cities					Total
			Vijayawada	Guntur	Vizag	Kurnool	Rajahmundry	
Every month top superiors keep continuous pressure to achieve unachievable targets	SA	Count	66	54	51	40	40	251
		Expected Count	67.2	55.0	51.9	47.6	29.3	251.0
		% Of Total	60.0%	60.0%	60.0%	51.3%	83.3%	61.1%
	A	Count	22	18	17	19	4	80
		Expected Count	21.4	17.5	16.5	15.2	9.3	80.0
		% Of Total	20.0%	20.0%	20.0%	24.4%	8.3%	19.5%
	N	Count	11	9	7	8	1	36
		Expected Count	9.6	7.9	7.4	6.8	4.2	36.0
		% Of Total	10.0%	10.0%	8.2%	10.3%	2.1%	8.8%
	DA	Count	6	6	5	8	1	26
		Expected Count	7.0	5.7	5.4	4.9	3.0	26.0
		% Of Total	5.5%	6.7%	5.9%	10.3%	2.1%	6.3%
	SDA	Count	5	3	5	3	2	18
		Expected Count	4.8	3.9	3.7	3.4	2.1	18.0
		% Of Total	4.5%	3.3%	5.9%	3.8%	4.2%	4.4%
Total		Count	110	90	85	78	48	411
		Expected Count	110.0	90.0	85.0	78.0	48.0	411.0
		% Of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table No 2 shows the responses of medical representatives to the statement "every month top superiors keep continuous pressure to achieve unachievable targets". Out of the total respondents, a high majority (80.6%) of medical representatives across the five cities have agreed with the statement. While 10.7% of medical representatives did not agree with the statement, 8.8% of medical representatives chose to be neutral.

It is clear that out of total 110 respondents from Vijayawada, 66respondents representing 60 percent strongly agreed with the statement. While 22(20 percent) respondents agreed with the statement,11 (10 percent)remained neutral, 6 (5.5 percent) respondents disagreed and 5 (4.5 percent) strongly disagreed with the statement.

Out of total 90 respondents from Guntur, 54respondents representing 60 percent strongly

agreed with the statement. While 18 (20 percent) respondents agreed with the statement and 9(10 percent) remained neutral, 6(6.7 percent) respondents disagreed and 3(3.3 percent) strongly disagreed with the statement.

Out of total 85 respondents from Vishakhapatnam, 51respondents representing 60 percent strongly agreed with the statement. While 17(20 percent) respondents agreed with the statement,7(8.2 percent) remained neutral, 5(5.9 percent) respondents disagreedand5(5.9 percent) strongly disagreed with the statement.

Out of total 78 respondents representing 100 percent from Kurnool, 40respondents representing 51.3 percent strongly agreed with the statement. While 19(24.4 percent) respondents agreed with the statement, 8(10.3 percent) remained neutral, 8(10.3 percent) disagreed and 3(3.8 percent) strongly disagreed with the statement.

Out of total 48 respondents from Rajahmundry, 40 respondents representing 83.3 percent respondents strongly agreed with the statement. While 4(8.3 percent) respondents agreed with the statement, 1(2.1 percent) remained neutral, 1(2.1percent) respondent disagreed and 2(4.2 percent) respondents strongly disagreed with the statement.

Table No 3. Stockist visits at ex-stations are a difficult task

			Medical Representatives Working Cities					Total
			Vijayawada	Guntur	Vizag	Kurnool	Rajahmundry	
Stockist visits at Ex-stations and out-stations is a difficult task to travel long distance and try to collect primary orders	SA	Count	46	33	28	32	17	156
		Expected	41.8	34.2	32.3	29.6	18.2	156.0
		% Of Total	41.8%	36.7%	32.9%	41.0%	35.4%	38.0%
	A	Count	38	31	39	26	22	156
		Expected	41.8	34.2	32.3	29.6	18.2	156.0
		% Of Total	34.5%	34.4%	45.9%	33.3%	45.8%	38.0%
	N	Count	15	17	13	14	7	66
		Expected	17.7	14.5	13.6	12.5	7.7	66.0
		% Of Total	13.6%	18.9%	15.3%	17.9%	14.6%	16.1%
	DA	Count	7	5	3	3	1	19
		Expected	5.1	4.2	3.9	3.6	2.2	19.0
		% Of Total	6.4%	5.6%	3.5%	3.8%	2.1%	4.6%
	SDA	Count	4	4	2	3	1	14
		Expected	3.7	3.1	2.9	2.7	1.6	14.0
		% Of Total	3.6%	4.4%	2.4%	3.8%	2.1%	3.4%
Total		Count	110	90	85	78	48	411
		Expected	110.0	90.0	85.0	78.0	48.0	411.0
		% Of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table No 3 shows the responses of medical representatives to the statement "stockist visits at ex-stations and out-stations to travel long distance and try to collect primary orders along with maintaining doctors call average per day is a difficult task". Out of the total respondents, a majority (76%) of medical representatives across the five cities have agreed with the statement. While 8% of

medical representatives did not agree with the statement, 16.1% of medical representatives chose to be neutral.

It is clear that out of total 110respondents from Vijayawada, 46respondents representing 41.8 percent strongly agreed with the statement. While 38(34.5 percent) agreed with the statement,15 (13.6 percent)remained neutral, 7 (6.4 percent) respondents disagreedand4(3.6 percent) respondents strongly disagreed with the statement.

Out of total 90 respondents from Guntur, 33 respondents representing 36.7percent strongly agreed with the statement. While 31 (34.4 percent) respondents agreed with the statement, 17 (18.9 percent) remained neutral, 5(5.6 percent) disagreed and4(4.4 percent) respondents strongly disagreed with the statement.

Out of total 85 respondents from Vishakhapatnam, 28respondents representing 32.9 percent strongly agreed with the statement. While 39(45.9 percent) agreed with the statement, 13 (15.3 percent) remained neutral, 3(3.5 percent) disagreed and 2(2.4 percent) respondents strongly disagreed with the statement.

Out of total 78 respondents representing 100 percent from Kurnool, 32respondents representing 41 percent strongly agreed with the statement. While 26(33.3 percent) agreed with the statement, 14(17.9 percent) remained neutral, 3(3.8 percent) disagreed and 3(3.8 percent) respondents strongly disagreed with the statement.

Out of total 48 respondents from Rajahmundry, 17 respondents representing 35.4percent respondents strongly agreed with the statement. While 22(45.8 percent) respondents agreed with the statement, 7(14.6 percent) remained neutral, 1(2.1 percent) respondent disagreed and 1(2.1 percent) respondent strongly disagreed with the statement.

Table No 4. Physical and mental strain with unachievable targets

			Medical Representatives Working Cities					Total
			Vijayawada	Guntur	Vizag	Kurnool	Rajahmundry	
Lot of physical and mental strain and stress feeling in the process of trying to unachievable target	SA	Count	45	29	24	23	10	131
		Expected Count	35.1	28.7	27.1	24.9	15.3	131.0
		% Of Total	40.9%	32.2%	28.2%	29.5%	20.8%	31.9%
	A	Count	42	37	44	38	27	188
		Expected Count	50.3	41.2	38.9	35.7	22.0	188.0
		% Of Total	38.2%	41.1%	51.8%	48.7%	56.3%	45.7%
	N	Count	14	14	13	10	7	58
		Expected Count	15.5	12.7	12.0	11.0	6.8	58.0
		% Of Total	12.7%	15.6%	15.3%	12.8%	14.6%	14.1%
	DA	Count	6	5	3	6	2	22
		Expected Count	5.9	4.8	4.5	4.2	2.6	22.0
		% Of Total	5.5%	5.6%	3.5%	7.7%	4.2%	5.4%
	SDA	Count	3	5	1	1	2	12
		Expected Count	3.2	2.6	2.5	2.3	1.4	12.0
		% Of Total	2.7%	5.6%	1.2%	1.3%	4.2%	2.9%
Total		Count	110	90	85	78	48	411
		Expected Count	110.0	90.0	85.0	78.0	48.0	411.0
		% Of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table No 4 shows the responses of medical representatives to the statement "lot of physical and mental strain and stress feeling in the process of trying for unachievable targets". Out of the total respondents, a majority (77.6%) of medical representatives across the five cities have agreed with the statement. While 8.3% of medical representatives did not agree with the statement, 14.1% of medical representatives chose to be neutral.

It is clear that out of total 110respondents from Vijayawada, 45 respondents representing 40.9 percent strongly agreed with the statement. While 42(38.2 percent) agreed with the statement, 14 (12.7 percent) remained neutral, 6 (5.5 percent) disagreed and3 (2.7 percent) respondents strongly disagreed with the statement.

Out of total 90 respondents from Guntur, 29respondents representing 32.2percent strongly agreed with the statement. While 37 (41.1 percent) agreed with the statement,14(15.6 percent) remained neutral, 5(5.6 percent) respondents disagreed and 5(5.6 percent) respondents strongly disagreed with the statement.

Out of total 85 respondents from Vishakhapatnam, 24respondents representing 28.2 percent strongly agreed with the statement. While 44(51.8 percent) respondents agreed with the statement, 13 (15.3 percent) remained neutral, 3(3.5 percent) respondents disagreed and1(1.2 percent) respondents strongly disagreed with the statement.

Out of total 78 respondents representing 100 percent from Kurnool, 23respondents representing 29.5 percent strongly agreed with the statement. While 38(48.7 percent) respondents agreed with the statement, 10(12.8 percent) remained neutral, 6(7.7 percent) disagreed and 1(1.3 percent) respondents strongly disagreed with the statement.

Out of total 48 respondents from Rajahmundry, 10 respondents representing 20.8percent respondents strongly agreed with the statement. While 27(56.3 percent) respondents agreed with the statement, 7(14.6 percent) remained neutral, 2(4.2 percent) respondents disagreed and 2(4.2 percent) respondents strongly disagreed with the statement.

Table No 5. Long distances need to travel for companies meetings

			Medical Representatives Working Cities					Total
			Vijayawada	Guntur	Vizag	Kurnool	Rajahmundry	
Long distances need to travel to attend companies meetings quiet frequently	SA	Count	44	36	33	27	20	160
		Expected Count	42.8	35.0	33.1	30.4	18.7	160.0
		% Of Total	40.0%	40.0%	38.8%	34.6%	41.7%	38.9%
	A	Count	23	18	17	21	23	102
		Expected Count	27.3	22.3	21.1	19.4	11.9	102.0
		% Of Total	20.9%	20.0%	20.0%	26.9%	47.9%	24.8%
	N	Count	12	10	13	12	0	47
		Expected Count	12.6	10.3	9.7	8.9	5.5	47.0
		% Of Total	10.9%	11.1%	15.3%	15.4%	0.0%	11.4%
	DA	Count	9	8	5	5	2	29
		Expected Count	7.8	6.4	6.0	5.5	3.4	29.0
		% Of Total	8.2%	8.9%	5.9%	6.4%	4.2%	7.1%
	SDA	Count	22	18	17	13	3	73
		Expected Count	19.5	16.0	15.1	13.9	8.5	73.0
		% Of Total	20.0%	20.0%	20.0%	16.7%	6.3%	17.8%
Total		Count	110	90	85	78	48	411
		Expected Count	110.0	90.0	85.0	78.0	48.0	411.0
		% Of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table No 5 shows the responses of medical representatives to the statement "long distances need to travel to attend companies' meetings quiet frequently". Out of the total respondents, 63.7% of medical representatives across the five cities have agreed with the statement. While 24.9% of medical representatives did not agree with the statement, 11.4% of medical representatives chose to be neutral.

It is clear that out of total 110 respondents from Vijayawada, 44 respondents representing 40 percent strongly agreed with the statement. While 23(20.9 percent) agreed with the statement and 12 (10.9 percent) remained neutral, 9 (8.2 percent) disagreed with the statement and 22 (20 percent) strongly disagreed with the statement.

Out of total 90 respondents from Guntur, 36 respondents representing 40percent strongly agreed with the statement. While 18 (20percent) agreed with the statement and 10(11.1 percent) remained neutral, 8(8.9 percent) disagreed with the statement and 18 (20 percent) strongly disagreed with the statement.

Out of total 85 respondents from Vishakhapatnam, 33respondents representing 38.8 percent strongly agreed with the statement. While 17(20 percent) agreed with the statement and 13 (15.3 percent) remained neutral, 5(5.9 percent) disagreed with the statement and 17 (20 percent) strongly disagreed with the statement.

Out of total 78 respondents representing 100 percent from Kurnool, 27 respondents

representing 34.6 percent strongly agreed with the statement. While 21(26.9 percent) agreed with the statement, 12(15.4 percent) remained neutral, 5(6.4 percent) disagreed with the statement and 13 (16.7 percent) strongly disagreed with the statement.

Out of total 48 respondents from Rajahmundry, 20 respondents representing 41.7 percent respondents strongly agreed with the statement. While 23(47.9 percent) agreed with the statement, no respondents remained neutral, 2(4.2 percent) disagreed with the statement and 3(6.3 percent) strongly disagreed with the statement.

Table No 6. Company fixes unachievable targets

			Medical Representatives Working Cities					Total
			Vijayawada	Guntur	Vizag	Kurnool	Rajahmundry	
Company fixes unachievable targets every month.	SA	Count	44	36	26	28	16	150
		Expected Count	40.1	32.8	31.0	28.5	17.5	150.0
		% Of Total	40.0%	40.0%	30.6%	35.9%	33.3%	36.5%
	A	Count	45	34	43	35	26	183
		Expected Count	49.0	40.1	37.8	34.7	21.4	183.0
		% Of Total	40.9%	37.8%	50.6%	44.9%	54.2%	44.5%
	N	Count	10	8	12	7	4	41
		Expected Count	11.0	9.0	8.5	7.8	4.8	41.0
		% Of Total	9.1%	8.9%	14.1%	9.0%	8.3%	10.0%
	DA	Count	8	7	4	5	2	26
		Expected Count	7.0	5.7	5.4	4.9	3.0	26.0
		% Of Total	7.3%	7.8%	4.7%	6.4%	4.2%	6.3%
	SDA	Count	3	5	0	3	0	11
		Expected Count	2.9	2.4	2.3	2.1	1.3	11.0
		% Of Total	2.7%	5.6%	0.0%	3.8%	0.0%	2.7%
Total		Count	110	90	85	78	48	411
		Expected Count	110.0	90.0	85.0	78.0	48.0	411.0
		% Of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table No 6 shows the responses of medical representatives to the statement "companies fix unachievable targets every month". Out of the total respondents, a high majority (81%) of medical representatives across the five cities have agreed with the statement. While 9% of medical representatives did not agree with the statement, 10% of medical representatives chose to be neutral.

It is clear that out of total 110respondents from Vijayawada, 44 respondents representing 40 percent strongly agreed with the statement. While 45(40.9 percent) respondents agreed with the statement,10 (9.1 percent) remained neutral, 8 (7.3 percent) disagreed and 3 (2.7 percent) strongly disagreed with the statement.

Out of total 90 respondents from Guntur, 36 respondents representing 40percent strongly agreed with the statement. While 34 (37.8 percent) agreed with the statement, 8(8.9 percent) remained neutral, 7(7.8 percent) respondents disagreed and 5(5.6 percent) strongly disagreed with the statement.

Out of total 85 respondents from Vishakhapatnam, 26 respondents representing 30.6 percent

strongly agreed with the statement. While 43(50.6 percent) respondents agreed with the statement, 12 (14.1 percent) remained neutral, 4(4.1 percent) respondents disagreed and no respondents strongly disagreed with the statement.

Out of total 78 respondents representing 100 percent from Kurnool, 28 respondents representing 35.9 percent strongly agreed with the statement. While 35(44.9 percent) agreed with the statement, 7(9 percent) remained neutral, 5(6.9 percent) disagreed and 3(3.8 percent) respondents strongly disagreed with the statement.

Out of total 48 respondents from Rajahmundry, 16 respondents representing 33.3 percent respondents strongly agreed with the statement. While 26 (54.2 percent) respondents agreed with the statement, 4 (8.3 percent) remained neutral, 2(4.2 percent) disagreed and no respondents strongly disagreed with the statement.

Table No 7. Threat to the present job

			Medical Representatives Working Cities					Total
			Vijayawada	Guntur	Vizag	Kurnool	Rajahmundry	
Threat to the present job when unable show continuous performance	SA	Count	44	36	34	29	35	178
		Expected Count	47.6	39.0	36.8	33.8	20.8	178.0
		% Of Total	40.0%	40.0%	40.0%	37.2%	72.9%	43.3%
	A	Count	44	36	34	30	9	153
		Expected Count	40.9	33.5	31.6	29.0	17.9	153.0
		% Of Total	40.0%	40.0%	40.0%	38.5%	18.8%	37.2%
	N	Count	5	6	7	7	2	27
		Expected Count	7.2	5.9	5.6	5.1	3.2	27.0
		% Of Total	4.5%	6.7%	8.2%	9.0%	4.2%	6.6%
	DA	Count	13	8	7	6	1	35
		Expected Count	9.4	7.7	7.2	6.6	4.1	35.0
		% Of Total	11.8%	8.9%	8.2%	7.7%	2.1%	8.5%
	SDA	Count	4	4	3	6	1	18
		Expected Count	4.8	3.9	3.7	3.4	2.1	18.0
		% Of Total	3.6%	4.4%	3.5%	7.7%	2.1%	4.4%
Total		Count	110	90	85	78	48	411
		Expected Count	110.0	90.0	85.0	78.0	48.0	411.0
		% Of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table No 7 shows the responses of medical representatives to the statement "threat to the present job when unable show continuous performance". Out of the total respondents, a high majority (80.5%) of medical representatives across the five cities have agreed with the statement. While 12.9% of medical representatives did not agree with the statement, 6.6% of medical representatives chose to be neutral.

It is clear that out of total 110respondents from Vijayawada, 44 respondents representing 40 percent strongly agreed with the statement. While 44(40 percent) respondents agreed with the statement, 5 (4.5 percent) remained neutral, 13 (11.8 percent) respondents disagreed and 4 (3.6 percent) respondents strongly disagreed with the statement.

Out of total 90 respondents from Guntur, 36 respondents representing 40 percent strongly agreed with the statement. While 36 (40 percent) respondents agreed with the statement,6(6.7 percent) remained neutral, 8(8.9 percent) respondents disagreed and4(4.4 percent) respondents strongly disagreed with the statement.

Out of total 85 respondents from Vishakhapatnam, 34respondents representing 40 percent strongly agreed with the statement. While 34(40 percent) respondents agreed with the statement, 7 (8.2 percent) remained neutral, 7(8.2 percent) respondents disagreed and3(3.5 percent) respondents strongly disagreed with the statement.

Out of total 78 respondents representing 100 percent from Kurnool, 29respondents representing 37.2 percent strongly agreed with the statement. While 30(38.5 percent) respondents agreed with the statement, 7(9 percent) remained neutral, 6(7.7 percent) respondents disagreed and 6(7.7 percent) respondents strongly disagreed with the statement.

Out of total 48 respondents from Rajahmundry, 35 respondents representing 72.9percent respondents strongly agreed with the statement. While 9(18.8 percent) agreed with the statement, 2(4.2 percent) remained neutral, 1(2.1 percent) respondent disagreed and 1(2.1 percent) respondent strongly disagreed with the statement.

Table No 8. Struggle to achieve Weekly break up targets

			Medical Representatives Working Cities					Total
			Vijayawada	Guntur	Vizag	Kurnool	Rajahmundry	
Weekly/Once in 10 days monthly breakup targets need to achieve along with meeting the doctor call average per day.	SA	Count	45	36	33	25	8	147
		Expected	39.3	32.2	30.4	27.9	17.2	147.0
		% Of Total	40.9%	40.0%	38.8%	32.1%	16.7%	35.8%
	A	Count	22	18	18	24	31	113
		Expected	30.2	24.7	23.4	21.4	13.2	113.0
		% Of Total	20.0%	20.0%	21.2%	30.8%	64.6%	27.5%
	N	Count	13	11	8	8	2	42
		Expected	11.2	9.2	8.7	8.0	4.9	42.0
		% Of Total	11.8%	12.2%	9.4%	10.3%	4.2%	10.2%
	DA	Count	21	18	16	11	3	69
		Expected	18.5	15.1	14.3	13.1	8.1	69.0
		% Of Total	19.1%	20.0%	18.8%	14.1%	6.3%	16.8%
	SDA	Count	9	7	10	10	4	40
		Expected	10.7	8.8	8.3	7.6	4.7	40.0
		% Of Total	8.2%	7.8%	11.8%	12.8%	8.3%	9.7%
Total		Count	110	90	85	78	48	411
		Expected	110.0	90.0	85.0	78.0	48.0	411.0
		% Of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table No 8 shows the responses of medical representatives to the statement "weekly/Once in 10 days monthly breakup targets need to achieve along with meeting the doctor call average per day". Out of the total respondents, 63.3% of medical representatives across the five cities have agreed with the statement. While 26.5% of medical representatives did not agree with the statement, 10.2% of medical representatives chose to be neutral.

It is clear that out of total 110respondents from Vijayawada, 45 respondents representing 40.9 percent strongly agreed with the statement. While 22(20 percent) agreed with the statement, 13 (11.8 percent) remained neutral, 21 (19.1 percent) respondents disagreedand9 (8.2 percent) strongly disagreed with the statement.

Out of total 90 respondents from Guntur, 36 respondents representing 40 percent strongly agreed with the statement. While 18 (20percent) agreed with the statement and 11(12.2 percent) remained neutral, 18(20 percent) disagreed and 7(7.8 percent) strongly disagreed with the statement.

Out of total 85 respondents from Vishakhapatnam, 33respondents representing 38.8 percent strongly agreed with the statement. While 18(21.2 percent) respondents agreed with the statement,8 (9.4 percent) remained neutral, 16(18.8 percent) respondents disagreed and10(11.8 percent) respondents strongly disagreed with the statement.

Out of total 78 respondents representing 100 percent from Kurnool, 25respondents representing 32.1 percent strongly agreed with the statement. While 24(30.8 percent) agreed with the statement, 8(10.3 percent) remained neutral, 11(14.1 percent) disagreed and 10(12.8 percent)respondents strongly disagreed with the statement.

Out of total 48 respondents from Rajahmundry, 8 respondents representing 16.7percent respondents strongly agreed with the statement. While 31(64.6 percent) respondents agreed with the statement, 2(10.4 percent) remained neutral, 3(6.3 percent) respondents disagreed and 4(8.3 percent) respondents strongly disagreed with the statement.

Table No 9. Special chemist drives has to do

			Medical Representatives Working Citie					Total
			Vijayawad	Guntur	Vizag	Kurnool	Rajahmund	
Special Chemis drives has to do personal order bookings to rais secondary sales stockist level alo with regular doct calls work	SA	Count	28	30	21	28	23	130
		Expected Cou	34.8	28.5	26.9	24.7	15.2	130.0
		% Of Total	25.5%	33.3%	24.7%	35.9%	47.9%	31.6%
	A	Count	24	27	23	24	23	121
		Expected Cou	32.4	26.5	25.0	23.0	14.1	121.0
		% Of Total	21.8%	30.0%	27.1%	30.8%	47.9%	29.4%
	N	Count	15	6	9	7	1	38
		Expected Cou	10.2	8.3	7.9	7.2	4.4	38.0
		% Of Total	13.6%	6.7%	10.6%	9.0%	2.1%	9.2%
	DA	Count	22	9	16	9	0	56
		Expected Cou	15.0	12.3	11.6	10.6	6.5	56.0
		% Of Total	20.0%	10.0%	18.8%	11.5%	0.0%	13.6%
	SDA	Count	21	18	16	10	1	66
		Expected Cou	17.7	14.5	13.6	12.5	7.7	66.0
		% Of Total	19.1%	20.0%	18.8%	12.8%	2.1%	16.1%
Total		Count	110	90	85	78	48	411
		Expected Cou	110.0	90.0	85.0	78.0	48.0	411.0
		% Of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table No 9 shows the responses of medical representatives to the statement "special chemist drives has to do for personal order bookings to raise secondary sales at stockist level along with regular doctors calls/visits work". Out of the total respondents, 61% of medical representatives across the five cities have agreed with the statement. While 29.7% of medical representatives did not agree with the statement, 9.2% of medical representatives chose to be neutral.

It is clear that out of total 110 respondents from Vijayawada, 28respondents representing 25.5 percent strongly agreed with the statement. While 24(21.8 percent) agreed with the statement,15 (13.6 percent)remained neutral, 22 (20 percent) disagreedand21 (19.1 percent) respondents strongly disagreed with the statement.

Out of total 90 respondents from Guntur, 30respondents representing 33.3 percent strongly agreed with the statement. While 27 (30 percent) respondents agreed with the statement,6(6.7 percent) remained neutral, 9(10 percent) respondents disagreed and18(20 percent) respondents strongly disagreed with the statement.

Out of total 85 respondents from Vishakhapatnam, 21respondents representing 24.7percent stronglyagreed with the statement. While 23(27.1 percent) agreed with the statement,9 (10.6 percent) remained neutral, 16(18.8 percent) disagreed and16(18.8 percent) respondents strongly disagreed with the statement.

Out of total 78 respondents representing 100 percent from Kurnool, 28 respondents representing 35.9 percent strongly agreed with the statement. While24(30.8 percent) agreed with the statement, 7(9 percent) remained neutral, 9(11.5 percent) disagreed and 10(12.8 percent) respondents strongly disagreed with the statement.

Out of total 48 respondents from Rajahmundry, 23 respondents representing 47.9percent respondents strongly agreed with the statement. While 23(47.9 percent) respondents agreed with the statement, 1(2.1 percent) remained neutral, no respondents disagreed and 1(2.1 percent) respondent strongly disagreed with the statement.

LIMITATIONS OF THE STUDY

Although the study was well planned it suffered from some unavoidable limitations.

- The first and second lock downs imposed by COVID-19 have restricted the free movement from place to place in conducting the survey. Hence the study has been confined only to five major cities of Andhra Pradesh.
- The data collection from the respondents posed a major limitation. Some of the respondents were reluctant to answer the questionnaire nor had they time to answer them fully.

DISCUSSION AND CONCLUSION

Medical representatives play a crucial role in the pharmaceutical industry, as they are responsible for promoting and selling medical products to healthcare professionals. However, their work life is not without its challenges. In this discussion, we will explore the marketing challenges faced by medical representatives and their impact on their day-to-day operations. By understanding these challenges, we can identify strategies to overcome them and enhance the effectiveness of their marketing efforts.

1. Regulatory Restrictions: One of the prominent challenges for medical representatives is navigating the complex regulatory environment. Pharmaceutical marketing is subject to stringent regulations to ensure patient safety and ethical practices. Medical representatives must comply

with guidelines regarding promotional materials, off-label marketing, and interactions with healthcare professionals. The dynamic nature of regulations can pose challenges in staying up-to-date and ensuring compliance, which may restrict their marketing strategies and limit their ability to effectively communicate product benefits.

2. Increasing Competition: The healthcare industry is highly competitive, with numerous pharmaceutical companies vying for the attention of healthcare professionals. Medical representatives often face the challenge of differentiating their products from competitors' offerings. They must possess in-depth knowledge about their products, understand their unique selling points, and effectively communicate these advantages to healthcare professionals. The increasing number of pharmaceutical companies and the evolving market dynamics make it crucial for medical representatives to continually adapt their marketing strategies to stand out in a crowded marketplace.
3. Limited Access to Healthcare Professionals: Gaining access to busy healthcare professionals can be a significant challenge for medical representatives. Healthcare professionals have limited time and are often overwhelmed with patient care responsibilities. Securing appointments and establishing meaningful interactions can be difficult. Medical representatives must find innovative ways to engage healthcare professionals, such as providing valuable scientific information, organizing educational events, or leveraging digital platforms for virtual engagement. Building strong relationships and demonstrating the value of their products becomes crucial in overcoming this challenge.
4. Evolving Healthcare Policies: Changes in healthcare policies and regulations can significantly impact the marketing landscape for medical representatives. Shifting reimbursement models, formulary restrictions, and changes in treatment guidelines can affect product adoption and utilization. Medical representatives need to stay informed about these policy changes and adapt their marketing strategies accordingly. They may need to reposition products, educate healthcare professionals about new treatment guidelines, or provide evidence of cost-effectiveness to align with evolving policies.
5. Ethical Concerns: Maintaining ethical standards in pharmaceutical marketing is paramount. Medical representatives must navigate ethical considerations such as ensuring accurate and evidence-based product information, avoiding conflicts of interest, and respecting patient privacy. Striking a balance between sales targets and ethical conduct can be challenging, and medical representatives must make ethical decisions even in high-pressure situations. Continuous training and reinforcement of ethical guidelines are crucial to address this challenge effectively.

Marketing challenges in the work life of medical representatives encompass regulatory restrictions, increasing competition, limited access to healthcare professionals, evolving healthcare policies, and ethical concerns. By recognizing and understanding these challenges, pharmaceutical companies can provide targeted support, training, and resources to empower their medical representatives. Moreover, leveraging technology, fostering strong relationships with healthcare professionals, and adapting marketing strategies can help medical representatives overcome these challenges and enhance their effectiveness in promoting medical products. Ultimately, addressing these challenges will contribute to better patient care and improved healthcare outcomes.

References

Ahmed, R. R., Streimikiene, D., Abrhám, J., Streimikis, J., & Vveinhardt, J. (2020). Social and

behavioral theories and physician's prescription behavior. Sustainability, 12(8), 3379.

Ahmed, R. R. (2014). Pharmaceutical marketing mix strategy and physician's prescription behavior. The Pharma Innovation, 3(7, Part A), 8.

Al-Hamdi, A. Y., Ibrahim, M. I. M., & Hassali, M. A. A. (2013). The role of healthcare professionals in establishing unhealthy pharmaceutical promotion activities in Yemen. Journal of Medical Marketing, 13(3), 142-150.

Al-Areefi, M. A., Hassali, M. A., & Ibrahim, M. I. B. M. (2012). A qualitative study exploring medical representatives' views on current drug promotion techniques in Yemen. Journal of Medical Marketing, 12(3), 143-149.

Allayla, T. H., Nouri, A. I., & Hassali, M. A. (2018). Pharmacist role in global health: a review of literature. Malaysian Journal of Pharmaceutical Sciences, 16(1), 45-54.

Alshurideh, M., Al Kurdi, B., Abumari, A., & Salloum, S. (2018). Pharmaceutical promotion tools effect on physician's adoption of medicine prescribing: evidence from Jordan. Modern Applied Science, 12(11), 210-222.

Ajay Gidwani (2018), Assessment of doctor's perception towards medical representat ives'. Paripex - Indian Journal of Research, Volume-7, Issue-11

Ankush, C., Ligade, V. S., Kiranshanker, K., Sreedhar, D., Manthan, J., Muragundi, P. M., & Udupa, N. (2015). A survey on doctor's expectation from medical representative in Karnataka state. International Journal of Current Research and Review, 7(8), 75-82.

Ankush ., Deepak Kapur (2017). Influence of Medical Representative on Knowledge, Attitude and Practice of Physicians. IJMRBS

Arora, U., & Taneja, G. (2006). An analytical study of physicians' behavior towards marketing of pharmaceutical products. Indian Journal of Marketing, 36(11).

Arafat, S. Y., Rahman, F. H. S. A. I., & Al Asad, S. H. (2015). Job satisfaction among the medical representatives in Bangladesh. Australian journal of business and management research, 5(1), 22.

Budak, O. Tanses Gulsoy. (2018).The role of the pharmaceutical sales representative in the physician-customer's firm loyalty: implications for managing a strategic business relationship in emergi ng market context

Caudill, T. S., Johnson, M. S., Rich, E. C., & Mc Kinney, W. P. (1996). Physicians, pharmaceutical sales representatives, and the cost of prescribing. Archives of family medicine, 5(4), 201-206.

Cooper, C. L., Rout, U., & Faragher, B. (1989). Mental health, job satisfaction, and job stress among general practitioners. British Medical Journal, 298(6670), 366-370.

Dar, T. M. (2020). Effectiveness of promotional tools used by medical representatives to generate product prescriptions from doctors with respect to Pakistan's Pharmaceutical Industry. Electronic Research Journal of Social Sciences and Humanities, 2, 37-63.

Dilruba, S. S. (2016). Job satisfaction and job stress among bank employees in Rajshahi City: A Field Study. The International Journal of Indian Psychology, 3(5), 19-25.

Ehab Mudher Mikh ael (2014). Evaluating the effect of medical representative on physician prescribing pattern in I raq. Asian J Pharm Clin Res, 7(1), 222-223.

Girish Taneja (2008). Impact of pharmaceutical industry promotion mix on doctor's prescribing i. b ehavior. Asia Pacific Business Review, 4(4), 82-95.

Gonul, F. F., Carter, F., Petrova, E., & Srinivasan, K. (2001). Promotion of prescription drugs and its impact on physicians' choice behavior. Journal of Marketing, 65(3), 79-90.

Gupta, S. K., Nayak, R. P., & Sivaranjani, R. (2016). A study on the interactions of doctors with medical representatives of pharmaceutical companies in a Tertiary Care Teaching Hospital of South India. Journal of pharmacy & bioallied sciences, 8(1), 47.

Ijoma, U., Onwuekwe, I., Onodugo, O., Aguwa, E., Ejim, E., Onyedum, C....& Ugwuonah, G. (2010). Effect of Promotional Strategies of Pharmaceutical Companies on Doctors' Prescription Pattern in South East Nigeria. TAF Preventive Medicine Bulletin, 9(1).

Iorga, M., Sztankovszky, L. Z., Soponaru, C., & Gardikiotis, I. (2015). Pharmacists' attitude and practices about drug dispensing in Romania. Farmacia, 63(4), 601-6.

Jandhyala, R.(2014).Personal selling and its effectiveness in generating sales: an assessment of: 'promotional', 'non-promotional' personal selling and 'non-personal' selling as part of the Promotional Mix in the Pharmaceutical Industry.

Jaffar, F., Iqbal, Q., & Randhawa, T. A. (2017). Assessment of job satisfaction among medical sales representatives working in karachi city, pakistan. Indo American Journal of Pharmaceutical Sciences, 4(6), 1717-1722.

Kalyanasundaram, P. (2017). An effect of stress among medical representatives working in Coimbatore city, Tamil Nadu, India. European Journal of social sciences, 55(4), 452-461.

Khan, N., Naqvi, A., Ahmad, R., Ahmed, F., Mc Garry, K., Fazlani, R., & Ahsan, M. (2016). Perceptions and attitudes of medical sales representatives (MSRs) and prescribers regarding pharmaceutical sales promotion and prescribing practices in Pakistan. Journal of young pharmacists, 8(3), 244-250.

Kiran Bala, KavitaSharma.(2020).Role of medical representatives in influencing medicine prescription behavior of doctors. Journal of Business Thought, 10, 39-52.

Kotlo, A., Maram, A., Muragundi, P. M., Janodia, M., & Ligade, V. (2015). Health related quality of life among medical representatives. Journal of Young Pharmacists, 8(1), 18.

Kumar, M. S., & Pandian, P. S. (2015). An investigation into burnout of medical representatives–a study with special reference to job demands. Journal On Management Studies, 1(4), 198-204.

Kumar Mishra, S., & Bhatnagar, D. (2010). Linking emotional dissonance and organizational identification to turnover intention and emotional well-being: A study of medical representatives in India. Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management, 49(3), 401-419.

McKay, S., & Tate, U. (1999). A path analytic investigation of job-related tension: A case for sales management. Journal of Marketing Management (10711988), 9(3).

Mohammed, R., & Kheder, S. I. (2017).The impact of pharmaceutical promotion on rational prescribing and drug use in Sudan.

Murshid, M. A., & Mohaidin, Z. (2018). The influence of information, brand, medical representatives and sales promotion on physician prescribing decision. Journal of Pharmaceutical Health Services Research, 9(3), 259-269.

Muragundi, P. M., Kotlo, A., Maram, A., Krovvidi, S. A., Srikanth, M. V., Udupa, N., & Naik, A. N. (2014). What is the Status of Health Related Quality of Life Among Medical Representatives in India?. Value in Health, 17(7), A798-A799.

Ovais, M., Wazir, M. I., & Mufti, O. (2010). Pharmaceutical Personal Selling: Problems Prospects and Importance Of Strategic Relationship Marketing. Business & Economic Review, 3(2), 1-23.

Patil, S. B., & Singh, J. M. (2013). Work induced stress among medical representatives in Aurangabad city, Maharashtra. National Journal of Community Medicine, 4(02), 277-281.

Raizada, H. (2012). A study on Job Induced stress among pharmaceutical sales representatives in Jaipur City of Rajasthan. International Journal of Collaborative Research on Internal Medicine & Public Health, 4(5), 0-0.

Saavedra, K., O'Connor, B., & Fugh-Berman, A. (2017). Pharmacist–industry relationships. International Journal of Pharmacy Practice, 25(6), 401-410.

Schramm, J., Andersen, M., Vach, K., Kragstrup, J., Peter Kampmann, J., & Søndergaard, J. (2007). Promotional methods used by representatives of drug companies: A prospective survey in general practice. Scandinavian Journal of Primary Health Care, 25(2), 93-97.

Scharitzer, D., & Kollarits, H. C. (2000). Satisfied customers: Profitable customer relationships: Pharmaceutical marketing: How pharmaceutical sales representatives can achieve economic success through relationship management with settled general practitioners—An empirical study. Total Quality Management, 11(7), 955-965.

Spiller, L. D., & Wymer, W. W. (2002). Physicians' responses to marketing strategies of pharmaceutical companies. Journal of Pharmaceutical Marketing & Management, 15(1), 15-30.

Stamps, P. L., & Piedmonte, E. B. (1997). Nurses and work satisfaction: An index for measurement.

Sriwignarajaa, K., & Fernando, P. M. P. (2015). Factors affecting on pharmaceutical products brand promotions: a study on professional endorsement perspective.

Tander, B., Canbaz, S., Canturk, F., & Peksen, Y. (2007). Work-related musculo skeletal problems among pharmaceutical sales representatives in Samsun, Turkey. Journal of Back and Musculoskeletal Rehabilitation, 20(1), 21-27.

Umamaheswari R and Sindhuja R (2018).Work-life balance among medical representatives and the strategies to attain a balanced work-life. International Journal for Research in Engineering application and management. 4(7), 2454-9150

Undale, S., & Pande, M. (2016). Effect of organizational and occupational commitment on satisfaction and performance of medical representatives. SM's International E-Journal on Ongoing Research in Management & IT.

Vasan, M. (2018). Impact of job stress on job satisfaction among the pharmaceutical sales

representatives. Research Journal of Pharmacy and Technology, 11(9), 3759-3764.

Zahrani, H. S. A. (2014). The impact of pharmaceutical promotions on primary health care physician's prescribing behaviour in KAMC in central region.

Arts & Humanities

Transnational Neverland(s): Poetic Responses to Disintegrated Neo-Liberal Identities

Pranav Kapil and Balpreet Singh***

ABSTRACT

This study is an attempt to bring forth James Mathew Barrie's notion of 'Neverland', a fictional place whose agency is injected through the creator's desire for escape and/or nostalgia, as a tool to voice diasporic anguish. Yehuda Amichai, a German-born Orthodox Jew who made his home in Israel and Agha Shahid Ali, a Kashmir-born poet who made his home in America, both produce in their oeuvres the breadcrumbs that lead to two distinct, yet similar Neverlands. The paper studies the personal and experiential ideas of displacement from the homeland. These ideas are sparked by a crisis of belonging and often result in the poetic recreation of such lost spaces. For the two bards, their deep desire to revisit their homeland i.e. the peaceful Kashmir for Ali and the integrated Jerusalem for Amichai become a recurring theme in their works. These recreations are birthed through the mire of childhood memories, nostalgia, and an urge to escape the present; The designs of these Neverlands reveal many distinctions and yet some similarities. Thus, it becomes essential to examine these breadcrumbs and produce a comparative account of the features of these Neverlands. The paper attempts to trace these Neverlands along three spatial axes – nostalgia, childhood and escape. This is an effort to develop a nuanced understanding of diasporic attempts at reformulating an answer to the challenge of disintegrated neo-liberal identities.

Key Words: Neverland, Diasporic Homeland, Exile, Exodus, Displacement and Liminal Space

Introduction

In the 1930s, while Friedrich Hayek was defining the contours of what would be the influential notion of Neoliberalism, he was offering something beyond opposition to ideas of welfare states; neoliberalism for him would be a comprehensive vision of organising society. As Stephen Metcalf notes that "[for Hayek] within such a society, men and women need only follow their own self-interest and compete for scarce rewards. Through competition, 'it becomes possible … to discern who and what is valuable" (2017). When Loc Wacquant emphasised the proportional relationship between the advent of neoliberalism and an expanded prison state, he brought attention to such a social component. He offered that neoliberalism is perhaps better understood as a "transnational political project aiming to remake the nexus of [sic] market, state, and citizenship from above" (Wacquant 213).

The augmentation of neoliberalism, therefore, did not limit itself to informing economic policies. It encroached and continues to encroach on societal paradigms to influence culture. In our neoliberal, globalised world order, consumption of media, continuous migration, relentless remapping

* Assistant Professor, Department of English, Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh, India
** Assistant Professor, Department of English, Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh, India

of markets, political reorganisation of electorates, demographic changes, growing associations with virtual micro-identities, etc. impact how we construct and perceive the identity of ourselves, others and the world. Herein, any work of imagination carries the agency to disrupt traditional social structures i.e. family, nation, local community, religion, etc. This creates experiences of disjuncture within our understanding of our spatial and temporal situatedness. Albeit contrasted with historical identifications the former is perceived as one with greater stability, upon closer examination, however, this is not sustained. To illustrate, the world persists, perpetually in transit, be it ideas, people, images, products, profits, philosophies, trends, technologies, etc. yet it also comprises larger structures or Networks e.g., nation-states, which upon closer examination disintegrate into variables in transit or actors and actants that constitute the given network. The relations and trajectories of relations between these moving variables, Appadurai noted as global flows. He primarily lists five of them i.e., Ethnoscapes, Technoscapes, Financescapes, Mediascapes and Ideoscapes. Thus, in a neo-liberal world, identity, however it may be produced, is created within these spaces. While imagination has the potential to disrupt such structures, larger structures take longer to dissipate into global flows. Diasporic identities are structures which begin in dynamic cohesion and as such respond to such force of dissipation produced by globalisation in abstract forms. For Deleuze, difference determined that there is no identity, and in repetition, nothing remained what it was previously. The reproductions or copies produced are something new in every instance, thus, everything is in a constant state of flux, and identity can only be understood as becoming and not a being. Thus, the challenge of disintegrated neo-liberal identities is perhaps best addressed through literature and the abstract landscapes it has to offer i.e., Neverlands.

Characteristics of the Neverland(s)

James Mathew Barrie's fairy play Peter Pan (1904) and later homonymous novel in 1911 famously presented an imaginary and fantastical setting called 'The Neverland'. From then on it has persisted as a vehicle for literary and imaginative expression for over a century, from the early days of Barrie's play to the 2019 documentary on Michael Jackson. In the primary drafts of Peter Pan, the island was called "Peter's Never Neverland". Neverland is an island where Peter Pan, a mischievous boy, flies off and never grows up. Adventures are also never far away on this mythical island where Peter, the leader of the lost boys, is often found conversing with mermaids, pirates and fairies. In Barrie's tales, the real world, one which is full of harsh realities is called the Mainland. Barrie tries to showcase a criticism of his contemporary society and its domestic reality by creating the fictional setting of Neverland in total contrast and opposition to the Mainland. However, he invariably ends up creating a literary vehicle which houses a great immensity of human experience. The Neverland is, thus, used metaphorically for childhood, nostalgia and as an escape from the mainland and its sufferings. It offers an architecture particular to its creator's notion of their childhood, memories of their home and a desire to escape their present. Barrie notes in Chapter 11:

> "Of course, the Neverlands vary a good deal. John's, for instance, had a lagoon with flamingos flying over it at which John was shooting, while Michael, who was very small, had a flamingo with lagoons flying over it. John lived in a boat turned upside down on the sands, Michael in a wigwam, Wendy in a house of leaves deftly sewn together. John had no friends, Michael had friends at night, Wendy had a pet wolf forsaken by its parents..." (Barrie 7)

Such is the case with the two poets being examined in this study, for both are driven by the sense of a disintegrated identity and they respond to it by creating, in their oeuvres, a space here

examined as a Neverland — the minutiae of these Neverland(s) are particularised to their lived experience. Agha Shahid Ali was a modern poet, well acknowledged for his diasporic consciousness. Born in Kashmir, he moved to New Delhi and finally emigrated to and settled in America. The attachment he had for his roots and the aching distance from his homeland, affected him deeply. In an essay titled 'A Darkly Defense of Dead White Males', he noted that "the moon would shine into my dorm room, and I remember one night closing my eyes and feeling I was in my room in Kashmir", and that "sometimes in a bar at 2:00 a.m., like so many Americans, I felt alone, almost an exile (except when I got lucky!)". Ali keenly portrays his triple exile from India, Urdu and his displacement from his motherland, Kashmir, in his poetic oeuvre. This voluntary displacement and the political disruption in Kashmir were subjects for him to revisit in his poetic neverland, a faraway place in his imagination, that fed his diasporic consciousness.

Although diaspora has often been considered as a move from one geographical space to another, diasporic sensibilities are not confined to borders and boundaries on the ground or political crossovers. Rather, as in the case of Yehuda Amichai, it can also be traced as a move from spaces of conflict to safe havens. Yehuda Amichai, the Israeli poet, was born to Jewish parents in Germany and was initially named Ludwig Pfueffer. After moving back to Israel at the age of twelve, he fought as a British soldier in World War II and later in the Palestine War (1947-49). Amichai is celebrated for having a poetic voice that reverberates in the hearts of the masses. His poetry is deeply influenced by the establishment of an independent Israel by Jews and the displacement of the Palestinian society during the 1948 Palestine exodus. His poetry also envisions the emergence of a new Israel amidst the cultural and political complexities of Jerusalem. His name in Hebrew combines 'Ami' meaning "my nation" and "Chai" which means "life", forming a combined meaning of "my nation lives" ("The Poet Who Invented Himself"). While Agha Shahid Ali's poetry revolves around the temporal, cultural and political space of Kashmir, Amichai's poetry is steeped in remembrance of Jerusalem and voices its many phizogs. Amichai was born under the growing totalitarianism of a Nazi state, where Jews were violently ostracised. In search of harmony and a safe place to call home, Amichai's family moved to Mandate Palestine in 1935. But in May 1948, the Palestinian Mandate was divided into Jewish and Arab states. Amichai was witness to the violence and exodus of Jews from their homeland leading to the emergence of Israel as an independent Jewish state. Amichai was striving for a space of communal harmony in contrast to his birthplace, Germany. With a deep sense of dissatisfaction over the disharmony among the Jews and Arabs in Jerusalem, he tried to compensate for this conflict and the displacement of Jews in his poetry, hoping to gain space for the peaceful co-existence of the two. Having been a witness to such a Jeruleum in its early days, when he was but a boy living with his parents, he continues to long for it when he grows up in a Jerusalem perpetually in conflict. Like a diaspora striving to recreate a home he once knew, he longs for the Jerusalem he saw as a child and longed for all his life.

Agha Shahid Ali and Yehuda Amichai are examined as attempting to reclaim their lost identities via an imaginative transnational network. Ali and Amichai, having moved away from their nations, travel within their homelands' imaginative territory to reconstitute situatedness for the lacunae of lost identity. This imaginative context within which the dynamic and abstract desire for identity takes form is examined as Neverland. This Neverland is the Liminal space for Ali and Amichai. Liminal space is a space in transition between two other spaces. The etymological roots of the word liminal are from the Latin word 'limen' meaning 'threshold'. It is a kind of waiting area between what space was and what is next. Physical liminal spaces are usually familiar abandoned places which make someone uncomfortable and unsettled. Mental liminal spaces are having emotional waves that lead from one

state of mind to another. Physical events like exodus, displacement or nostalgia for the motherland generate the mental liminal space. Non-physical liminal spaces or mental liminal states are because of transitional moments that make someone feel about his new identity or experimenting with that identity just because of an event like migration, exodus or exile. Liminal space defines the memetic aesthetics of physical liminality by associating it with past events like childhood memories or traumatic events like exodus and displacement from the homeland. There is a strong bridge between the liminal spaces and hauntology. This is the reason that liminal spaces are subjective. Few people may not relate to Ali's exile expressed in his verses and the exodus of Jews in Amichai's poetry the way both of them do.

Immigrants and the Re-Memorialization of Diasporic Homelands

For diasporic writers the attempts at recreating their homelands often result in two realisations: one, that the homeland doesn't exist and perhaps never existed the way they remember it i.e. it evolves not just due to external forces but also through their own experience with it; two, that their homeland is inaccessible outside of imagined spaces i.e. they may never be able to visit it. Hence the re-memorialization of their homeland(s) is much like echoes reverberating in empty chasms far away from their situatedness, perfectly voicing the despair of their disintegrated identities. Agha Shahid Ali's exile, although a voluntary one, was a source of great diasporic anguish for him. This anguish is addressed through the recreation of visions of his homeland in his poems. These recreations offer an imaginary landscape in his writings, wherein reside the deep desire to escape to his homeland and the most potent of childhood memories. In an interview with Eric Gamalinda taken in Ali's apartment in Brooklyn in April 2001, he said, "Of course, I'm not an exile technically, because I haven't been kicked out of any place, but temperamentally I would say I'm an exile [...] the ability to inhabit several circumstances and several historical and national backgrounds simultaneously makes up the exilic temperament" (Gamalinda).

Peter Pan, Agha Shahid Ali and Yehuda Amichai were immigrants. They had left their homes in pursuit of a better life. For Peter, it was to get away from the predetermined designs for his life that his parents had crafted with little input from him. Peter had told Wendy one night when he was still in the crib that his "father and mother [were] talking about what [he] was to be when [he] became a man...". Having rejected his parents' ideas for his life, he left the crib and moved to Kensington Gardens, where he would live for an elongated period with the fairies (Barrie 24). While Ali may not have had the opportunity to mingle with fairies as Peter Pan did (albeit a case can be made for the time he spent with Begum Akhtar) his move to America gave him the success in life he so desired. Ali did have a phenomenal time making novel contributions to poetry while in America, as Manan Kapoor notes:

> "In hindsight, Shahid had realized that moving to America was a pivotal decision which had placed him in an enviable position where he was simultaneously contributing 'to the new anglophone literatures of the world, the new subcontinental literatures in English and the new multiethnic literatures of the United States'." (Kapoor 66)

For Amichai the reasons to move away from home were far more pressing than those for Ali or Pan. Even though Amichai's family had ancestral connections in Germany, his father had decided to move the family to Petah Tikva, Mandate Palestine in 1936 on account of the increasing threat from the Nazis. This, however, also meant that the 12-year-old Amichai would be separated from his childhood love, Ruth Hanover, who was a disabled daughter of a local rabbi. Ruth was denied an affidavit by the British and US immigration and eventually, "perished in the Sobibor death camp in

Poland in 1943, after numerous failed attempts by her father as well as by Amichai's father to rescue her". (Kronfeld 13) Life in Petah Tikva and then Jerusalem was conducive to Amichai's survival and inclinations, he received religious education at a school in Jerusalem and eventually joined Haganah, the Zionist paramilitary defence force for the Jewish community.

Omphalos of the Neverlands

For Agha Shahid Ali, Kashmir is invariably the central locus of his poetic world. Albeit a key catalyst for his poetic process, it never emerges as a utopia in his poetry. His Kashmir often presents itself as a landscape lost to time. Although it often places itself as a central concern in his poetry, for a long time following his move to America, he was unable to address it.

> "For almost a decade, Shahid hadn't used the word 'Kashmir' in his poetry. As he was [...] exploring his hyphenated identity, Kashmir, somehow, had fallen into the backdrop. However, when he finally uttered the word [...] he launched into a frenzy, repeating it over and over and over, allowing it to spiral through a web of semantic associations." (Kapoor 134)

The Kashmir that eventually reveals itself is addressing a void left by a disintegrated identity continuously being pulled at by new circumstances. As he laments the loss of his identity, he simultaneously tries to retrace, reinvent and re-establish that identity. Manan Kapoor notes that "As things developed in Kashmir, so did the meaning of the word 'Kashmir' for Shahid. With time, it had acquired new meanings, and from being a metaphor for home, it had turned into a metaphor for a lost homeland" (Kapoor 135). The diasporic poet was getting engaged in the double duty. As R. Radhakrishnan puts it, "As diaspora citizens doing double duty [...] we have a duty to represent India to ourselves and to the United States as truthfully as we can" (Banerjee 2027).

A strong sense of loss, desire and love is made visible through his invocations and repetitive allusions to Kashmir. The Blesséd Word: A Prologue in The Country Without a Post Office is a perfect example of it. Wherein 'Kashmir' turned into an incantation, a spell whereby Shahid lay the word flat in front of himself to reinvent 'an imaginary homeland, filling it, closing it, shutting himself (myself in it)'" (Kapoor 134). In the poem, he used different spellings of the word to refer to the many phizogs of Kashmir that are birthed when trying to recall it.

> Let me cry out in that void, say it as I can. I write on that void: Kashmir, Kaschmir, Cashmere, Qashmir, Cashmir, Cashmire, Kashmere, Cachemire, Cushmeer, Cachmiere, Cašmir. Or Cauchemar, in a sea of stories? Or: Kacmir, Kaschemir, Kasmere, Kachmire, Kasmir. Kerseymere? (Ali 171)

Just like Kashmir is for Ali, Jerusalem becomes the omphalos of Yehuda Amichai's poetic world. His verses explore the untouched chapter of Jerusalem's history. He explained his own first-hand experience of war in his verses and gave voice to the sufferings of Jews. He started writing poetry just after 1949, the war of independence. Jerusalem is the pulsating heartbeat of his living poetry. He expressed his childhood memories in a peaceful Jerusalem, the cultural visage of Jerusalem and most importantly the eventual chaos and violence that seemed to have gripped his motherland. His poetry portrays the journey of Jerusalem as a space of communal harmony despite the struggles among Jews, Christians, and Muslims. Aviya Kushner in How One Nation Mourns a Poet remarked that the poet was simply "Jerusalem's great friend. He wrote of her as a child, a lover, a companion, and an enigma. She was always on his mind, and he was always trying to understand her" (613-14). Throughout his oeuvre, Jerusalem's great friend tried to examine and interpret it from

evolving viewpoints. Like Agha Shahid Ali, Amichai also tried to retrace and revisit his omphalos by reinterpreting its nomenclature in "Jerusalem,1967":

The city plays hide-and-seek among her names:
Yerushalayim, Al-Quds, Salem, Jeru, Yeru, all the while
whispering her first, Jebusite name: Y'vus,
Y'vus, Y'vus, in the dark. She weeps
with longing: Ælia Capitolina, Ælia, Ælia.
She comes to any man who calls her
At night, alone. But we know
who comes to whom. (Amichai 84)

It appears that Jerusalem speaks to Amichai when he is no longer able to speak to it. The conversation manifests itself in silences only the poet could experience, however, through the simple tool of description he can craft signs for the readers to eavesdrop on this conversation brimming with nostalgia. This strange and enigmatic relationship he has with Jerusalem hosts many a ciphered record of fathomless despair and longing. He wrote in Jerusalem 1967:

"On Yom Kippur in 1967, the Year of Forgetting, I put on
my dark holiday clothes and walked to the Old City of Jerusalem.
For a long time I stood in front of an Arab's hole in the wall shop,
not far from the Damascus Gate, a shop with
buttons and zippers and spools of thread
in every color and snaps and buckles.
A rare light and many colors, like an open Ark.
I told him in my heart that my father too
had a shop like this, with thread and buttons.
I explained to him in my heart about all the decades
and the causes and the events, why I am now here
and my father's shop was burned there and he is buried here.
When I finished, it was time for the Closing of the Gates prayer.
He too lowered the shutters and locked the gate
and I returned, with all the worshipers, home." (Amichai 83)

Yom Kippur also known as the 'Day of Atonement' is a holy day in Judaism. On this day Jews seek to atone for their sins and achieve reconciliation with God. In the above poem, Yehuda Amichai charts his path to such reconciliation which is marked by a recounting of the Old Jerusalem in the present and that in his father's time. The description of the hole-in-the-wall shop in Old Jerusalem and his imaginary conversation with the shopkeeper on the day of Yom Kippur marks a key aspect of Amichai's experience. His father, who is no longer with him, offers memories to Amichai. The recollections he makes in this conversation span the duration of his life and marks his situatedness; "I

explained to him in my heart about all the decades, and the causes and the events, why I am now here// and my father's shop was burned there and he is buried here." Ranen Omer-Sherman in 'Yehuda Amichai, Jerusalem, And The Fate Of Others' notes that "Another crucial dimension of this resolutely unsentimental poem resides in its imperative to remember both the father's religion and wounded history. These necessarily compel the "I" to see the present differently than his compatriots". Furthermore, these lines that evoke his father's memory and his Zionism point to Amichai's history as someone in exile using his father's memory as an anchor to establish his identity. His memories of his father inform his memories of Jerusalem and they both persist in an inseparable cohesion. This finds reference in another poem published in the 1974 collection:

"Jerusalem is a place where everyone remembers

That they have forgotten something there

But they don't remember what it is.

In order to remember

I wear my father's face

On mine..." (Amichai 207)

Thus, Amichai's Neverland is centred on Jerusalem. And invariably he must access it through memories of his father and his childhood.

The Nostalgia of Childhood Memories and a Cultural Pluralism

Shahid Ali's poetic corpus is knitted with the themes of cross-cultural plurality, the beauty of Kashmir, his childhood memories with his elders, the exodus of Kashmiri pandits and the ensuing political turmoil in Kashmir. Ali was a beneficiary of three cultures i.e., Hindu, Muslim and American. Growing up, poetry at his home was recited in four languages i.e., English, Urdu, Persian and Kashmiri. Although he was born in a Muslim family, he had constant exposure to various religions from an early age.

> "In a photograph from the early '50s, Shahid is dressed as Krishna. A crown rests on his head, although at the time he was unaware of what it represented or who the 'blue, invisible god' was. The picture was taken at Jamia Millia Islamia in Delhi when Shahid was barely two years old. A few years later, when they were in Kashmir, his mother dressed him as Krishna on each Janmashtami and took him to the refugee home she ran. In time, his admiration for Krishna grew, and dressing up as the Hindu god turned into a precious memory." (Kapoor 1)

His mother, Sufia Agha, a Sunni Muslim from Uttar Pradesh, sang him bhajans while his father, Agha Ashraf Ali, an educationist with liberal leanings, exposed him to the thoughts of a variety of social thinkers of the time. While his paternal grandmother, Begum Zafar Ali, was a devoted Shia Muslim who taught him about Islam, he also attended a Catholic school and was intrigued by Christ during his initial years.

Much like Peter Pan, for Ali, his Neverland was crafted from childhood memories. Shahid remembered this tradition forever. Kapoor notes "A few years later, when he realised who Krishna was, Shahid went through what Iqbal calls his 'Krishna phase'. He not only dressed as Krishna but also ran around the house with an idol, asking his parents to help him build a temple". This childhood memory for Ali was a precious one, in an elegy for his mother, he wrote:

"... and I, one festival, crowned Krishna by you, Kashmir listening to my flute. You never let the gods die". (Ali 247)

Similar childhood memories of love and joy help construct Ali's Neverland when he recalls Begum Akhtar or Faiz being played in his home in Kashmir. His father's voice reading Faiz had left a lifelong imprint on his poetic sensibility. His fondness for Begum Akhtar further sustained his affection for Faiz. He notes, "Begum Akhtar comes back to me in strange moments. As does Faiz. Often, the two come back together" (Kapoor 86). Begum Akhtar's presence not only informed his fondness for ghazal as a poetic form but also resonated with the culture he grew up in. Kapoor notes that "Ghazal's existence in two worlds, geographies and cultures turned the form into a comfortable space for Shahid, where he could be truly expressive. In his ghazals, he emerges as a mystic who interprets the world in a very different manner from a modern poet" (Kapoor 123).

Agha Shahid Ali's Neverland is an empty cultural "room of requirements" often visited by diasporic identities like Ali in search of nostalgic fodder. He visits Kashmir in his imagination by visiting old music gharanas, the rivers like Jhelum and lakes. Critic Bruce King observed in "Agha Shahid Ali's Tricultural Nostalgia" that the poetry of Ali is focused on fear and "obsessions.... memory, death, history, ancestors in the family, nostalgia for the past that he has never known, dreams, Hindu ceremonies, friendship and self-awareness about a poet." (King 4)

His poem "Postcard from Kashmir" shows his intense nostalgia. The speaker stares at the postcard photographs of Kashmir, where he belonged, but now he can just recall his motherland. He felt that his imagination for his motherland is vast, containing what he and that place currently is, and this exposes his profound love for the place he once belonged to. His exile is generating his nostalgia and making him realise what he is missing – landscape, language, shades of different cultures, his loved ones in Kashmir and his former self. He writes:

This is home. And this the closest

I'll ever be to home. When I return,

The colours won't be so brilliant,

The Jhelum's waters so clean,

So ultramarine. (Ali 29)

A similar notion of cultural plurality is noted in the works of Yehuda Amichai. However, for Amichai, this plurality is revealed in a spiritual context i.e. through Amichai's notion that god celebrates diversity and plurality. Chana Kronfled notes, "Amichai's critique of a dualist ethics that is based on the exclusion of the "other" finds its anchor in the grammatical and ontological paradox of God's singular plurality, as it brings together masculine and feminine, male and female, Jew and Arab" (Kronfled 241). The Language of Love and Tea with Roasted Almonds, Poem No. 1 in Open Closed Open provides evidence for the same.

"Layla, night, the most feminine of all things, is masculine

in Hebrew, but it's also the name of a woman.

Sun is masculine and sunset feminine,

the memory of the masculine in the feminine, and the yearning

of a woman in a man. That is to say: the two of us, that is to say: we.

And why is Elohim, God, in the plural? Because All of Him

are sitting in the shade under a canopy of vines in Akko,
playing cards. And we sat at a table nearby and I held your hand
and you held mine instead of cards, and we too
were masculine and feminine, plural and singular,
and we drank tea with roasted almonds, two tastes
that didn't know each other and became one in our mouth.
And over the café door, next to the sky, it said:
"Not Responsible for Items Forgotten or Lost." (Amichai 467)

This poem goes beyond criticism to provide a surreal vision of an earthly god that incorporates and celebrates human multiplicity.

Childhood memories too continuously influence Amichai's poetic spaces. For Yehuda Amichai his poem "I Studied Love" is more than a feminist critique of traditional Jewish prayer customs (wherein at the synagogue the women are separated from the men by a mechitza i.e. a partition) it is a childhood memory of his seeing his mother standing with all other women, penned off away from the men. The memory reflects the imprint of practices of division within a place of worship on the innocent and impressionable mind of a young boy. This memory from his childhood informs as the title suggests Amichai's understanding of love.

"I studied love in my childhood in my childhood synagogue
in the women's section with the help of the women behind the
partition
that locked up my mother with all the other women and girls.
But the partition that locked them up locked me up
on the other side. They were free in their love while I remained
locked up with all the men and boys in my love, my longing.
I wanted to be there with them and to know their secrets
and say with them, "Blessed be He who has made me
according to His will." And the partition—
a lace curtain white and soft as summer dresses, swaying
on its rings and loops of wish and would,
lu-lu loops, lullings of love in the locked room.
And the faces of women like the face of the moon behind the clouds
or the full moon when the curtain parts: an enchanted
cosmic order. At night we said the blessing
over the moon outside, and I
thought about the women." (Amichai 417)

For Yehuda Amichai, Jerusalem is the wounded heart of his poetry and his poems are called

the "secular prayers" of the nation. Amichai often recalls and revisits his memories as a child in the city with his parents. In the poem "When I Was a Child" from his collection Now and in Other Days (1955) Amichai visits his Neverland through nostalgia and childhood memories in his poetic imagination:

"When I Was a child
grasses and masts stood at the seashore,
and as I lay there
I thought they were all the same
because all of them rose into the sky above me.
Only my mother's words went with me
Like a sandwich wrapped in rustling waxpaper" (Amichai 3)

Amichai's escape route is no different to the one taken by Agha Shahid Ali. He once thought, "My escape route to childhood is always open" (Wood). There are many such "escape routes" in Amichai's work. He has swift accessibility to all of the senses to move away from the mainland. Amichai always stepped into his cultural memory to escape the mainland of his present diasporic situatedness. His visit to his memory of childhood gives him warmth and support to escape the anguish in Jerusalem. In his poem "1924" From A Life of Poetry, he writes:

"He who remembers his childhood better
Than others is the winner,
If there are any winners at all." (Poetry International)

Persistence of a Historical Consciousness

Many of Ali's poems address forgotten history through a mixture of historical events with experiences from his childhood. 'The Dacca Gauzes' a poem that brings to fore the horrid colonial past associated with the muslin trade is entwined with memories of his grandmother.

"In history we learned: the hands
of weavers were amputated,
the looms of Bengal silenced,
and the cotton shipped raw
by the British to England.
History of little use to her,
my grandmother just says
how the muslins of today
seem so coarse and that only
in autumn, should one wake up
at dawn to pray, can one
feel that same texture again.
One morning, she says, the air
was dew-starched: she pulled

it absently through her ring." (Ali 42-43)

This memory of his grandmother pulling muslin out of a ring absently contains a historical sense of history itself. His mother reflecting on the quality and history of muslin becomes history for Ali as well and seems to inform a deep sense of historic consciousness in his poetry. Similarly, Yehuda Amichai attempts in his poetry to curate his poetic landscape with memories of his home, quickly realising the inaccessibility of such a home. In his long poem, *The Travels of the Last Benjamin of Tudela*, he states:

"Sometimes I want to go back
to everything I had, as in a museum,
when you go back not in the order
of the eras, but in the opposite direction, against the arrow,
to look for the woman you loved.
Where is she? The Egyptian Room,
the Far East, the Twentieth Century, Cave Art,
everything jumbled together, and the worried
guards calling after you:
You can't go against the eras! Stop!
The exit's over here! You won't learn from this,
you know you won't. You're searching, you're forgetting" (Amichai 117)

Chana Kornfeld notes that the poem reflects some of the major principles embodied in Amichai's work i.e. "[The] poem as an achronological, simultaneous, discontinuous, and disruptive reconstruction of the various layers of the speaker's experience of personal and collective history" (Kronfeld 113). She further notes that "Although his quest always has a specific goal, such as to find the lost beloved woman or the (permanently lost) God of his childhood, these disruptions of personal and communal chronology cannot bring the speaker back to "everything [he] had" (Kronfeld 114).

Shahid Ali's reconstruction of this idyllic space within his poetry is also informed by a familial sense of history. Kapoor notes that "Shahid's family could trace their history to the Persian Qizilbash clan, who were mercenaries in the armies of Nader Shah and the Safavid Shahs". A historical awareness in his poems marks again the effort to address his now challenged identity. In the poem 'Snowmen' he writes:

"My ancestor, a man
of Himalayan snow,
came to Kashmir from Samarkand,
carrying a bag
of whale bones:
heirlooms from sea funerals.
His skeleton
carved from glaciers, his breath

Arctic,

he froze women in his embrace[...]

This heirloom,

his skeleton under my skin, passed

from son to grandson,

generations of snowmen on my back.

They tap every year on my window,

their voices hushed to ice." (Ali 34)

The establishment of a historical anchor for his identity equips him to address his dynamic situatedness. Such persistence of a historical impetus ensures that his identity is slow to the disintegration perpetuated by neoliberalism and allows him to respond to the crisis of identity perpetuated by a life away from home.

"No, they won't let me out of winter,

and I've promised myself,

even if I'm the last snowman,

that I'll ride into spring

on their melting shoulders." (Ali 34)

Violence and Conflict

For these poets, the memories of their homelands, be it memories drawn from their childhood or memories borrowed from a cultural exchange, represent a personal space of peace and perhaps joy, far away from their present. However, it is in those moments when external forces reshape it with chaos and violence that the poets realise that the homeland they crafted from curated memories is different from the real homeland. This key juncture marks the realisation that their imagined homeland is firstly a very personal one i.e., this is an individualised experience and has claims of being a shared space and secondly, that this homeland is accessible only in imagined spaces; both are features of the Neverland.

For Agha Shahid Ali the violence and suffering in Kashmir draw a parallel to the decentred chaos of his own identity. In the 1990s Kashmir was becoming the sight of horrid tragedies. Ali responded to it by writing poems about it. The exodus of Kashmiri Pandits had a profound impact on Ali and informed his understanding of his displacement. Kapoor notes,

> "As the Pandits fled their homeland in search of a safe haven, they left a vacuum in the Valley, a void that deeply disturbed Shahid, and in The Country without a Post Office, he spoke of all that he had lost—including the Pandits who, though far away from home, wore 'jeweled ice in dry plains / to will the distant mountains to glass'". (Ali 141)

Agonies and suppression of Kashmiris gave distress to Ali and he gave voice to this exploitation in his poetry. Akshaya K. Rath comments on the role of Kashmir in Ali's poetry when he says:

"That Shahid Ali constantly portrays Kashmir as a disturbed place has a long

history and an extensive purpose in mind. The large–scale atrocities, constant subjugation, mass rapes, curfews and tortures in army camps are embedded in Shahid Ali's poems, so as to show the real image of a place that was once termed 'the blessed land' or 'paradise on earth'." (Rath 150)

Ali has always harboured a concern for the Kashmiri people; he lamented the exodus of Kashmiri pandits from the valley for a long time. Ali portrays Kashmir through traditions and customs; through the natural landscape and most important through harsh realities and pain. Ali creates this Kashmir through a blend of language and images. Despite this horrid visage, Ali has hope and in his poetic imagination, he at times paints a Kashmir with communal harmony and peace. His dreamland of togetherness is visible in his poem "The Blessed Word: A Prologue" where he says:

"What is the blessed word? Mandelstam gives no clue. One day the Kashmiris will pronounce that word truly for the first time." (Ali 171)

In the same poem, Ali mentions creating an imaginary homeland, essentially revisiting and reinventing his imagined homeland. He wishes to remain in this fictitious Neverland to avoid the harsh challenges of a diasporic identity. He writes,

"He reinvents Petersburg (I, Srinagar), an imaginary homeland, filling it, closing it, shutting himself (myself) in it." (Ali 172)

Ali recalls in his imagination the brutal assassinations and chaos in Kashmir. He mentions an 18-year-old boy named Rizwan, who was slain by soldiers close to his native place in Bandipore, in "Dear Shahid" and "I See Kashmir from New Delhi at Midnight". Shahid's father was good friends with Molvi Abdul Hai, the father of Rizwan. In "Dear Shahid", Ali writes a letter to himself. He writes, "You must have heard Rizwan was killed. Guardian of the Gates of Paradise. Only eighteen years old" (Ali 29). In another poem, "I See Kashmir from New Delhi at Midnight", he wrote:

"Rizwan, it's you, Rizwan, it's you, ..."
"Each night put Kashmir in your dreams, ..."
"Don't tell my father I have died," he says,
and I follow him through blood on the road
and hundreds of pairs of shoes the mourners
left behind, as they ran from the funeral,
victims of the firing. From windows we hear
grieving mothers, and snow begins to fall
on us, like ash. Black on edges of flames,
it cannot extinguish the neighborhoods,
the homes set ablaze by midnight soldiers.
Kashmir is burning: (Ali 179)

Yehuda Amichai's verses are full of references to a tormented Jerusalem and its grief-stricken souls. His verses give voice to the subjugated residents of his motherland. Amichai played his part in World War II and the War of Independence 1949 as a soldier. Having seen the atrocities of war, he noted his painful experience in his poems. It seems like he had endured this duty to write the nation's poetry, poetry which can be read at dead soldiers' funerals and religious places. This is the reason that

later his poems are considered verses of Jerusalem and elegies for departed souls. He is harsh on the political turmoil of Jerusalem and he criticises it in his poems e.g. "Jerusalem, the only city in the world where the right to vote is granted even to the dead." (Amichai 82)

Yehuda Amichai's poetry is the re-definition and re-description of Jerusalem and Jews as they both suffer in mutual anguish. Amichai's Neverland imbibes the pain felt by Jews. Amichai kept on revisiting his Neverland with painful memories of Jerusalem. His experiences are visible in his one long poem "Jerusalem, 1967", wherein he remarks, "Jerusalem is full of Jews used by history / Secondhand Jews, with small flaws, bargains." Amichai, as a witness to the human tragedies in their lives, recollects his personal experiences and synthesises them to form his Neverland. In "The Diameter of the Bomb", Yehuda Amichai explained the specific tragedy that happened from the perspective of an eyewitness. At the beginning of the poem, he mentions how it affected people by using numbers to make us see a clear picture of that moment. He also used specific numbers for the dead and wounded bodies. He concluded by saying, "no end, no god," which means that this tragedy has caused so much pain to people that they believe there will never be an end to it and that there is no god who can make it stop.

"The diameter of the bomb was thirty centimeters
and the diameter of its effective range about seven meters,
with four dead and eleven wounded.
And around these, in a larger circle
of pain and time, two hospitals are scattered
and one graveyard." (Amichai 245)

While poetry has always been the tool that created landscapes for those who found none in the real world, diaspora writers have used poetry to reflect their unique predicament of belonging. While traditional identities are challenged and subjected to disintegration by a changing external world, the memories and remembrances of these traditional identities strive to retain some elements of the past as they undergo an unstoppable metamorphosis. It must be noted that although such evolution is inevitable, remembrances of the homeland produce and reproduce fragments of these places as a response to the anguish of the individual. In a world where communities and individuals are reshaped by markets as it takes over their roles and function, the anguish of a disintegrating identity has to fall back upon creating spaces which preserve the remembrances, hopes and records of responses to such change.

Works Cited

Ali, Agha Shahid. The Veiled Suite: The Collected Poems. 1st ed., W. W. Norton and Company, 2009.

Amichai, Yehuda. The Poetry of Yehuda Amichai. Edited by Robert Alter, First, Farrar, Straus and Giroux, 2015.

---. "1924." Poetry International, Poetry International, www.poetryinternational.com/en/poets-poems/poems/poem/103-24213_1924. Accessed 20 July. 2022.

Appadurai, Arjun. "Disjuncture and Difference in the Global Cultural Economy." Theory, Culture & Society, vol. 7, no. 2–3, 1990, pp. 295–310. Crossref, https://doi.org/10.1177/026327690007002017.

Banerjee, Ayanita. "Re-Mapping Culture and Identity: Diasporic Theorisation and Dislocation Strain

in the Selected Poems of Agha Shahid Ali." International Journal of English Learning & Teaching Skills, vol. 3, no. 2, 2021, pp. 2022–32. Crossref, doi:10.15864/ijelts.3207.

Barrie, James M. Peter Pan. Free classic e-books, 1911, freeclassicebooks.com/James%20M%20Barrie/Peter%20Pan.pdf.

Bilquees, Dar Arshiddar. "Aga Shahid Ali as a Diasporic Poet." International Journal of English and Literature, vol. 5, no. 2, 2014, pp. 64–66. Crossref, doi:10.5897/IJEL2013.0433.

Chatterjee, Partha. "Beyond the Nation? Or Within?" Economic and Political Weekly, vol. 32, no. 1/2, Jan. 1997, pp. 30–34. Jstor, www.jstor.org/stable/4404962.

Gamalinda, Eric. "An Interview With Poet Agha Shahid Ali." Poets & Writers, 24 Nov. 2009, www.pw.org/content/interview_poet_agha_shahid_ali.

Nietzsche, Friedrich. "The Will to Power as Knowledge." The Will to Power, edited by Walter Kaufmann, New York, Vintage Books, 1968, pp. 261–324.

Ghosh, Amitav. "'The Ghat of the Only World': Agha Shahid Ali in Brooklyn." Postcolonial Studies, vol. 5, no. 3, 2002, pp. 311–23. Crossref, doi:10.1080/1368879022000032810.

Jahangeer, Peer Salim. "Diasporic Consciousness about Kashmir Expressed by Agha Shahid Ali." Literary Herald, vol. 2, no. 4, Mar. 2017, pp. 422–32, www.TLHjournal.com.

Kacker, Saloney. "The Role of Kashmir in the Poetry of Agha Shahid Ali." International Journal of English Language, Literature and Humanities, vol. v, no. II, Feb. 2017, pp. 66–73, http://www.ijellh.com/

Kapoor, Manan. A Map of Longings. Vintage Books, 2021.

King, Bruce. "Agha Shahid Ali's Tricultural Nostalgia." Journal of South Asian Literature, vol. 29, no. 2, Summer 1994, pp. 1–20. Jstor, www.jstor.org/stable/25797511.

Kronfeld, Chana. The Full Severity of Compassion: The Poetry of Yehuda Amichai (Stanford Studies in Jewish History and Culture). 1st ed., Stanford UP, 2015.

Kushner, Aviya. "How One Nation Mourns a Poet." Partisan Review, Vol. 68, no. 4, Autumn 2001, pp. 613–14.

Muzafarpala, Aadil. "A Thematic Comparison in the Poetry of Seamus Heaney and Agha Shahid Ali." International Journal of English Language, Literature and Translation Studies, vol. 2, no. 3, 2015, pp. 461–67, www.ijelr.in.

P.S, Mahaswetha Devi. "The Nuances of Cultural Memory in the Poetry of Yehuda Amichai." International Journal of Creative Research Thoughts, vol. 9, no. 6, June 2021, pp. 102–08, ijcrt.org/papers/IJCRT2106019.pdf.

Rath, Akshaya K. "Agha Shahid Ali's Kashmiri Poetry." Kavya Bharti, 2010, pp. 148–63.

"The Poet Who Invented Himself." The Forward, 5 Sept. 2008, forward.com/culture/14134/the-poet-who-invented-himself-02465.

Times, The New York. "Amichai, Israel´s Most Important and Influential Poet, Dies at 76." The New York Times, 22 Sept. 2000, www.nytimes.com/2000/09/22/continuous/amichai-israelacutes-most-important-and-influential-poet-dies-at.html.

Wacquant, Loïc. Punishing the Poor: The Neoliberal Government of Social Insecurity. Illustrated, Durham, NC, Duke University Press Books, 2009.

Wood, James. "Yehuda Amichai, the Secular Psalmist." The New Yorker, 28 Dec. 2015, www.newyorker.com/magazine/2016/01/04/like-a-prayer.

Silence to Suicide: The Death of Monisha in *Voices in the City*

Neetika Sharma*

ABSTRACT

Suicide, "death caused by self-directed injurious behaviour with the intent to die" ("Suicide", National Institute) has psychological as well as social reasons behind it. Besides, the culture of domination and oppression affects the psyche of a person. Women are often subjected to mental and physical abuse in their marital life sphere because of patriarchal violence. The strained conjugal relationship affects the emotional and psychological bent of a woman's mind.

As per norms of patriarchal culture in Indian society, women are supposed to accept the atrocities and injustice silently. The stressed emotional and physical life forces them to be silent and suppress their feelings of helplessness and denial. The women who speak are looked down upon and are ostracized in the family as well as publically which makes their existence subsidiary, pushing them to the margins. This paper underscores 'the culture of silence to oppression' leading to depression in women which results in suicide through the study of the character Monisha in Anita Desai's novel Voices in the City published in 1965. The solace and fulfilment Monisha looked for from her husband were absent, leading to her depression. The constant nagging from her in-laws, which she could not share with others, pushed her to mental collapse led to her emotional instability and she saw her living as worthless which resulted in her absolute silence that is suicide. She could speak her anger only through the flames in which she put herself to end her life.

Key Words: suicide, gender, patriarchy, the culture of silence, man-woman relationship

Introduction

According to the World Health Organization's suicide data for the year 2019:

> Globally, 703,000 people die by suicide every year. Suicide is among the leading causes of death worldwide, with more deaths due to suicide than to malaria, HIV/AIDS, breast cancer, or war and homicide. More than one in every 100 deaths (1.3%) in 2019 were the result of suicide. (*Suicide Worldwide*)

Suicide is a grim issue in the world. On *Worldometer* website, the number of deaths by suicide in the world as recorded on July 1, 2023, for the year 2023 is "533, 614" (*Worldometer*). The number is for six months, that is January–June 2023 data. Suicide, "death caused by self-directed injurious behavior with the intent to die..." ("Suicide," *National Institute*), has psychological as well as social reasons behind it: "Suicide results from a complex interaction of biological, psychological, social, and situational factors" (Heikkinen et al. 747). The impact of society on an individual's mind cannot be ignored:

> ...there are intricate aspects of social interaction that...are related to how social structures and connectedness impact suicide...the external social world matters

* Research scholar, Department of English, Central University of Jammu, Samba, India

> to individual well-being and psychache, thereby revealing the social roots of suicide. (Mueller et al. 5,9)

Hence, social factors and relationships have an important role in shaping an individual's psyche and well-being and, thus, influence the thoughts of suicide. Marital status, living arrangements, social interaction factors (Heikkinen et al. 747); love affairs, poverty ("Suicides in India" 202); harassment, "a string of recent suicides is attributed to overt and covert harassment at office" (Menon); professional/career problems, sense of isolation, abuse, violence, family problems, mental disorders, addiction to alcohol, financial loss, chronic pain ("Suicides in India" 196), etc. among all these social issues, gender problem is also a cause of suicide. In the work *Comprehensive Textbook of Suicidology*, it is stated: "Gender plays a complex and important role in suicidal behavior" (Maris et al. 167). Hence, the influence of gender oppression cannot be ignored in determining the suicide of a person.

The suicide rate data for women globally is "11/100,000" (Vijayakumar). There are various reasons behind women's suicide. It can be: "Childhood adversities including physical, emotional and sexual abuse lead to substantially higher risk for suicide." And "[w]ife abuse is one of the most significant precipitants of female suicide" (Vijayakumar). In "Practice Guideline for the Assessment and Treatment of Patients with Suicidal Behaviors", it is stated:

> The risk for suicide attempts in individuals who have experienced recent domestic partner violence has been estimated to be four- to eightfold greater than the risk for individuals without such experiences .... [which is] much more commonly experienced by women. (40)

'Domestic partner violence' is mainly due to the patriarchal structure of society. The patriarchal set-up is such, "Men and women differ in their roles, responsibilities, status and power and these socially constructed differences interact with biological differences to contribute to differences in their suicidal behavior" (Vijayakumar). The gendered position, rights, and role played by the individuals contribute to dictating their suicidal behaviour. The patriarchal system in Indian society has disabled women in many cases from acquiring even the basic needs of their lives. Indian women suicide data, "... represents 36.6% of global female suicide deaths ..." ("Nearly 40%", *The Guardian)*, showing a depressing reality and it is revealed:

> ...the highest proportion of suicide deaths among women in India involves married women – this is true across class and religion. Essentially, the entrenched patriarchy in institutions of marriage and family can be brutally traumatic, and drive a woman to despair. ("Patriarchy kills")

Women are confined to the four walls of their houses in the name of protection. They lead a depressing and dejected life silently because of patriarchal culture: "...women are a victim of male domination in the respective sphere of life; especially in economic life, over decision making on resources, on the utilization of her earnings and her body" (Nirola). They hold no position in any important decision and their voices remain unheard: "... the words of women are crying to be heard ...." (Lorde 43-44). The oppressed situation of a woman is visible but often it is ignored in the interest of the patriarch. And in most cases, the speaking of women is silenced.

Even after various feminist movements across different cultures and societies, women are still struggling. In the 1960s, the status of women in India remained underdeveloped as "The patrilineal kinship structure and inheritance and marriage systems do not give Indian women autonomy within

the family....Authority and decision-making within the family theoretically follow the male side of the kin network" (Dube et al. qtd. in Dutta 163). The position of women remained marginalized as the power to make decisions stayed with the male of the family.

Marriages are considered a protective factor but for women that may not be the case. According to Emile Durkheim, "The immunity of married persons [to suicide] is due [largely] to the influence not of conjugal society, but of the family society. In itself, conjugal society [marriage] is harmful to the woman and aggravates her tendency to suicide" (qtd. in Maris et al. 222). The marital pressures on a woman are often suffocating which sometimes leads to suicide. In patriarchal Indian society, women are made to make compromises and pursue life under patriarchal codes wherein they cannot assert their desires: "Prejudices coloured by patriarchy are inherent in many traditions. Where tradition rules, institutions, cultures, social mechanisms, norms, and practices tend to become resistant to change and hinder women's development" (Kasturi 5). A woman's identity is always framed under the shadow of her husband and hence, her status as an individual is never recognized: "...the complete submission of the woman to the man was supposed and even forced" (Subasi). The societal construct is such that they are made to rely on the menfolk for their well-being and survival because of the restriction on women's mobility in the public sphere: "Indian women are disadvantaged by widely shared gender ideologies that restrict women's movements outside the home" (Derne 203). Women are forced to pursue caged subsistence in silence. Taking this as background this paper is an attempt to highlight the 'culture of silence' on oppression leading to depression in women which results in suicide through the study of Anita Desai's novel *Voices in the City* published in 1965:

> ... generations of [Indian] women hidden behind the barred windows of half-dark rooms, spending centuries in washing clothes, kneading dough and murmuring aloud verses from Bhagvad-Gita and the Ramayana in the dim light of sooty lamps. Lives spent in waiting for nothing, waiting on men self-centered and indifferent and hungry and demanding and critical, waiting for death and dying misunderstood, always behind bars, terrifying black bars that shut us in, in the old houses in the old city. (*VIC* 122)

The novel *Voices in the City* portrays the imprisoned situation of women inside their houses pursuing meaningless lives. In Indian society during the 1960s people were majorly orthodox which made the position of women subservient to men. The position of women in modern India has improved a lot, however:

> ...they still face challenges. They must balance their personal and professional obligations....When women are tortured by their family members rather than receiving aid, their situation becomes more embarrassing. Sexual harassment by family members, relatives, neighbours, acquaintances, bosses, and others is more widespread at home and in the workplace. (Sah f598)

This subjugated status of woman and silence on emotional suffering under the weight of all the responsibilities of her home consequently pushes her to depression which sometimes results in the suicide of a woman as in the case of Medhashri Sen in *Black Light* written by Rimi B. Chatterjee published in 2010. Medhashri Sen was a middle-aged lady who belonged to a Bengali family. Medhashri was of an artistic bent of mind: "She had been in her youth an indifferent scholar, and could not be persuaded to give more than a few minutes to any task that did not engage her mind" (Chatterjee 239) which her husband never accepted. She was married to Ranjan Sen, "... an ordinary man ... [he] fanc[ied] himself an extraordinary man" (Chatterjee 240). They had two daughters,

Bilasha and Asha. Years after their marriage, unable to accept Medhashri as her equal, Ranjan Sen decided to leave for America with one of their daughters, Bilasha.

He left Medhashri and their disabled daughter Asha and never tried to contact or enquire about them. Medhashri had nobody's support and the death of her daughter Asha aggravated her depression: "... belongingness is a core predictor of suicidality ... marriage is an important aspect of social attitudes ... play a role in predicting suicidal behaviour" ("Spousal Attitudes"). Medha was left alone emotionally. Ranjan made sure to push her to the verge of loneliness which impacted her at a psychic level. Even after Medashri's suicide, people around her tried out to frame it as an accidental death: "... she must have slipped and fallen from her veranda" (*Black Light* 6). All through her adversities in her married life, she remained silent which pushed her towards suicide.

The novels *Voices in the City* and *Black Light* are written at the gap of forty-five years and portray the position of Indian women and their struggle in society. The position of Indian women past and present is still marginalized which prevents most of them from living their lives on their own terms. Hence, the study of the case of Monisha as depicted by the writer Anita Desai in the novel *Voices in the City* is important even in the present times. Monisha was forced to stay silent on her oppression.

Silence,"...is often considered as an absence of sound or words, by implication an absence of communication" (Bagwasi185-86). Silence often results in "cultural situations where there is no freedom of speech or where opposing and divergent views are not encouraged" (Bagwasi 192). Silence and suicide are related to each other because whenever a person thinks about committing suicide, s/he always contemplates all the life situations in silence as there is no one to listen to and understand. Suicide is the result wherein a person ultimately embraces death under suppression which was "prepared within the silence of the heart...," (Albert Camus, qtd. in Maris et al. 3). Monisha turned silent over the years as the emotional support and attachment she craved for in her marriage was lacking. She was in distress at her in-laws' house as she had no chance of self-expression and this led to grave anxiety in her: "... most of the Indian women have been suffering from the lack of self and space, disempowerment, disprivilege, disadvantage, sexist discrimination, gender inequity, invisible asymmetries, marginalization, devalorization and reification" (Misra 867), thereby making their lives burdensome. Monisha married into a joint family, where she was made to comply with the rules laid down by the patriarchal set-up. She was denied personal space. Her movement outside the house was restricted. Jiban, Monisha's husband, was also unsupportive towards her which subsequently pushed Monisha towards loneliness. Monisha started to lose her 'self' in the process of regulation with Jiban and his family: "Women are expected to abide by the judgments of men and in most cases to be subservient to their wishes. Generally, a woman is expected to sacrifice her personal desires and needs if they conflict with the overall goals of the family" (Dutta 43). Their desires are often put at stake for the overall happiness of the family. Monisha began to fear love:

> ... I shy from love, fear it as attachment, for 'from attachment arises longing...' If only love existed that is not binding, that is free of rules, obligations, complicity and all stirrings of mind or conscience, then – but there is no such love. It is not there in my relationship with Jiban, which is filled only by loneliness and a desperate urge to succeed ....(*VIC* 137)

Due to her disillusionment with her relationship with her husband, she began to estrange from people as she realized that the attachment would lead to pain only. In Indian society, "Marriage has been an important social institution. It is the basis for the family" (Sharma et al.). Both wife and husband are important pillars of this relationship, for solace and support in each other. However, even

in the company of Jiban, Monisha felt lonely as he remained uninterested in the life affairs relating to Monisha: "... Jiban remains sitting with us, but Jiban is never with us at all" (*VIC* 112).

The marital pressures that Monisha faced made her miserable and the signs of emotional and mental torture began to be visible physically through her deteriorating health: "I grow smaller every day, shrink and lose more and more of my weight, my appurtenances, the symbols of my existence that used to establish me in the eyes of this world. I am already too small to be regarded much by anyone. I will be invisible yet" (*VIC* 141-42). Her whole existence was under threat and she was objectified and identified as a wife and daughter-in-law and not as an individual, a human being. She was devoid of emotional support. To add to her woes, Monisha's inability to conceive invited taunts: "'The womb may be in the wrong position, then also an operation is required" (*VIC* 114). There were round table discussions on her sexuality by her in-laws. According to Catherine Kohler Riessman, "Remaining childless after marriage challenges strong cultural beliefs "ordinary and natural" life course for Indian women,..." (118). The patriarchal culture grades women on their ability to contribute to the procreation process and all the other aspects of women's lives are null and void:

> Having a child, no matter at what age, changes the status of a woman in all classes of Indian society....Becoming a mother, in fact, is not so much a change of status as it is the attainment of the status a woman is born to achieve.(Manisha Royqtd. in Dutta 43)

A childless woman is a thorn in people's eyes. This invites sarcastic remarks and ridicule. The child in a marriage is held in the utmost important position. According to social beliefs, a child completes a marriage, which was not likely in Monisha's case.

She wore all the unbearable sufferings in silence "... but do not try to tell [her husband] of the pain of bearing secrets, the frequent miscarriages and stillbirths" (*VIC* 134). The constant reminder of her failed attempts at bearing a child remained with her all along and was also reminded about it by the family time and again. The silence that she chose for herself was burdensome and was, disregarded by everyone: "I am too silent for them, I know. They all distrust silence" (*VIC* 121). Sucharita Maji and Shikha Dixit in their article "Self-silencing and women's health: A review" affirm, "... women, to maintain intimate relationships, 'silence certain feelings, thoughts and actions'" (4). And while maintaining such a silence women destroy their inner peace. In order to vent her feelings and emotions, Monisha started to maintain a diary, wherein the records of her emotional upheaval in the daily pursuit of her life were registered. She catalogued her sentiments and dispositions in her diary in order to entrench connections that she was unable to establish with any of the family members. Her life circumstances were such that she was forced to write her desires and impressions on a piece of paper as there was no one to whom she could open up to say that she was in pain: "I am turned into a woman who keeps a diary. I do not like a woman who keeps a diary. Traceless, meaningless, uninvolved – does this not amount to non-existence ..." (*VIC* 142). And hence, for her, the diary became the symbol of her nothingness and oblivion in her family.

Monisha within the walls of the house lost her social and private space:

> ... place is a form of stability associated with women and their place at home .... The division between the public [social] and private spaces corresponds to a male-dominated world of work place. Women's place was in the private sphere of the home, that consists of the house and garden, and she had a moral duty as a wife and a mother. ("Public and Private Space")

Her importance in the house was measured by her ability to how many household chores she could complete: "I am glad to be occupied in cutting vegetables, serving food, brushing small children's hair. Only I wish I were given some tasks I could do alone, in privacy, away from the aunts and uncles, the cousins and nieces and nephews" (*VIC* 117). She craved privacy, the time of her own, which was never the case in her family. Her desire to read books in silence and in confidentiality was also marred and nobody understood her love for books, "... there is nothing to laugh at in Kafka or Hopkins or Dostoyevsky or my Russian or French or Sanskrit dictionaries. But I wish they would leave me alone, sometimes, to read" (*VIC* 117). Lack of understanding and compassion from the family pushed her towards being silent, where she started to keep secrets and was keeping her feelings to herself and piling them up inside her heart making it difficult for her to bear with each passing day. The life of a woman in marriage is full of hardships, "... entire life of Indian women is regulated by their marital status. Even, their status in the family and society depends on their marital status. Due to... suppression, they often lack confidence that push them back from mainstream development process" (Biswas and Mukhopadhyay). In marriage life, an Indian woman experiences drastic change as compared to men. They are supposed to leave their natal houses and relationships behind physically as well as mentally and are needed to comply with the rules set up by the in-laws while pursuing their lives:

> After marriage, her husband's home is her home. She should visit her natal home only as a guest, she should never return to her parents' home... In India, marriage and family dominate the life of women. The primary duty of the woman is to be subservient/loyal to the husband/his relatives and her children. After marriage, the husband and relatives control all outside relationships. (Tonarsystem)

However, it is very hard for a woman as a human being to get emotionally detached and become loveless to her parents and siblings. This process results in complete isolation in a woman's life after marriage. Jennifer Huizen in her article "Why do People Kill Themselves?" states: "Social isolation, a lack of support, ... place people at higher risk of suicide, ..." (Huizen). Monisha became a victim of isolation.

Monisha's in-laws' rejection and control of her to even meet her ill brother aggravated Monisha's mental anxiety. Nirode suffered a great deal of suffering when he was unable to establish his career in a media enterprise. He could not adjust himself in the cubicles of his office and wanted to achieve something big rather than just glueing articles to the record register. Monisha could relate her sufferings with her brother's pain as like her brother she was also looking to lead a purposeful life according to her wishes. When Nirode was admitted to a hospital she tried to console him by relating what she endured during her marriage: "Accept, I plead with him, accept defeat, accept insignificance, accept solitude, a truer gift than any communication, any art, any faith or delusion in the world can offer you. If he accepts, he will survive" (*VIC* 130). In the acceptance speech that she was imagining in her head, she was referring to her own acceptance of marriage: "In pleading with him, exactly to what extent am I trying to persuade myself?" (*VIC* 131). She felt consoled in the company of her brother: "But I wish they would leave me alone, ... Or that Nirode would come again and take me away to sit under a tree with him" (*VIC* 117). However, she gave up all her desires and will in order to comply with the wishes of her in-laws in order to make them happy and for her survival. However, despite all this, her spending time and bonding with her ill brother was not accepted by her in-laws: "I'm sure and they watch silently from the window as we go rolling off. Had Jiban been here, I can hear them say, he would not have allowed her to go" (*VIC* 115). Jiban never supported her or said anything to his family about

their tormenting behaviour towards Monisha. Monisha felt alone and alienated as there was nobody to console her in loneliness: "... loneliness, such as disconnection from social networks, feelings of social isolation and feeling like a burden, ... can increase a person's desire to take their own life" ("Loneliness" 4) which ultimately caused further depression in her.

Monisha was living in a world of total hopelessness:

> ... I have no faith, no alternative to my confused despair, there is nothing I can give myself to ... such a life cannot be lived – a life dedicated to nothing – that this husk is a protection from death ... choice between death and mean existence and that, surely, is not a difficult choice. (*VIC* 123)

Even in the presence of so many members of her large family, she was made to feel lonely without any support from family members, "I am alone here" (*VIC* 139). On discovering the meaningless nature of life that she was leading, she decided to set herself on fire by dripping herself in kerosene oil as life for her was more like an unattached ring of events and a well of fire: "Warmth, heat, terrible heat, a bright glare, smoke, an unbearably loud noise, bubbling, hissing, a gigantic cracking and whipping in her ears – heat seared her eyeballs – a great fog enveloped her, not the white one of dreams but black, acrid, thick, – and God, the pain!" (*VIC* 245). The silent existence of Monisha came to an end with lots of noises from the annihilating fire and some by the people around her: "....belongingness is a core predictor of suicidality ... marriage is an important aspect of social connection, spousal attitudes... play a role in predicting suicidal behavior" ("Spousal Attitudes"). Finally, when she died, they were ready to allow Monisha her own space and privacy by not entering the room where she was dying: "They wanted only to give her, before the total annihilation, a little respite, a little solitude and so they remained outside the room where she lay" (*VIC* 250). In her journey from momentary silence to final silence, she experienced unworthiness, loneliness and inferiority in the place of love, warmth, compassion and connection. She embraced silence at the end making her husband realize the mental and physical condition of Monisha in their house, to which he says, "'If this terrible thing is the fault of anyone – it is mine" (*VIC* 248). This realization on the part of Jiban could have saved Monisha's if only it had been recognized earlier.

Literature is the reflection of society: "Literature symbolizes society or the world in all aspects" (Keerthika 471). Suicide is a serious problem. Literature around the world has mentioned the cases of suicide from ancient to contemporary times. Writers like Sophocles, William Shakespeare, Ernest Hemingway, Virginia Woolf, bell hooks, Sylvia Plath, and Gayatri Spivak have mentioned about suicide in their works. The portrayal of suicides in the novels written by male and female authors expresses the seriousness of the problem of suicide across societies worldwide. Some authors like Kate Chopin in *The Awakening* (1899), Edith Wharton in *House of Mirth* (1905), Charlotte Bronte in *Jane Eyre* (1847), Margaret Atwood in *The Blind Assassin* (2000) and Sarah Waters in *Affinity* (1999) have portrayed suicide as the ultimate option left to them while others like Leo Tolstoy in *Anna Karenina* (1877) have outrightly despised the suicides in their respective works as observed by Margaret Higonnet in "Suicide: Representations of the Feminine in the Nineteenth Century": "To take one's life is to force others to read one's death...In their deaths, many are obsessed with projecting an image, whether to permit aesthetic contemplation or to provoke a revolution in thought" (103-04). However, one thing is clear in the whole of the literature written on suicide, the focus is on the causes of suicide to bring change in society. Thus, reading the life of the character who commits suicide becomes important in order to trace out the reasons for such a drastic step. The authors have mentioned various reasons behind their character's motive for suicide, some of which are infidelity,

failed relationships, abusive marriages, war victims, mental trauma, depression, physical abuse, and childhood atrocities among many others. Some of the authors like Virginia Woolf, Sylvia Plath, Ernest Hemingway and Charlotte Mew ended their lives by suicide. Thus reading such novels becomes significant in order to reach the root.

Women's suicide points to their caged existence in many cases which has undermined their living choices as stated by Margaret Higonnet, "...so for women who inscribe on their own bodies cultural reflections and projections, affirmation and negation" (103), enabling the readers to discover the causes marked on their dead bodies. The novel *The House of Mirth* (1905) by Edith Wharton, a female writer, stands as an example of what a woman contemplates before choosing to end her life. The protagonist, Lily Bart was stuck between the two worlds of superficial and real calling and was battered by the norms set up by society disabling her from fulfilling her dreams and desires. Thus, she took sedatives and died in her sleep embracing death via suicide: "For many years even after all the struggle and fight, [Women] are still being ill-treated by this male dominating society" (Narula). It is never an easy decision for a woman to end her life even after all the adversities of her life: "For a woman, a decision to kill herself and therefore destroy all relatedness stands in direct opposition to the values most central to her identity" (Alexandra Kaplan and Rona Klein qtd. in Maris et al 153). When a woman feels that her existence is meaningless and gets betrayed by her close ones, she chooses such a drastic step. Hence, the writing of female suicide by women becomes important as these writings give a close brush to the causes behind female suicide. According to Audre Lorde:

> We [Women] can learn to work and speak when we are afraid in the same way we have learned to work and speak when we are tired. For we have been socialized to respect fear more than our own needs for language and definition, and while we wait in silence for that final luxury of fearlessness, the weight of that silence will choke us. (43-44)

The female writings have portrayed how the silence over oppression is burdensome and encourage women to speak for their life and existence. Many Indian women writers in their works have tried to express the miserable situation of women. *Slow Suicide of Sundri* (2016) by Sudama Chandra, *Paro: Dreams of Passion* (1984) by Namita Gokhale, *The Binding Vines* (1992) by Shashi Deshpande, *Eating Wasps* (2018) by Anita Nair, *Wife* (1975) by Bharati Mukherji are some of the novels that depict the problem of suicide in the Indian context. Monisha in the novel *Voices in the City* suffered greatly due to her inner turmoil. The thoughts referring to the insignificance of the life lived her remained with her throughout: "What does it all mean? Why are lives such as these lived? At their conclusion, what solution, what truth falls into the waiting palm of one's hand, the still pit of one's heart?" (*VIC* 122). Silence often hides the storm within a person. The culture of silence to oppression leads to the constant suppression of the inner turmoil which ultimately results in disastrous consequences and a threat to a woman's life as the author tries to draw attention through her novel *Voices in the City* in Monisha's case. Anita Desai makes an endeavour to speak the unspoken and hidden and tries to break this culture of silence. Monisha had no home of her own. She was provided with no support at all. Both her families were indifferent to her. There is a change in the status of women but it has not changed much. The gender roles associated with a woman are still played by a woman, in addition to that a woman is handling things at work as well: "... results show that traditional gender roles still affect the way men and women manage the work and family interaction" (Cerrato and Cifre). Women are supposed to manage the home as well as work having little to no support from their partners and in-laws in most of the cases. Monisha having been endowed with a talent for reading and

writing was forced to abandon her books and indulge in household chores. Having been left with no option and no person to go to, she chose the path of suicide by burning herself in the fire. Burning herself alive in fire is also symbolic of her living existence as a torment on fire. The author tried to highlight the prevalent situation of women in the 1960s which is still present in the modern and digital age and the solution to the problem is still a far-sighted reality.

Works Cited

Benjamin, Jessica. *The Bonds of Love*. Pantheon Books, 1988.

Biswas, Chaiti Sharma, and Ishita Mukhopadhyay. "Marital Status and Women Empowerment in India." *Sociology International Journal*, vol. 2, no. 1, 5 Jan. 2018, https://doi.org/10.15406/sij.2018.02.00030.

Brox, Jane. "A Social – and Personal – History of Silence." *The New Yorker*, Apr. 3 2019,https://www.newyorker.com/culture/annals-of-inquiry/kinds-of-silence.

Cerrato, Javier, and Eva Cifre. "Gender Inequality in Household Chores and Work-Family Conflict." *Cylant.Com*, 3 Aug. 2018, cylant.com/research-article-on-gender-discrimination.

Chatterjee, Rimi B. *Black Light*. HarperCollins, 2010.

Derne, Steve. "Hindu Men Talk about Controlling Women: Cultural Ideas as a Tool of the Powerful." *Sociological Perspectives*, vol. 37, no. 2, summer, 1994, pp. 203-27.*JSTOR*,

https://www.jstor.org/stable/1389320?seq=1.

Desai, Anita. *Voices in the City*. Orient Paperbacks, 1965. [The parenthesis belongs to this edition of the text].

Dutta, Mousumee. "Gender Equality in Families: The Case of Middle-Class Bengali Women in Calcutta." *The Australian National University*, 1999.

Ghosh, Debashis. "Suicide: Ancient Indian Perspective." *Making Sense of Suicide?*, 8 Apr. 2011, pp. 35–43, https://doi.org/10.1163/9781848880689_006.

Harmer Bonnie, Sarah Lee, TrucVi H. Duong, and AbdolrezaSaadabadi. "Suicidal Ideation." National Center for Biotechnology Information. U.S. National Library of Medicine, May 18, 2022. https://pubmed.ncbi.nlm.nih.gov/33351435/.

Heikkinen, M.E., E.T. Isometsa, M.J. Marttunen, H.M. Aro, and J.K. Lonnqvist. "Social factors in suicide." *The British Journal of Psychiatry* vol.165, 1995, pp. 747-53.

Higonnet, Margaret. "Suicide: Representations of the Feminine in the Nineteenth Century." *Poetics Today*, vol. 6, no. 1/2, [Duke University Press, Porter Institute for Poeticsand Semiotics], 1985, pp. 103–18, https://doi.org/10.2307/1772124.

Hulzen, Jennifer. "Why do people kill themselves?" *Medical News Today*, 15 Jan. 2021,

https://www.medicalnewstoday.com/articles/why-do-people-commit-suicide.

Kasturi, Leela. *Development, Patriarchy, and Politics: Indian Women in the Political Process*, 1947-1992, core.ac.uk/download/pdf/162461716.pdf.Accessed 5 June 2023.

Leonard, Karen. *Women in India: Some Recent Perspectives*, spring 1979, www.jstor.org/stable/2757768.

"Loneliness, suicide and young people" *Samaritans*, pp. 1-13,

https://media.samaritans.org/documents/loneliness-suicide-young-people-jan-2019.pdf. Accessed 13 May 2022.

Lorde, Audre. *The Transformation of Silence into Language and Action*". 1977, https://electricliterature.com/wp-content/uploads/2017/12/silenceintoaction.pdf.

Maji, Sucharita, and Shikha Dixit. "Self-silencing and women's health: A review." *International Journal of Social Psychiatry*, 5 Dec. 2018, *Sage*,https://journals.sagepub.com/doi/full/10.1177/0020764018814271.

Maris, Ronald W., et al. "Comprehensive Textbook of Suicidology." The Guilford Press, 2006.

"Nearly 40% of Female Suicides Occur in India." *The Guardian*, Guardian News and Media, 13 Sept. 2018, https://www.theguardian.com/world/2018/sep/13/nearly-two-out-of-five-women-who-commit-suicide-are-indian.

Menon, Rajitha. "Workplace harassment can kill." *Deccan Herald*, 2019. https://www.deccanherald.com/india/karnataka/bengaluru/workplace-harassment-can-kill-738304.html.

Misra, Jugal Kishor. *Empowerment of Women in India*, The Indian Journal of Political Science, 2016, www.jstor.org/stable/pdf/41856270.pdf?ab_segments=&initiator=.

Mmangaka Bagwasi, Mompoloki. "Perceptions, Contexts, Uses and Meanings of Silence in Setswana." *Journal of African Cultural Studies*, vol. 24, no. 2, Dec. 2012, pp. 184–194, https://doi.org/10.1080/13696815.2012.696783.

Mueller, Anna S., Seth Abrutyn, Bernice Pescosolido, and Sarah Diefendorf. "The Social Roots of Suicide: Theorizing How the External Social World Matters to Suicide and Suicide Prevention." *Frontiers in Psychology*, vol.12, March 2021, pp. 1-14.doi: 10.3389/fpsyg.2021.621569

Nirola, Basant. "Patriarchy and the Status of the Women in the Society." *Youth Ki Awaaz*, 27 Dec. 2017,https://www.youthkiawaaz.com/2017/12/role-of-patriarchy-and-status-of-women-in-indian-society/.

"Patriarchy kills: Suicide data tells it like it is." *The Times of India*, 14 Sep. 2018,https://timesofindia.indiatimes.com/blogs/toi-editorials/patriarchy-kills-suicide-data-tells-it-like-it-is/.

"Practice Guideline for the Assessment and Treatment of Patients with Suicidal Behaviors." *Practice Guidelines for the Treatment of Psychiatric Disorders: Comprehensive Guidelines and Guideline Watches*, Nov. 2003, https://doi.org/10.1176/appi.books.9780890423363.56008.

"Public and Private Space Described by Katherine Mansfield and Virginia Woolf." *GradesFixer*, 12 Dec. 2018, gradesfixer.com/free-essay-examples/definitions-of-place-katherine-mansfield-and-virginia-woolf/.

Radhakrishnan, Rajiv, and Chittaranjan Andrade. "Suicide: An Indian Perspective." *Indian Journal of Psychiatry*, vol. 54, no. 4, 2012, pp. 304–319, https://doi.org/10.4103/0019-5545.104793.

Riessman, Catherine Kohler. "Stigma and Everyday Resistance Practices: Childless Women in South India." *Gender and Society*, vol. 14 no. 1 Feb. 2000, pp. 111-135. JSTOR,

https://www.jstor.org/stable/pdf/190424.pdf.

Sah, Sapna. Patriarchy and the Identity of Women in Indian Society - *JETIR*, Aug. 2022,

www.jetir.org/papers/JETIR2208563.pdf.

Shpancer, Noam. "Is Marriage Worth It for Women?" *Psychology Today*, 1 Oct. 2015, www.psychologytoday.com/us/blog/insight-therapy/201510/is-marriage-worth-it-women.

Spivak, Gayatri. "Can the Subaltern Speak." *Internet Archive*, 2009, www.archive.org/details/CanTheSubalternSpeak.

"Spousal Attitudes and Suicidal Thoughts." *Suicide Prevention Resource Center*, 25 Oct. 2019,

https://www.sprc.org/news/spousal-attitudes-suicidal-thoughts.

Sharma, Indira, et al. "Hinduism, marriage and mental illness." *Indian Journal of Psychiatry*, vol. 55, no. 2, Jan. 2013,

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3705690/.

Shrivastava, Nidhi. *The Progress of Indian Women from 1900s to Present*, 5 spring 2009, opencommons.uconn.edu/cgi/viewcontent.cgi?article=1096&context=srhonors_theses.

"Suicide." *National Institute of Mental Health*, Updated Mar. 2022, https://www.nimh.nih.gov/health/statistics/suicide. Accessed May 1, 2022.

"Suicide." World Health Organization, 17 June 2021,https://www.who.int/news-room/fact-sheets/detail/suicide.

"Suicide and Suicidal Behavior." *Medline Plus*, https://medlineplus.gov/ency/article/001554.htm. Accessed May 2, 2022.

"Suicide." National Institute of Mental Health, https://www.nimh.nih.gov/health/statistics/suicide. Accessed on 26 July 2023.

"Suicide in India." National Crime Records Bureau, https://ncrb.gov.in/sites/default/files/ADSI-2021/adsi2021_Chapter-2-Suicides.pdf. Accessed on 26 June 2023.

Suicide Worldwide in 2019: Global Health Estimates. World Health Organization, 2021.

Subasi, Muzzaferderya Nazlipinar. *The Female Identity Exploration in a Patriarchal Society as Reflected in Virginia Woolf's The Voyage Out and Halide Edip-Adıvar's Handan*. June 2012, https://www.researchgate.net/publication/324165868_The_Female_Identity_Exploration_in_a_Patriarchal_Society_as_reflected_in_Virginia_Woolf's_The_Voyage_Out_and_Halide_Edip-Adivar's_Handan.

Tonarsystem. "How Does an Indian Woman's Life Change Post Marriage." *Medium*, 13 Sept. 2021, medium.com/indian-thoughts/how-does-an-indian-womans-life-change-post-marriage-9785fda0f5ed.

Vijayakumar, Lakshmi. "Suicide in Women." *Indian Journal of Psychiatry*, vol. 57, no. 2, July 2018, 10.4103/0019-5545.161484.

Worldometer. https://www.worldometers.info/

The Multiplicitous "I": Construal of the Gendered Self in Salman Rushdie's *Victory City*

*Manisha Gangahar**

ABSTRACT

The paper, drawing upon the feminist theoretical approaches, explores the construal of the gendered Self through the reading of Pampa Kampana, who is the woman protagonist of Salman Rushdie's novel Victory City. Rushdie's novel, through the character of Pampa Kampana challenges and dismantles the traditional gender norms, while reinforcing the idea that construction of self-identity is rooted in subjective and lived experiences beyond the gender binary. Women, through history, have been systematically 'Othered', subjugated and marginalized, often on the basis of cultural stereotypes and social norms Pampa Kampana exists not only outside the conventional boundary of gender but also offers a nuanced understanding of identity and disrupting the idea that there is a singular experience of being a woman. The assertion of one's agency and a sense of preordination continue throughout the novel. However, though "I" as a subject is asserted when it comes to defining the self, yet it is not independent of the discourse within which it is located. A sense of self is shaped by power structures and socio-cultural experiences and in Parnpa's case even fate.

Key Words: Self, identity, Other, discourse, power, binary

Introduction

Simone de Beauvoir's statement, "He is the Subject, he is the Absolute—she is the Other" (xvi), suggests the fundamental significance of the Self within Women's Studies. The 'Other' is a non-subject, to be 'Other' means to have no agency and to be merely an "object". Women, through history, have been systematically 'Othered', subjugated and marginalized, often on the basis of cultural stereotypes and social norms, as de Beauvoir states that "one is not born a woman, but one becomes a woman". However, since the Self can no longer be seen as an independent and a unified or a coherent entity, it needs to be understood not only as dynamic but also intersectional. While Western classical view, particularly that offered by Rene Descartes and Immanuel Kant, interprets Self as singular and that which relies on reason, the subsequent modern and postmodern theoretical approaches towards understanding of Self-Identity points at identity being dynamic, fluid and relational, located in sociocultural, political and interpersonal contexts. Though "I" as a subject is asserted when it comes to defining the self, yet it is not independent of the discourse within which it is located. A sense of self is shaped by power structures and socio-cultural experiences.

The paper, drawing upon the feminist theoretical approaches, explores the construal of the gendered Self through the reading of Pampa Kampana, who is the woman protagonist of Salman Rushdie's novel Victory City. Rushdie's novel, through the character of Pampa Kampana challenges and dismantles the traditional gender norms, while reinforcing the idea that construction of a woman's

* Assistant Professor, Department of English, Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh, India

self-identity is rooted in subjective and lived experiences beyond the gender binary. Pampa Kampana exists not only outside the conventional boundary of gender but also offers a nuanced understanding of identity and disrupting the idea that there is a singular experience of being a woman. In fact, in the novel, the women are not just conspicuously present, but they also play a prominent role in the construction of the narrative and are instrumental to the plot. When Pampa Kampana, at the age of nine, witnesses her mother burn in the fire along with other widows, she resolves to never let men decide the fate of her life: "She would laugh at death and turn her face toward life. She would not sacrifice her body merely to follow dead men into the afterworld. She would refuse to die young and live, instead, to be impossibly, defiantly old. It was at this point that she received the celestial blessing that would change everything. . ." (Rushdie 7).

This assertion of one's agency and a sense of preordination continue throughout the novel. After the fire incident, Pampa Kampana is possessed by the goddess, also named Pampa Kampana, who commands her to create a city in which men and women will be equal and "no more women are ever burned in this fashion, and that men start considering women in new ways. . ." (Rushdie 8). Thus, Pampa constructs the city of Bisnaga or Vijayanagara. She has the power of creation, power to reproduce. While the feminist politics of the text is obstruse, the gender binaries are certainly subverted. In the man-woman binary, it is the man who is "Othered" in the novel, for Pampa Kampana sets her own terms as far as her romantic relationships are concerned, be it with king Hukka, foreigner Domingo Nunes or Bukka. She clearly tells her soon-to-be husband, "I will not abandon the interests of my heart even though I will accept your hand to establish the bloodline of the empire" (Rushdie 54). And she doesn't forsake her pleasures: "After the wedding and for the first twenty years of the Bisnaga Empire, Queen Pampa Kampana openly maintained two lovers, the king and the foreigner..." (Rushdie 55).

Here, the established power binary is also subverted. The sexes are not only unequal, but more so it is the woman, the feminine, who wields authority and control over the masculine Other. The socially and culturally constructed man/woman dichotomy is subverted, just as do the cultural norms, allowing women the freedom to choose and decide. Pampa Kampana wants to establish a utopian city and promote modern feminism, where on the one hand, men and women are totally equal— women being the woodcarvers, masons and rulers—and on the other hand, a woman's sexuality remains a powerful force, for it is a source of pleasure that is hard for a man to substitute. While defining womanhood on her own terms, Pampa defies the patriarchal norms as she had vowed to the goddess. Moreover, when Hukka insults and slurs her, calling her "a loose woman", "a slattern", "a hussy" and the "one who sports with a person who is not even a member of her race or religion", she not only laughs at him in response, instead of feeling humiliated as would be for any ordinary women, but also points at the spots that now cover Hukka's face. She explains to Hukka: "Every time you used one of those unkind words, another one burst out of your skin. I think you had better clean up your tongue ..." (Rushdie 55). Pampa's sorcery becomes a metaphor of woman power, a sort of subversion of authority, a counter to the established order:

> "It was clear that Pampa Kampana's magic extended far beyond the enchantment of seeds. He realized that he was scared of her, and a moment later understood, additionally, that his fear of her magic was sexually arousing.
>
> 'Let's get married right away', he said.
>
> 'As long as you're clear about my terms,' she insisted.

> 'Whatever you want,' he cried. 'Yes, I accept. You are so unbelievably dangerous. I must have you.' (Rushdie 55)

Pampa Kampana, unlike the usual beloved, is also the protector of her lover, as she tells Domingo Nunes, "... with my protection it is impossible for you to be harmed" (Rushdie 65). When Nunes protests about Pampa being a "heartless bitch" (Rushdie 66) and he had always loved her more, she agrees and says, "It is hard for me to love anyone with my whole heart, because I know they are going to die" (Rushdie 66). She was powerful, she was an enchantress, yet she was destined to lose everyone she loved:

> She understood that it was her destiny to lose everyone she cared for and to be left standing at the end surrounded by their burning corpses just as her nine-year-old self had stood alone watching her mother and the women burn. She would relive, in slow motion, over aeons, the catastrophe of the lethal pyre offer childhood. Everyone would die just as before, but this second immolation would take almost two hundred and fifty years instead of a couple of hours" (Rushdie 67).

After the death of Domingo Nunes, Pampa Kampana did find herself in melancholy. While king Hukka had aged, Pampa remained her youthful self. Her own people began to fear her, she strongly thought of herself being cursed: "'The story of a life, she told herself, has a beginning, a middle and an end. But if the middle is unnaturally prolonged then the story is no longer a pleasure. It is a curse'" (Rushdie 67). She begins to carry the burden of her own identity.

> In those days after the death of her lover Pampa Kampana began to feel oddly estranged from herself...she began to feel like a wanderer in a maze with a monster waiting at its heart: lost, that is to say; to herself. Who was she, she wondered. Maybe she was the monster at the heart of the maze, so that as she moved through that verdant labyrinth she was in reality getting ever closer to the beastliness of her true nature. . . Her real self felt incomprehensible, impossible to approach, as if she too were burning in fire" (Rushdie70-71)

How would she define her identity? Mario Lugones' idea of self suggests its existence to be in multiple realms and is able to navigate through them, at all times, thereby reinforcing that the Self cannot be seen as a unified, singular entity. According to Lugones, reality comprises different "worlds", or "spheres of existence", within which individuals dwell and also travel through—"one can travel between these worlds and one can inhabit more than one of these worlds at the very same time" (Lugones 10-11). It is for this reason that Lugones asserts that the underlying "I" while defining the Self is missing and an individual can adopt multiple identities, transcending fixed categories. In line with Lugones's concept of "world-travelling", Mariana Ortega maintains that the Self is "a multiplicitous self caught in between the norms and practices of different cultures, classes, races or 'worlds' (Ortega 4). While both Lugones and Ortega primarily refer to racially and culturally marginalized positions while arguing about identity formation, nevertheless their concepts can be used to understand how the character of Pampa Kampana is a world-traveller— "I begin to feel she wrote as if I'm more than one person and not all those persons are admirable" (Rushdie 173). From being a child who has witnessed the self-immolation of herd of women, including her mother, to being an enchantress with magical powers adorned by the goddess, its fall, being a queen of one and beloved to another, a mother of three daughter and banishing her own three sons, having been defiled and abused for several years and above all mapping centuries with her life, Pampa Kampana's self is a conundrum.

"sometimes I feel I'm not a person of any kind, that I no longer exist, that there is no longer an

> eye that I can identify with myself. Maybe I should go by a new name, or many new names in the interminable future that stretches ahead. When I say what my name is I am not believed big 'cause I am, of course, impossible. I am a shadow, or a dream. One night when darkness falls I might simply become a part of that darkness and disappear. I feel, often, that that would be no bad thing" (Rushdie 173).

Gendered identity, as Judith Butler puts it, is "a complexity whose totality is permanently deferred, never fully what it is at any given juncture in time" (16). Soon after the death of her foreign lover, Nunes, Pampa realizes that she "was more like a man than a gentlewoman in the matter of desire; when she saw someone she wanted, she set her sights upon him, she had to have him and cared little for consequences... (Rushdie 71). The next 'man' "upon whom her predatory and possibly lethal gaze alighted was her husband's brother: little buzzing Bukka" (Rushdie 72). This is also suggestive of the subversion of the prescribed "performativity", to use Butler's concept, whereby Pampa disrupts, again and again, the normative gender performance, challenging societal expectations and deconstructing her own identity as a woman. As Butler asserts, "Gender ought not to be constructed as a stable identity, or locus of agency, from which various acts follow; rather, gender is an identity, tenuously, constituted in time, instituted in an exterior space, through a stylised repetition of acts" (Butler 179). Genders, as she maintains, "can be neither true nor false, neither real nor apparent, neither original nor derived" (Butler 180) and even be "radically incredible". When we see Pampa being totally unapologetic about her romantic affairs, she is using both agency and resistance play a role in shaping and expressing multiplicitous aspects of one's identity. Pampa Kampana, and her embodied identity, underscores the need to acknowledge the diverse and intersecting factors that contribute to an individual's sense of self: "There is no gender identity behind the expressions of gender; that identity is per- formatively constituted by the very "expressions" that are said to be its results" (Butler 34).

However, while Pampa Kampana, the woman protagonist, has the power to create, to construct a city, she had the power "to not only whisper them alive but also whisper them dead" (Rushdie 68), yet the other part of her contradicts her own agency, she must succumb to her fate. The reason for her marriage to Hukka, the monarch is not pure love for him but the need to sustain the empire: "There are things that must be done that are important for the general good, things larger than ourselves." (Rushdie 54). Even when she feels the pull towards the king's younger brother, Bukka, her motive is again not love:

> In the absence of a clearly established line of succession the death of a king endangered all his closest relatives. Therefore it was important that she safeguard book cars longest stablished claim to the throne. . . and if she stood by his side no man in Bisnaga would dare to stand against them (72)

As Mariana Ortega argues that an individual is made of many selves, it is this conforming and devoted aspect of Pampa that convolutes her identity further. With all the magic powers and sorcery at her command, why should she not follow her emotions and marry Nunes instead of Hukka? Perhaps, this would have pushed her out of the power to control and rule the city she had created. Later, as the queen of Bukka, she can settle her score with Vidyasagar, the philosopher-priest. After Pampa's mother walked into the fire, leaving her nine-year-old daughter to fend for herself, Pampa had taken shelter in a mutt where Vidyasagar, then a young scholar, was practicing his asceticism. But unsurprisingly, as is the patriarchal lust, she was defiled and physically abused by the priest in the cave: "This was how men were, Pampa Kampana thought" (Rushdie 11). However, she remained

silent, for nine years, she did not even tell her name. She was yet to evolve into an enchantress with all supernatural powers to seed a city and till then, she allowed an "angry power" (Rushdie 10) to grow within her.

But after marrying Butta, becoming the queen once again, she had gathered more power than the philosopher-priest. She visits him again, all by herself, only to prove a point:

> "she paid Vidyasagar a visit in the cave to which he had retreated, the cave in which his weakness had been revealed and inflicted repeatedly upon her body. She came without any retinue of guards or handmaidens, and wearing only the mendicant's two strips of fabric, apparently turning herself once again into the ascetic young woman who had slept on the cave floor for so many years, and borne in silence everything he had done (Rushdie 87).

Reclaiming her sexuality and subjectivity, she never allows a man to have control over her, even if it was through her sorcery. Pampa Kampana's affection and fury, her capacity to create and destroy, transform her into a demi goddess. As Bukka's queen, she passes a diktat that erotic art should be exhibited among the ordinary people, in the bazaars, the exteriors of buildings, the hallways of the palace, and so on. She steers the city from its puritan fabric to a more progressive set-up. However, following Bukka's death she is forced to go into exile and returns to her city during the reign of Krishnadevaraya, who gives the orders of blinding her in his fit of rage. She once again takes refuge in the mutt — "She was separated from her own history, and no longer felt like Pampa Kampana the maker of miracles whom the goddess had touched long ago. The goddess had abandoned her to her fate. . . Nothing was all there was and she was nothing too" (Rushdie 256). It is only after she finishes writing the last page of her narrative poem, the Jayaparajaya, and the city is ruined that she is ready to be released from her 248-year-old life after she has buried it. Pampa Kampana had completely belonged to the city of Bisnaga and this is the reason that she could not be there for herself.

Works Cited

Beauvoir, Simone de. Second Sex. New York, Vintage, 1949.

Butler, Judith. Gender Trouble: Feminism and the Subversion of Identity. New York, Routledge, 1999.

Lugones, Mario. "Playfullness, 'World' Travelling, and Loving Perception". Hypatia, Vol. 2, no. 2, 1987, pp. 3-19.

Ortega, Mariana. "'New Mestizas', 'World Travelers', and 'Dasein': Phenomenology and the Multi-Voiced, Multi-Cultural Self". Hypatia, Vol. 16, no. 3, 2001, pp. 1-29.

Rushdie, Salman. Victory City. New Delhi, Penguin, 2023.

GUIDELINES

ABOUT THE JOURNAL

In the present scenario it has become pertinent for institutions of higher learning to provide a platform where all the disciplines are articulated in a manner where they have their own clearly demarcated space and yet have room for dialogue, collaboration, contestation, confirmation or negation across disciplines and this necessitates the multidisciplinary approach of the Journal "Researcher".

AIM AND SCOPE

Researcher is a bi-annual, multidisciplinary, and refereed (double-blind peer-reviewed) Journal of the University of Jammu that seeks to provide a specialized academic platform and reference for the dissemination of research in the broad areas of academic disciplines including Science and Technology, Social Sciences, Business Studies and Humanities. This includes both qualitative and quantitative empirical work, besides theoretical and conceptual contributions. The ambit of the Journal is international and submissions are subject to double-blind peer review process. The editorial policy of the Journal is to invite research paper/scholarly article from academicians, researchers, policy makers and practitioners. The publication is intended for scholars including litterateurs, academicians, educationists, professionals, policy makers, research scholars and students. The Journal does not levy submission/publication charges. Further, the contributing author(s) is/are given a complimentary copy of the Journal.

CALL FOR PAPERS

- ***Researcher: A Multidisciplinary Journal*** is a bi-annual refereed (double-blind peer reviewed) Journal of the University of Jammu that seeks to provide a specialized academic platform for the dissemination of research in the broad areas of academic disciplines including Science and Technology, Social Sciences, Business Studies and Humanities. The ambit of the Journal is international and submissions are subject to double-blind peer review process.
- Original and unpublished research papers/ scholarly articles are invited for publication in the Journal. Research papers/ scholarly articles are considered for publication only if they fall within the ambit of the aim and the scope of the Journal.
- The submission of research papers/scholarly articles is open throughout the year on rolling basis. Since the periodicity of the publication is bi-annual, research papers/scholarly articles submitted till 30, April will be considered for June issue and research papers/scholarly articles submitted till 31, October will be considered for December issue.
- The Journal does not levy any submission/publication charges. Further, the contributors are given a complimentary copy of the Journal.

SUBMISSION GUIDELINES

- The Journal encourages the submission of works in the specified disciplines in a variety of styles including research papers, scholarly articles, case-studies, review/ essays and book reviews.
- Only original and unpublished work is sought for consideration of publication in the Journal.
- The submission of research papers/ scholarly articles is open throughout the year on rolling basis. Since the periodicity of the publication is bi-annual in nature, research papers/scholarly articles submitted till 30, April will be considered for June issue and research papers/scholarly articles submitted till 31, October will be considered for December issue.
- Any research paper/ scholarly article that is identical to or substantially similar to a work already published or under review for conference / publication will not be considered.
- Unless clearly indicated, all correspondence will be with the first author.

- Receipt of all research paper/ scholarly article will be acknowledged.
- Each submission will be double-blind peer reviewed for technical merit and content.
- The first page of the research paper/ scholarly article should be the title page. It should contain the title of the research paper/ scholarly article and the name, designation and affiliation of the author along with the address, phone/fax number and email address of the author and co-author(s).
- The second page should contain the research paper/ scholarly article title, the abstract (not more than 150 words) and keywords (a minimum of 4 and maximum of 6 words).
- All the figures and tables should appear at the end of the research paper/ scholarly article; should be properly numbered in Arabic notation; and bear appropriate title and labels.
- The research paper/ scholarly article should normally be between 3000-5000 words including figures and tables typed in double space and printed in 12-point font on A-4 size paper with 1 inch margin on all four sides. All tables and figures must be serially numbered, sequentially following references to them in the text. All exhibits should be in black and white only.
- The research paper/ scholarly article should not contain footnotes. References should be placed at the end of the research paper/ scholarly article after the figures and the tables. The references should mention only those sources, which are cited in the text of the research paper/ scholarly article.
- The first paragraph of any section, including the introduction, should not be indented. Major headings should be left justified and bold with one line above and one line below the heading to separate it from the text.
- Authors are advised to follow uniform citation and referencing style throughout the research paper/ scholarly article.

Following discipline specific reference styles are accepted:

- APA/Chicago Style for Social Sciences, Home Science and Business Studies.
- MLA Style for Humanities.
- ACS/APS/IEEE for Science and Technology.

PUBLICATION, REVIEW AND ETHICS POLICY

PUBLICATION POLICY

- Research paper/ scholarly article will be considered for publication only if it falls within the ambit of aim and scope of the Journal. The research paper/ scholarly article would be accessed on the basis of:

  a) Originality

  b) Relevance

  c) Quality of research

  d) Research contribution and applied significance.
- The Journal does not levy submission/publication charges. Further, the author shall be given a complimentary contributor's copy of the Journal.
- University of Jammu owns the Copyright© of the research papers/ scholarly articles published in *Researcher*. Research papers/ scholarly articles published in *Researcher* should not be reproduced/ reprinted in any form without prior written permission from the Convener, Publication Cell, University of Jammu.

Disclaimer: The views expressed in the research papers/ scholarly articles in *Researcher* do not necessarily reflect the opinion of the University of Jammu.

PEER REVIEW POLICY

This Journal operates a double-blind peer review process. All contributions are initially assessed by the Editorial Board for suitability for the Journal. Research paper/ scholarly article deemed suitable is sent to a minimum of two independent expert reviewers to assess the quality of the paper/article. The Editorial Board is responsible for the final decision regarding acceptance, revision, or rejection of research paper/ scholarly article based on the reviewers' comments. The Editorial Board's decision shall be final.

INSTRUCTIONS TO THE REVIEWERS

- The submitted research paper/ scholarly article is a privileged communication and reviewers must treat it as confidential.
- The reviewer must not (or allow anyone else to) retain/copy or share the research paper/ scholarly article with any one without the explicit permission of the editor.
- The reviewer shall not disclose his/her identity and the review outcome with anyone other than the editor of the Journal.
- The reviewer must return the reviewed research paper/ scholarly article within two weeks from the date of the receipt.

Evaluation Criteria: The criteria or evaluating a research paper/ scholarly article encompasses the evaluation of the attributes as given in the following (research paper / research article) review form:

REVIEW FORM

Rankings: Please use the symbol (✓) to indicate your assessment

(5= Excellent, 4= Good, 3= Average, 2=Poor, 1= Very Poor, NA= Not applicable)

Sl.No.	Key Evaluation Parameters	1	2	3	4	5
1.	Originality of the work					
2.	Contemporaneity of the subject					
3.	Contribution to existing knowledge					
4.	Adequacy of empirical/theoretical background					
5.	Appropriateness of the research methodology					
6.	Citation and referencing as per the style					
7.	Analysis and inferences					
8.	Legitimacy of the conclusions					
9	Applied significance					
10.	Organization of the research paper/ scholarly article					
11.	Quality of the communication in terms of use of language.					
12.	Appropriateness for publication					

Reviewers Detailed Comments (Reviewers may use separate sheet)

1. Reviewer to comment on the strengths and weaknesses of the research paper/ scholarly article.
2. Additional inputs to the author on how he/she can make the topic more meaningfully aligned to the discipline specific requirement.
3. General comments for improving/adding, references, clarifying data analysis, structure and format, language editing, etc.

ETHICS POLICY

- Authors should submit only unpublished original research paper/ scholarly article that has not been submitted for publication or published elsewhere. A declaration by the author(s) should be made that the paper has not been sent elsewhere for publication. It should be made on separate sheet with the title of the research paper/ scholarly article, name(s) of the author(s)/ co-author(s), full postal address for correspondence and signature.
- Any research paper/ scholarly article which is found to be plagiarized or if is having text match above the standards as fixed by the Editorial Board will be rejected out rightly. Authors are required to scan submissions using plagiarism detection software before submission of research article. Plagiarism (Urkund) report of more than 10% will lead to rejection of the paper. The author shall bear the full responsibility if any malpractice is detected. Authors involvement in any of the following will be treated as malpractice:
  a. Falsification of data
  b. Plagiarism
  c. Improprieties of authorship
  d. Misappropriation of ideas of other scholars
  e. Violation of generally accepted research practices
  f. Material failure to comply with legislative and regulatory requirements affecting research
  g. Inappropriate behavior / correspondence

  In such cases the decision of the Editorial Board shall be final and binding.

Note: Authors must assign copyright@ of the research paper/scholarly article in favour of the Journal *Researcher*.

Note: Authors are advised to avoid biased language and subjective comments/opinion that do not in any way pertain to the research problem.

LIST OF CONTRIBUTORS

Parul Sahi	Department of Computer Science & I.T., University of Jammu, Jammu, India E-mail: parul_sahi@yahoo.com
Pawanesh Abrol	Department of Computer Science & I.T., University of Jammu, Jammu, India E-mail: pawanesh.abrol@gmail.com
Dongre	Dongre Clinic, Mulund, Mumbai, India E-mail: ddongre46@gmail.com
Tinny Sawhney	Department of Electronics, University of Jammu, Jammu, India E-mail: drtsawhney@gmail.com
Parveen Kumar Lehana	Department of Electronics, University of Jammu, Jammu, India. Email address: pklehana@gmail.com
Neeru Sharma	Department of Home Science, University of Jammu, Jammu, India E-mail: neerusha@gmail.com
Amit Sharma	Department of Library & Information Science, University of Jammu, Jammu, India E-mail: amit.snvdu@gmail.com
Meghna Dhar	Department of Library & Information Science, University of Jammu, Jammu, India E-mail: dhar_meghna@rediffmail.com
Manjeet Kaur	Department of School Education, Punjabi University, Patiala, India E-mail: saggumanjeet65@gmail.com
Ravita Singh	Department of Economics, Punjabi University, Patiala, India E-mail: ravita85@gmail.com
Gian Singh	Department of Economics, Punjabi University, Patiala, India E-mail: giansingh88@yahoo.com
Kamran Zarri	DSRS, University of Jammu, Jammu, India Email: kamranzarri1@gmail.com
Priyanka Sharma	DLL, University of Jammu, Jammu, India Email: pri.lot2000@gmail.com
Ilfa Zaidi	Department of Educational Studies, Jamia Millia Islamia, New Delhi, India E-mail: ilfazaidi@gmail.com
Roohi Amir	Department of Educational Studies, Jamia Millia Islamia, New Delhi, India E-mail: roohiamir.official@gmail.com
Harjeet Kaur Bhatia	Department of Educational Studies, Jamia Millia Islamia, New Delhi, India E-mail: hbhatia@jmi.ac.in
Vibhuti Sharma	Department of Economics, University of Jammu, Jammu, India. E-mail: vibhutisharma457@gmail.com
Venkata Ramana Karri	Department of Management Studies, Sri Y N College, Narsapur, West Godavari, Andhra Pradesh, India E-mail: venkataramana909@gmail.com
N. Udaya Bhaskar	Department of Commerce & Management Studies, Adikavi Nannaya University, Rajamahendravaram, India E-mail: nudaybhaskar@gmail.com
Pranav Kapil	Department of English, Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh, India E-mail: Pranav.kapil@ggdsd.ac.in
Balpreet Singh	Department of English, Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh, India E-mail: hanjrabalpreet@gmail.com
Neetika Sharma	Department of English, Central University of Jammu, Samba, India E-mail: neetikaa011@gmail.com
Manisha Gangahar	Department of English, Goswami Ganesh Dutta Sanatan Dharma College, Sector 32-C, Chandigarh, India E-mail: mgangahar@gmail.com

RESEARCHER

A Multidisciplinary Journal

SUBSCRIPTION FORM

I wish to subscribe/renew my subscription to ***Researcher : A Multidisciplinary Journal*** for 1/2/3 years(s). A draft/cheque bearing No. _____ dated _____ for Rs. _____ drawn in favour of Publication Cell, University of Jammu is enclosed.

Name : _____

Address: _____

Pin _____ State _____ Country _____

Tel Number _____ Mobile No. _____

Email : _____

Signature _____

Subscription Rates (INR)			
Category	1 year	2 year	3 year
Institutional	1000	1500	2000
Faculty/Student/Scholar	500	750	1000

Mailing Address:-
Convener, Publication Cell,
University of Jammu, Jammu, J&KUT, India Pin-180006
Email: publication.ju@gmail.com, officepublicationju@jammuuniversity.ac.in

EDITOR

Prof. Anupama Vohra
Convener, Publication Cell, University of Jammu
E-mail: anupama_vohra@jammuuniversity.ac.in

EDITORIAL TEAM /ASSOCIATE EDITORS

Researcher: A Multidisciplinary Journal, having Indian Citation Index, is a bi-annual refereed (peer-reviewed) Journal of University of Jammu that seeks to provide a specialized academic platform for the dissemination of research in the broad areas of academic disciplines including Science and Technology, Social Sciences, Business Studies and Arts and Humanities. The ambit of the Journal is international and submissions are subject to blind peer review process. The editorial policy of the Journal is to invite the research articles/ papers from academicians, researchers, policy makers and practitioners. The publication is intended for readers including litterateurs, academicians, educationists, professionals, policy makers, research scholars and students. All the research articles/ papers are considered for publication only if they fall within the ambit of the aim and scope of the Journal.

Call for Papers for Next Issue

Full Paper Submission	March 31, 2024
Confirmation of Paper	April 30, 2024
Re-submission of revised paper	May 31, 2024
Issue Publication	June 30, 2024

Refer to "Guidelines" inside for details on paper submission.

Published by
Publication Cell on behalf of the Registrar, University of Jammu, Jammu.

Address
University of Jammu Baba Saheb Ambedkar Road, Jammu-180006 (J&K)
E-mail: publication.ju@gmail.com, officepublicationju@jammuuniversity.ac.in

Editorial Assistance: Mr. Gourav Sharma
Ms. Mamta Sharma
Ms. Priya Devi