

REPRESENTATION OF WOMEN AND COMMUNITY IN RAHULA SANKRITYAYAN'S VOLGA SE GANGA

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ABSTRACT

Rahula Sankrityayan, the Padma Bhushan awardee 'Maha Pandit' is a versatile scholar and philosopher of the aboriginal races. His interest in representing and documenting the lives of the primordial races, the nomads, the tribes, the Aryans and producing a scientific survey of social evolution of mankind indulged him in writing the great travelogue Volga Se Ganga (1947). This paper is on the representation of women and community in Sankrityayan's travelogue focusing on two stories namely, 'NISHA' and 'DIVA'. Both these stories are about the people of the Indo-European race.

Rahula Sankrityayan and his Volga Se Ganga have been reviewed and discussed for few times by few scholars or litterateurs. Satendra Kumar Mishra et al. in their article "Historicity of Amalgamations of 'Matushka' and 'Maiya': Based on Rahula Sankrityayan's Volga Se Ganga" discussed on the relation between the races residing in the banks of Volga and Ganga. Volga, the largest river of Russia, is treated as the origin or mother and Ganga in India is regarded or worshiped as mother Ganga or 'Ganga Maiya'. Both the rivers nourished the Indo-European races at their banks. My focal point of discussion in this paper is not to judge its thematic or historical perspectives but to explore the position of the women and the community life of the indigenous people as described in this travelogue.

Keywords: NISHA, DIVA, Women, Community, Feminism.

Introduction

Here I've taken two stories 'NISHA' and 'DIVA' from 'Rahula Sankrityayan's *Volga Se Ganga*. The first story NISHA is of an Indo-European race residing at the banks of the upper Volga during six thousand B.C. as "this story takes us back some three hundred sixty generations of human life and it was the dawn of mankind". (p.1) The story started with lively descriptions of landscape where under the roof of the blue sky the Earth was covered with snow and an unbroken realm of silence prevailed everywhere. There were no creatures other than a half-dozen of children belonging to the age-group of one year to eight years—all living in hill-cave which was their house, a house in darkness. As for grown-ups, there was an old woman. A boy, called Agin, was crying as the small piece of bone he was sucking was snatched away by his sister Rochana. To console the weeping child the old woman kissed and fondled his face and put his head to her skinny breast. Same kind of solace we can find in another story named 'DIVA'. This story is about an Aryan clan (Gene), some two hundred twenty-five generations ago. The story started with the daytime of a summer day when the Sun was so strong above the head and one boy and one girl were running after a deer

but ultimately remained unsuccessful in capturing it. Keeping aside their weapons and resting awhile they forgot their weariness due to their defeat. Both these stories have some striking similarities which I have tried to promote in this paper. I have focussed mainly on two points viz. to examine the place of women in the then society and to understand the role of community in a race. The position or the role of women or the role of women in our patriarchal society appears as a long-debated topic or issue.

The term 'feminism' can be traced back to 1871. The term is made up of two components-'femme' means 'women' in French and 'esme' refers to a 'social movements or a political ideology. The 'First Wave Feminism' is related with the movements of the late nineteenth and the early twentieth centuries. It aimed at achieving equal rights for the women. The movements of the 1960s and 1970s have been signified with the 'Second Wave Feminism'. Women employment, sexuality, political rights, their role in family as well as in society and such issues have been addressed in this wave. The 'Third Wave and Post-modern Feminism' attacks the gender-biased patriarchal structures. Difference in looking, thinking, speaking, and writing about women and for women have been considered with prior importance in this third

wave. The wave of 'post-feminism' examines the differences and varieties of 'Other' women in the backdrop of western feminists' view while universalizing oppression of women. Keeping aside this feminist backdrop in this paper, I have also tried to examine how 'self' and 'community' are interlinked where self identifies himself or herself through community and community presents itself through self. The word 'community' comes from the Latin word 'communitas' meaning 'common' or 'public spirit'.

Representation of Women in these two stories

In this travelogue, focusing on the two stories, i.e., 'NISHA' and 'DIVA', we the readers can easily understand the position and role of the woman they had enjoyed before some thousand years ago. If we have gone through these stories with a critical and scientific outlook then it would be clear that at that initial stage of civilization the females had secured their respectable position in society, they had their own voice, own choice, own opinion and led their whole community in any type of collective works like hunting, gathering, enjoying gaiety of life and involving in war. So the message which Rahula Sankrityayan wanted to convey is that the feminist of that time did not cry out for freedom of spirit, for love, for honourable position in society for which the people of the modern civilized world rather the feminists of the post-modern era are craving for. On one hand woman had carefully performed their household works and prepared food for their children and menfolk, which can be found in 'NISHA' as,

The Mother began by cutting up the wolf's heart and giving it to them... Each one pressed the Mother to take a bite from their morsels of the roast, but she only said. "Well today eat your bellyful"... Later she got up and brought from one corner of the cave a swollen bladder, saying, "Here there is honey wine, tonight drink, dance enjoy yourselves." (p.8)

On the other the women were bold looking and courageous also. Their well-built physique had no place for weakness and rickety. In 'NISHA' we observed same kind of boldness in females as,

Going closer, we see at their head a woman of between forty and fifty, with a body powerfully developed. Her bare right arm is enough to reveal her strength. In her hair, her face, and all her limbs, she resembles the two young men in the cave, but each much bigger. In her left hand is a stout, sharp-pointed stick of brich-wood... Her right hand holds a stone axe sharpened by friction... Behind her walk four men and a pair of women. (p.4)

The same graceful and courageous looking can also be observed in Diva's forehead shone with drops of perspiration when she had been running after a deer. Apart from this the women played another important role at that primitive time and that was the role of a leader. The Mother of the clan became the head of the group and she led all the members of her clan. It has been nicely expressed in the following line as,

"The whole community would go for hunting with the implements of wood, bone and stone in their hands. The mother, head of the group, would march ahead and the rest would follow". (p. 5) The society in that epoch was a matrilineal one, which Rahula described in this story as,

They had a ruler—the Mother—but her's was no rule of injustice or inequality. All but the grandmother and the big man were the mother's offspring, while she and the big man were both children of the old woman, so that there could be no question of 'mine' or 'thine' among them... The Mother, it is true, had paramount authority over all the males equally. (p.8)

Even at the old age when She or the Mother no longer remained as a leader or head or chieftainess of the clan she also possessed a respectable position in the society which the DIVA story narrates as, "Diva had lived to be past seventy. She was no longer chieftainess but she was still treated with respect in her old age, for in twenty years of her leadership she had done much for the prosperity of the growing gene" (p. 21)

There women would enjoy freedom at par with their male counterparts; participate equally in harvesting, gathering and gaiety of life. So the most important and characteristic element which I have found in the representation of women in Sankrityayan's stories is equal

participation of men and women in every sphere of life. This is finely expressed in the lines,

“There was music at the hut tonight: men and women singing, with fresh, clear voices. It might have been an accompaniment to the work of beating out hides for use as clothes, ... singing was an integral part of their communal toil, and as they joined their voices in chorus their fatigue were forgotten.”(pp.16-17)

The Readers may think that those primitive women or forest dweller indigenous adivasi women would enjoy freedom at par their male counterparts; participate equally in every decision making work. It is interesting to note that the rudiments of a patrilineal order viz. male-domination, exploitation and oppression of women were totally absent in their society. In this respect those primitive people were more civilized than today's so called modern people.

Representation of Community in these two stories

The primitive forest dweller peoples of these two stories i.e. NISHA and DIVA, had been living in close contact with nature, its flora and fauna. Those indigenous people learnt to live together with the animals. Collective thinking, collective work, collective leadership and collective accomplishment were the main concerns of such communities. To them 'self' constituted a solidarity, an underlying principle of togetherness. Their co-existence with nature and fight against oppression led them towards self realisation and self assertion. These communitarian habits we may observe in the story DIVA where,

All the clan members lived under the same roof, hunted together, gathered fruit or honey together. All obeyed one chieftainess... Nothing in the lives of the individual of the clan escaped from its common life; hunting, dancing, love making, house-building, making cloths out of skins – in all kinds of business, guidance was sought from a group of clan members (p. 16).

Those people strictly followed the rules of a community life i. e. they observed the principle of collective living and collective death theory. Only the able members of the clan would collect and gather food-meat and fruits but all

the members would consume together. When no food was available all would starve to death. To be faithful to the commands and customs of the clan seemed to these people as natural as to follow their own impulses. So, in these stories of Rahula Sankrityayan such aspects have been treated and stated that these indigenous people were not predators but protectors of the hills and forests because they considered all natural things as indigenous to their life style. Deep love and affection for the children (may be her own or other's) of the clan had been described in NISHA as,

Agni begins to cry afresh. Two women enter, and bang down in one corner of the bundles of wood . . . then one of them runs up to Rochana, the other to Agin . . . the young woman, sitting on the bull – skin she has dropped, puts Agin's mouth to her soft breast. He clutches it with all his fingers and begin to suck. Just now the other young woman . . . carries Rochana over and sits down near her.” (p. 3).

All these subscribe to the cohesion and deep bonding of the community.

Relation between Women and Community

In these stories, we observe a sharp interaction between self i.e. woman and the community. In the story NISHA, on the one hand, the community codes likes boldness, courage, and spirit of fight- all meant for survival of one's community, guide the Mother, the head of a matrilineal family. She represented the community and bore no separate existence outside the community. On the other, while she is a mother of two deceased children other than 'the Mother' of a clan, she mourns for her children and does not share in eating, drinking, and dancing. Here her self –realization over shadows her community feeling. Simultaneously the community participated and shared her pain. These primitive people did not believe in any absolute joy or absolute pain, whatever came in their life was equally shared within them. Their history advanced through the process of dialectical materialism which the Marxist scholars denoted as a age of 'Primitive socialism'.

The elevation to the post of 'the Mother' was not followed by any mechanical process. Every individual woman, old or young was conscious of the headship, eager to retain it, fought

among themselves but as soon as she retained the post every other followed her, forgetting their conflicts. Community spirit ruled over the individual's thinking. But at the stage of ascending the position of matriarch, each individual woman realized herself over the community; each of them may be characterised with separate identity. The self i.e. the woman and the community as depicted in the stories of Rahula underwent continuous transformations through the mutual interactions between the two.

Conclusion

In the concluding part of this paper I must sum up the most important and characteristic elements which can be visualised in the stories of the Indo European and Aryan civilizations at the early dawn of mankind from 6000 B.C to 3,500 B.C. First one is the honourable and highest position of the women and securing their rights and freedom for which those

primitive women did not have to fight or raised their voice, as if they had inherited all such things since their birth from soil. It is also observed that the unity and solidarity of the primitive people as depicted in these stories maybe considered as a constituent or a precursor of dalit collective identity. The community over self is the essence of these autobiographies. The use of pseudonyms catches the attention of the readers to be more attentive to "Bama – the Dalit woman" or "Baisantari – the Dalit woman" rather than the person Bama or Baisantari.

To conclude, what I found striking in Rahula's stories is his committed attachment to and celebration of the age-old primitive lives, which is something rare. So, the representation of primitive women and the representation of the communities' unity and solidarity reaffirm the core aspects of indignity rather the indigenous identity of those primitive people.

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“ENTREPRENEURSHIP BENEFITS: A DETERMINANT OF ENTREPRENEURIAL INTENTION”

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ABSTRACT

Entrepreneurship development is vital for any developing country across the world. It starts with the development of entrepreneurial intentions. Previous studies show individual intentions are the outcome of “attitude, Perceived Behavior Control (PBC) and, Subjective Norms(SN)”. Apart from this studies establishing the relationship of (E.I) with three pillars of institutes are present. But while going through the previous studies it is being found out that, not many major works are done on formulating the model based on Geographical factors, Perceived Benefits (P.B) derived from entrepreneurship development and, Demographical factors. So, in this paper attempt is made to formulate the model involving management students by establishing the relationship between Geographical factors (G.F) required for entrepreneurship development, Demographical factors (D.F) required for entrepreneurship development, and, Perceived Benefits (P.B) and its relationship with Entrepreneurial Intention. For this paper questionnaire containing a “Five-point Likert scale” was employed. The questionnaire is distributed among the management’s students and a total of 253 questionnaires are taken for the study. The model is formulated by using smartPLS 3.0. The findings suggest that all the factors included in the study are significantly related

Keywords: *Entrepreneurship, Demographic factors (D.F), Geographical factors (G.F), and Perceived Benefits (P.B) from entrepreneurship development and, Entrepreneurial Intention (E.I).*

Introduction

Entrepreneurship development has gained importance in the last decade as entrepreneurs come up with new ideas and convert them into profitable ventures for both developed and developing countries (Turker & Selcuk, 2009). In developing countries, entrepreneurship development is more important as they are considered as the Impetus for economic advancement, employment, and social development that will bring the country towards prosperity (Gürol & Atsan, 2006). Hence the entrepreneurship development is essential for a country like India, for enhancing the pace of economic development. In the past large number of studies are conducted based on the “Theory of Planned Behavior” (TPB) and “Institutional theory” in the field of entrepreneurship development. But when we look for the studies in which Geographical factors are considered for the development of (E.I), there are a very limited number of researchs has been done in Indian context. Similarly when we explore the past literatures, we find the relationship between economic development, poverty reduction, job creation and entrepreneurship development

(Adenutsi, 2009). So we have tried to address two questions in our study.

Question 1, Do the perceived benefits of entrepreneurship have a direct relationship with the Entrepreneurial intention of individuals?

Question 2, Does the demographic factors including individual age, gender, religion, and/her locality have a relationship with perceived benefits.

In this paper, we have attempted to formulate a model which includes Entrepreneurial Intention (EI) of students, Demographic factors (DF), Geographic factors (GF) and, Perceived Benefits derived from the entrepreneurship development in any country (P.B). That influences the management, students of different educational institutes of Ranchi and Kanpur, India, in becoming an entrepreneur in place of working for others. Research variables taken in the study are defined as:-

Demographic Factors (D.F): -It includes student’s gender, age, income of parents, family background, education, caste, and religion.

Geographical Factors (G.F): -It includes the role played by location of student’s home and college along with the

availability of natural resources required for entrepreneurship development of students within their concerned areas.

Entrepreneurial Intention (E.I): -The intention in terms of entrepreneurship is an individual's admitted belief that they want to start a new company and knowingly intend to do so at some stage in the future (Thompson, 2009).

Perceived Benefits (P.B): - As entrepreneurship development in a particular place brings benefits to that place in form of economic growth (Audretsch, Bönte, & Tamvada, 2013; Bosma, Content, Sanders, & Stam, 2018), in job creation (Baptista, Escária, & Madruga, 2008; Bednarzik, 2000) and also in poverty reduction (Adenutsi, 2009). So in this paper, we have taken them as a perceived benefit which an individual and country may receive in the future.

We have segmented the study into five sections: First is the Literature review of the study based on which model is formulated, Section two includes the research methodology in which method used in formulating the model and data collection technique is described, section third includes Results of the hypothesis testing, Section four contains the discussion of the result and the last section includes conclusion, Limitation of the study and future scope of the study undertaken.

Literature Review

For this study entrepreneurship is defined as a "starting of a new firm". So it becomes vital to understand what are the factors which result in the development of (E.I) in the individual. Previous studies conducted by various scholars and policymakers around the globe provide us with the basic answer to this question by explaining the various factors which influence the entrepreneurship development among students by using mainly TPB and institutional theory. The "Theory of planned behavior" (Ajzen, 1991) focused on attitude, (P.B.C), and social norms for predicting the individual intention on one hand, while in another hand Institutional theory worked on three

pillars of institutes namely normative pillar, regulative pillar, and cognitive pillar given by W. Richard Scott (2014) to explain the entrepreneurship intention development. But by doing literature review (Block, Fisch, & Rehan, 2020; Hatak, Harms, & Fink, 2014; Rahaman, Ali, Mamoon, & Al Asheq, 2020; Zellweger, Sieger, & Halter, 2011). It is found that not only three pillars of institutes and three factors of (TPB) have a relationship with the entrepreneurial intention of an individual. But Demographic factors like age, gender, religion, caste, education, income, and occupation of the farther play an important part in choosing entrepreneurship in most of the countries around the world. For example, Niels Bosma & Donna Kelley (2018) in their report, stated that countries including Canada, Sweden, Brazil, Greece, and the Slovak Republic have shown a high rate of entrepreneurship activities among adults 18-24 years old. This is because some individuals considered entrepreneurship as a better option than a job while for others there was a lack of good job opportunities. Similarly, the gender of an individual also has shown the relationship with intention. For Example, female entrepreneurs have shown more entrepreneurial intention than males (Sikdar, 2009). Likewise Religion and caste of individual effects the entrepreneurial decision (Audretsch, Bönte, & Tamvada, 2007). Individuals from the upper class and higher educated people are more likely to pursue entrepreneurship than those from the working class and those with a lower level of education (Sarachek, 1978). As the literature suggests that demographic factors do have a relationship with entrepreneurial intention so it becomes important to evaluate their relationship with entrepreneurial benefits. (Leyla Sarfaraz, Nezameddin Faghieh, 2014) states that economic factors like GDP per capita and GDP growth have a relationship with a gender of an entrepreneur. Similarly (Weeks & Seiler, 2001) found a strong correlation between women

entrepreneurship and GDP growth in Latin America and the Caribbean. Apart from benefits derived on basis of gender entrepreneurship helps in removing the unemployment among the youth and in turn increases their livelihood and promotes their economic independence (Awogbenle & Iwuamadi, 2010). Similarly (Mensah & Benedict, 2010) found that entrepreneurship training for youth has a relationship with poverty eradication in South Africa. Likewise, a study (Jain, Vyas, & Roy, 2015) depicted entrepreneurship as an antidote for poverty, insecurity, and underdevelopment. The following hypothesis is made in light of this.

H1:-Demographic factors have a significant positive relationship with the perceived benefits derived from entrepreneurship development.

It has been noted that academics and entrepreneurship development tend to focus on a specific location for regional growth, but geographical variables are overlooked when attempting to explain entrepreneurship development or entrepreneurial intention development. On the one hand, Rikard Eriksson & Marcin Rataj (2019) in their study depicted the role of regional circumstances under which human capital, social capital, and entrepreneurial culture affect the startup rates in particular municipalities in Sweden. Similarly (Westlund, Hans; Larsson, Johan P.; Olsson, 2012) in their study found that geographical advantages contribute to starting and running the enterprise in Sweden municipalities. Likewise (Pan & Yang, 2018) found that entrepreneurship concentration depends on the geographical location, In China, Beijing, Shanghai, and Shenzhen are the three most significant startup cities due to strong financial infrastructure. On another hand, entrepreneurship development promotes wealth creation, generates employment, and thus accelerates the GDP growth of a particular geographical area as suggested by (Udih & Odibo, 2016) in Nigeria. Similarly (M. Pascu, D. Dascalic, L. Sargu, 2019) in their study on clusters

found that “Clusters include a group of related industries and other important competition entities that cooperate formally or informally by implementing joint projects for local, regional or state benefits.” This GDP growth and increased concentration of enterprises in the particular area tends to improve the infrastructure of that region including the education system, financing infrastructure, and supply of natural resources in the particular area. That may result in to positive impact on the enterprises present in that geographical area. For example study (Bao, Chang, Sachs, & Woo, 2002) conducted in China found that not only geographical factors affects regional economic growth during the market reforms but there is the returns on capital investment in the coastal provinces are greater than in the rest of the nation, drawing more FDIs and migrant labour and contributing to the growth differential. Thus it is found that not only suitable geographical conditions promotes entrepreneurial development in the region but geographical region also drives benefits from the economical development of that particular region. On this basis following hypothesis can be formulated:-

H2:-Favorable geographical factors have a positive relationship with the perceived benefits from entrepreneurship development.

Entrepreneurial Intention and Perceived Entrepreneurial Benefits:-In the business environment, the intention may be described as willingness for a person to establish a new firm in the future (Thompson, 2009). People's intentions to start enterprises have been proved to be a basic, long-lasting, and widely used element in entrepreneurship studies (Bird, 1988; Carr & Sequeira, 2007; Krueger, 2007). The intention is defined as the outcome of individual attitude, Perceived Behaviour Control and Subjective norms (Ajzen, 1991). So when we look at the previous studies we find series of studies including (Buana, 2016; Gird & Bagram, 2008; Kavos .M. & Adebayo .S, 2016; Mwiya, Wang,

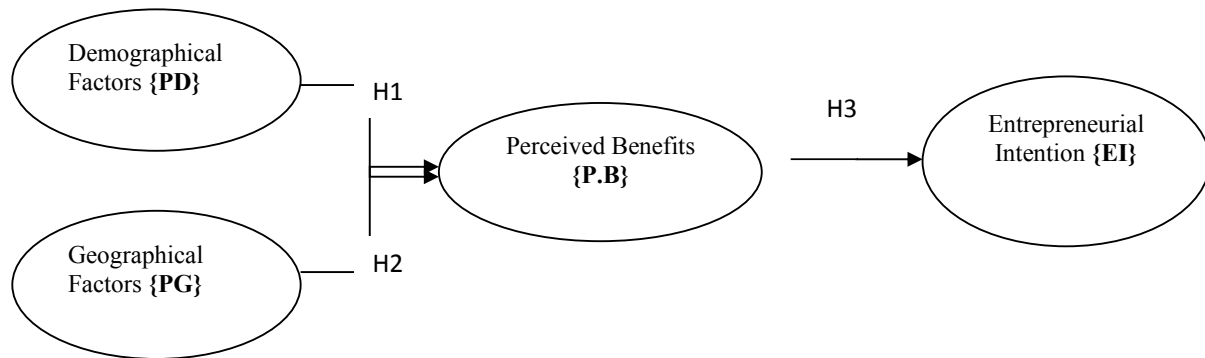
Shikaputo, Kaulungombe, & Kayekesi, 2017) all these studies were based on TPB and used attitude, Perceived Behavior Control (PBC) and Subjective norms to predict the individual intention towards the entrepreneurship. Apart from these three factors of entrepreneurial intention, there are many studies including (Ertuna & Gurel, 2011; Hatak et al., 2014; Nikou, Brännback, Carsrud, & Brush, 2019; Rahaman et al., 2020; Wibowo, 2017) which formulate the relationship of the entrepreneurial intention of an individual with demographic factors like gender, age, education, religion and, family background. In previous literature entrepreneurial intention is also predicted by the three pillars of institutes normative Piller, cognitive Piller and, regulative Piller using institutional theory for example (Arasti, Pasvishe, & Motavaseli, 2012; Dehghanpour Farashah, 2015; Engle, Schlaegel, & Dimitriadi, 2011; Urban, 2019). As entrepreneurship development in a particular area contributes to its economic growth by creating jobs, eradicating

poverty, and improving the per capita income of the individual (Adenutsi, 2009; Baptista et al., 2008; Bosma et al., 2018; Carree & Thurik, 2010). These can be defined as the benefits of entrepreneurship development that may be taken as a variable that may have a significant relationship with the entrepreneurial intention of an individual. On this basis following hypothesis can be formulated:-
H3:- Perceived benefits (PB) have a significant positive relationship with the entrepreneurial intention (EI) of students. Demographic factors (D.F) and Geographical factors (G.F) have a relationship with the perceived benefits (PB) derived from entrepreneurship development and PB has a relationship with Entrepreneurial Intention.

Objectives

- To formulate the model between Demographical factors, geographical factors, perceived entrepreneurial benefits, and entrepreneurial intention of students.

Figure1: Conceptual model



Research Methodology

The study utilizes the exploratory research design. The sample used in this research study comprises 253 management students from two cities Ranchi and Kanpur, India. In this study questionnaire containing “5 points, Likert scale” is employed that ranges between “strongly disagree” to “strongly agree” with neutral is midpoint based on previous studies conducted across the world and 400 questionnaires were

circulated both electronically as well as manually in hard copies among the management students of Government University, Private Universities, Private colleges and government colleges in two cities of Ranchi and Kanpur respectively. Of the 275 filled questionnaires received back only 253 questionnaires were useful as the remaining ones were either wrongly filled or incomplete in some context. Respondents in this study belong to three

sub-categories MBA “(Master of Business administration)”, PGDM “(Postgraduate Diploma in Management)”, and BBA “(Bachelor in Business Management)”. For

formulating the relationship between the variables Smart PLS 3 is used. The reliability of the questionnaire is given as follows:-

(TABLE:-1) RELIABILITY

Constructs	“Cronbach’s Alpha”	“Composite Reliability”	“Average Variance Extracted (AVE)”
Demographic Factors (D.F)	0.704	0.822	0.607
Geographic Factors (G.F)	0.683	0.825	0.611
Entrepreneurial Intention (E.I)	0.710	0.818	0.530
Perceived Benefits (P.B)	0.883	0.911	0.631

In the study, “Cronbach’s alpha” ranges between 0.683 to 0.883 which is above 0.60 accepted according to (Munir, 2018). “Composite reliability” for the construct of the model ranges from 0.818 to 0.911 which is ≥ 7 and apart from this values for $AVE \geq 0.5$ Therefore all the possible construct have taken in the study satisfy the conditions of Hair et al.(2019).

Result and Discussion

Proposed Model

Based on the evaluation of the literature conducted for the study undertaken, a model is formulated by running path analysis in smart PLS 3.0. In this model a clear relation is depicted between G.F(Geographical Factors) required for entrepreneurship development and

Perceived Benefits (B.F) from the development of entrepreneurship; Demographic factors (D.F) required for the development of entrepreneurship with P.B(Perceived Benefits) from the development of entrepreneurship and P.B(Perceived benefits) from the development of entrepreneurship with E.I(Entrepreneurial Intention).

FIGURE2:PROPOSED MODEL

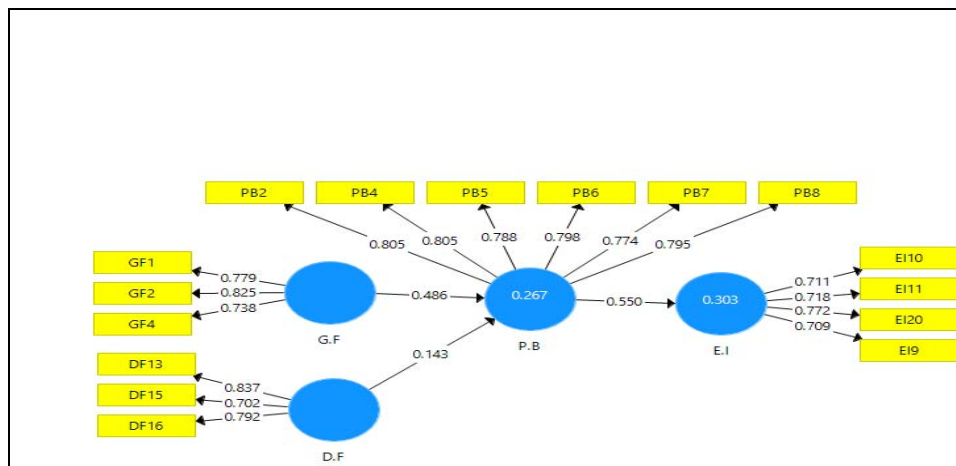


Figure-2 shows the relationship between variables taken for the study. The test to be undertaken for measuring the fitness of the

developed model is the validity test which helps in measuring the proposed concept of the study undertaken. Validity is of two

type's namely "convergent validity" and "discriminant validity".

The convergent validity of the model comprises "composite reliability", and "average variance extracted" (AVE). As given in "Table-1" the "composite reliability" of all constructs are between 0.818 to 0.911 which is above the acceptable limit of 0.7 (Claire Beckett, Lennart Eriksson, Erik Johansson, 2018). Apart from this "AVE" extracted for all the constructs are above 0.5 and AVE value above 0.5 is acceptable (JHair Jr, Sarstedt, & Hopkins, 2014).

Discriminant Validity

It defines the extent to which constructs differ from each other. "Discriminant validity test" can be depicted by the low level of collinearity between the various construct of the proposed model and for the identification of the discriminant test collinearity statistics of "VIF" can be used. "VIF" indicates the high level of collinearity or multicollinearity between the independent constructs of the model (Hair Jr, William C, Barry J., & Rolph E., 2017). VIF value should be higher than 3.3 as it is the threshold for factor-based PLS-SCM algorithm according to Kock, (2015). In "table:-2" all the VIF values below the acceptable level of 3.3 ranging from 1.154 to 2.231.

TABLE 2: VIF VALUE

Sr. No	Constructs	VIF
1	D.F 13	1.199
2	D.F 15	1.607
3	D.F 16	1.672
4	E.I 9	1.412
5	E.I 10	1.468
6	E.I 11	1.279
7	E.I 20	1.352
8	G.F 1	1.660
9	G.F 2	1.779
10	G.F 4	1.154
11	P.B 2	2.137
12	P.B 4	2.226
13	P.B 5	1.980
14	P.B 6	2.028
15	P.B 7	2.046
16	P.B 8	2.231

"Discriminant validity" can be checked by examining the "HTMT" value of the constructs in the proposed model as it is the better criterion to find "discriminant validity" (Henseler, Ringle, & Sarstedt, 2014). "HTMT" value below 0.80

represents the minimal discriminant validity for the model (Somjai, Chandarasorn, & Vasuvanich, 2019). The values given in table:-3 are well below 0.8 so this proposed model is free from the problem of discriminant validity.

Constructs	D.F	E.I	G.F	P.B
D.F				
E.I	0.267			
G.F	0.100	0.530		
P.B	0.202	0.663	0.623	

Fornell-Larckercriterio

It was established around 30 years ago and it was used to test the “discriminant validity” of the constructs employed in the research. The thumb rule to check the discriminant validity by “Fornell-Larckercriterio” is the first value of the construct should be greater than the values

of other constructs(Somjai et al., 2019). The first values of all the constructs present in the given table are greater than the rest of the values. Thus, all the constructs are free from discriminant validity according to the given criteria.

TABLE 4:FORNELL-LARKERCRITERIO VALUES

Constructs	D.F	EI	G.F	PP
D.F	0.779			
E.I	0.204	0.728		
G.F	0.069	0.385	0.782	
P.B	0.177	0.550	0.496	0.794

Cross Loading

Variable or construct having more than one significant loading is termed as cross-loading(HairJr et al., 2017).“Acceptable discriminant validity would typically be assumed if the number in the diagonal cell for each column is greater than any of the

other numbers in the same column” (Kock, 2015).Table:-5 depicts that there is no difficulty with discriminant validity because the each column's diagonal cell has a number that is greater than any of the numbers in the same column.

TABLE 5: CROSS-LOADING VALUES

Constructs	D.F	E.I	G.F	P.B
D.F 13	0.837	0.178	0.068	0.180
D.F 15	0.702	0.125	0.055	0.077
D.F 16	0.792	0.164	0.035	0.124
E.I 10	0.052	0.711	0.229	0.281
E.I 11	0.162	0.718	0.330	0.450
E.I 20	0.163	0.772	0.327	0.470
E.I 9	0.194	0.709	0.200	0.348
G.F 1	0.091	0.235	0.779	0.358
G.F 2	0.032	0.360	0.825	0.352
G.F 4	0.040	0.303	0.738	0.436
P.B 2	0.119	0.512	0.465	0.805
P.B 4	0.190	0.477	0.331	0.805
P.B 5	0.120	0.385	0.358	0.788
P.B 6	0.100	0.402	0.408	0.798
P.B 7	0.096	0.398	0.366	0.774
P.B 8	0.211	0.430	0.419	0.795

Model:-2

The second model is the structural model obtained by running the bootstrapping in smartPLS 3.0.Bootstrapping is a process of

taking out a large number of subsamples from the main sample with replacement to calculate the bootstrap standard error, with

the help of which approximate “T-values” for testing the significance of structural path are calculated and these T-values are used in the calculation of P-values (Wong, 2013). Hypotheses are tested by the calculation of P-values of path coefficient (Belkhir et al., 2015). This model tends to establish the relationship between different constructs taken in the study. This model elaborates how the demographic factors, geographical factors affect the Perceived Benefits derived from entrepreneurship development which in return have a significant effect on the entrepreneurial intention of individuals/students.

Hypothesis Testing

There are three hypotheses in the proposed study, and the “p-value” is used to determine the significance of the path (Joseph F. Hair, 2014). The “t-states that Perceived Benefits derived from entrepreneurship development → “Entrepreneurial Intention” (EI) has the highest path value of path coefficients (“ $\beta=0.556$ ”), “standard deviation” (0.050), “t-value”(11.057), and “P-value” is 0.000 so the hypothesis “H3” is also accepted.

value“and standard error are obtained by doing bootstrapping with 5000 bootstrapping samples in smart PLS3. Table:-6 represents the results of hypothesis testing. As the outputs given in “table:-6” shows the results of hypothesis testing. Demographic factors → Perceived Benefits path has values of path coefficient (0.151), t-values of (2.633), and standard deviation (0.054) and, the “P-value is” 0.008 which makes hypothesis “H1” valid and accepted. Demographical factors present in India will have a relationship with perceived benefits derived from entrepreneurship development. Geographical Factors → Perceived Benefits derived from the entrepreneurship development has a value of (“path Coefficient β ” = 0.490; “t-value” = 7.06; “P-value” = 0.000) so the proposed hypothesis H2 is accepted. Apart from this table:-6

from entrepreneurship development → “Entrepreneurial Intention” (EI) has the highest path value of path coefficients (“ $\beta=0.556$ ”), “standard deviation” (0.050), “t-value”(11.057), and “P-value” is 0.000 so the hypothesis “H3” is also accepted.

TABLE:6 HYPOTHESIS ANALYSIS

Hypotheses	Direct Relationship	Std β	“(STDEV)”	“T-Value”	“P-Values”	Confidence interval 5%	Confidence interval 95%	Decision
H1	D.F->P.B	0.151	0.054	2.633	0.008	0.064	0.239	Accepted
H2	G.F->P.B	0.490	0.069	7.06	0.000	0.372	0.600	Accepted
H3	P.B->E.I	0.556	0.050	11.057	0.000	0.471	0.637	Accepted

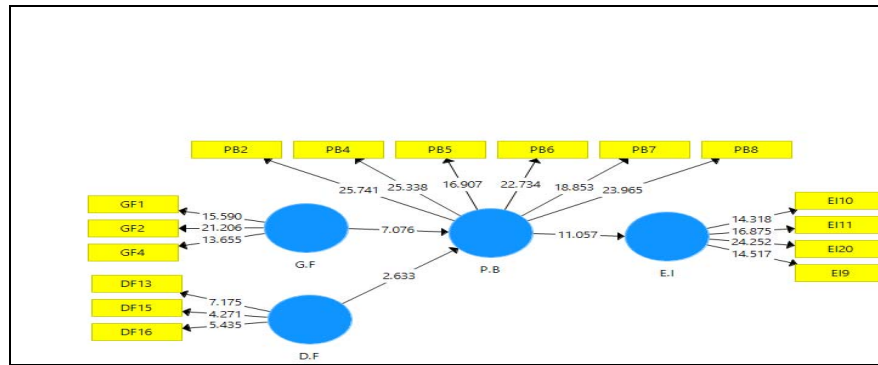
P-value ≤ 0.05 is acceptable according to Hair et al., (2019),

In the given study we have calculated the effective size (f^2) of an exogenous variable by following Joseph F. Hair (2014). The R^2 in the study is 0.303 for Entrepreneurial Intention (E.I) and 0.267 for perceived Benefits derived from entrepreneurship development by students. Both obtained values are suitable according to Wynne W. Chin (1998).

According to Cohen (1988), the effect size of “(0.02) is considered a small effect, (0.15) is a medium effect and, (0.35) is taken as a large effect”. The higher the

value of (f^2) the greater is the effect of the independent constructs. In the given study value of (f^2) for the Demographic factor (D.F) is 0.028, Geographical Factor (G.F) has an effect size value of 0.321 and, the effect size value for Perceived Benefits (P.B) derived from entrepreneurship development is 0.435. So according to Cohen (1988) Demographic factors have a small effect size, Geographical factor has a medium effect size and, Perceived benefits (P.B) has a large effect size.

FIGURE 3:STRUCTURAL MODEL



Discussion

Demographic factors including entrepreneurial education, Finance, and infrastructure present in the institute show a relationship with Perceived benefits that are supported by the previous studies. For example, Aja-Okorie Onele Adali (2013) in their study found that entrepreneurial education is proven to be very important in youth empowerment in Nigeria. Similarly, Meressa (2020) depicted that access to finance and initial investments are the key factors of growth in Ethiopia. Likewise, Woolley, J. (2017) in his study states that start-up activities have a significant relationship with infrastructure. Apart from this, there are studies present across the world that confirm the relationship of entrepreneurial education, finance, and infrastructure with entrepreneurial Perceived Benefits (Heuer & Kolvereid, 2014; Mustapha & Selvaraju, 2015; Somoye, 2013; Turker & Selcuk, 2009). In this study, age, gender, religion, caste, family size, and father Occupation does not show any relationship with Perceived benefits derived from entrepreneurial development so excluded while running path analysis in smart PLS3 which contradicts the studies (Hatak et al., 2014; Marlino, 2007; Mustapha & Selvaraju, 2015; Wibowo, 2017; Zellweger et al., 2011).

Geographical factors show the relationship with the perceived benefits like GDP growth, poverty reduction, and all-around development of a particular place as demonstrated in past studies including

(Bosma & Sternberg, 2014; Demurger et al., 2002; Gallup, Sachs, & Mellinger, 1999; Wang & Peng, 2020).

Apart from this Perceived benefits (P.B) derived from entrepreneurship development have a relationship with the entrepreneurial intentions that is supported by the previous studies including (Chen, Shen, Naznin, Wang, & Wu, 2014; Fatoki, 2010; Galvão, Mascarenhas, Gouveia Rodrigues, Marques, & Leal, 2017; Karabulut, 2016; Nakara, Laouti, Chavez, & Gharbi, 2020; Neneh, 2014; Vidal-Suñé & López-Panisseto, 2013).

Thus it can be said benefits that entrepreneurship development brings to society and an individual promotes entrepreneurial intention in them.

Conclusion

The entrepreneurial Intention of an individual is the cause of entrepreneurship development in the future. So it becomes equally important to establish the relationship between the factors responsible for the entrepreneurial intention among the individual/students. In previous studies, TPB and Institutional theories are used to explain the entrepreneurial intention of an individual but on examining the previous studies it is found that the entrepreneurial intention of an individual also has a significant relationship with geographic factors (G.F) and demographic factors (D.F) apart from this individuals are attracted by the benefits that entrepreneurs bring to the society. In this study, we have formulated the model that shows the relationship of

(D.F) and (G.F) with (P.B) and (P.B) have a positive significant relationship with (E.I) in the Indian context which is rare in terms of entrepreneurship research. The model can be used by policymakers, institutes, and governments to promote entrepreneurship education in colleges and universities, develop infrastructure which promotes entrepreneurship as the study suggest that location of business and infrastructure are benefited by the perceived benefits and show an indirect relationship with the entrepreneurial intention of an individual. Rather it is found that there is no statistically significant link between demographic variables such as Age, Gender, and Caste with perceived benefits derived from entrepreneurship development for management students in two cities undertaken for the studies which contradict many previous studies. Apart from this, they don't show a significant indirect relationship with entrepreneurial intention.

Limitation and Future Scope of the Study

In this study, the entrepreneurial intention of the students is depicted as an outcome of perceived benefits from entrepreneurship development only but when we look at literature many studies are there which define it as the antecedents of attitude, Perceived Behavior Control (PBC), and Subjective norms (SN) according to TPB. So in the future model can be formulated with all factors including PB, SN, PBC, and, attitude. As this study is conducted on management student in future researcher may conduct the study on samples including the respondents from all fields of study as it is seen that entrepreneurs belong to all group of people from society and study itself suggest that type of a subject and type of a degree doesn't have any direct relationship with the (P.B) or indirect relationship with the entrepreneurial intention of a student.

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PROSELYTISM IN THAKAZHI'S SCAVENGER'S SON AND TWO MEASURES OF RICE

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ABSTRACT

This research paper attempts to analyze the two theories of marginalization in Indian caste system along with the result of proselytism among the depressed caste concerning Thakazhi Sivasankara Pillai's notable works, Scavenger's Son (1947) and Two Measures of Rice (1948). Moreover, this paper examines the reasons behind the conversion among depressed communities and its consequences. Furthermore, the research paper tends to bring out debate on expectations and experiences of the depressed caste in the path of emancipation.

Keywords: Proselytism, Indian caste system, depressed caste, Scavenger's Son, Two Measures of Rice.

Introduction

Scavenger's Son and *Two Measures of Rice* are the earliest Proletarian novels of Thakazhi Sivasankara Pillai. He is one of the foremost writers in the Malayalam world. His writings follow the tradition of European Socialist realism. Those writings are with fine scorn of the social and economic inequalities. His works give the impression of irrefutable because of the concern he has for simple people. This psychological insight and realistic analysis of human nature and a concern for the downtrodden make him a prolific writer. His novels and short stories display the darker side of human life.

In most of Thakazhi's novels the protagonists are scavengers, peasants, and fishermen and in total the people who are in the lower rungs of the social ladder. The lives he portrayed in these novels are about the people, who constantly experience the agony of hunger and poverty and the oppression of the privileged class. His writings are always with the demand for social justice. His short stories and novels are packed with strong social content. The stark realism in his works tumbles the readers.

Discussion

This research paper examines the perspective of conversion which brings a new dimension to both novels. In the process of conversion, an individual's acceptance of new faith consequently results in an individual's conversion. The conversion is purely or personal and spontaneous not under any

external influence whatsoever. The mass conversion is about the collective embracement of the new religion or faith. It takes place by the impact of a wide-ranging group. Thakazhi's portrayal of conversion in *Scavenger's Son* and *Two Measures of Rice* come under the individual conversion. Though there are some traces of the mass conversion process, Thakazhi's focus is on the individual converts. According to the Indian Sociological perspective, conversion is looked at as an emancipation process. It is a larger belief that conversion will liberate the depressed community from their disgrace. Thakazhi displays the experiences of individual converts in both novels.

In *Scavenger's Son*, the character Ishukkumuttu died because of starvation. His son Chudalamuttu, a new scavenger of Alleppey municipality, undertakes his father's job unwillingly. On his first day of duty, he earned nothing and refused to get the leftovers from the hotel. So he returned with empty hands. His father Ishukkumuttu waited for his son to bring something to eat. But unluckily Ishukkumuttu died. Chudalamuttu has no money ever to bury his father's corpse. At the funeral, the fellow scavengers gathered in the hut. In the gathering, a man sits a little apart from the rest. He is a scavenger who has been converted to Christianity. By describing the sitting position of the character, Thakazhi symbolically represents the isolation of a convert from the caste and kin. It displays the consequences faced by individual converts. They are isolated

from their resources, status and connubial alliances.

Thakazhi also portrays the realistic picture of experiences of an individual convert. Joseph is the individual convert, who sits apart from others. He could not accept the statement by Palani that Ishukkumuttu is a lucky man. Because he died before being bed-ridden for a long time.

He said, "What sort of good fortune is that? Vadivelu saw what Joseph was getting at. From the day of his conversion, Joseph had been advising Vadivelu to change his religion. Vadivelu asked, 'Very well then, what is good fortune? Does it consist of treading the Christian path?'"

Rather disdainfully Joseph said, 'Why were we born? To offer praise to God. If we die we need to be saved. One should die consciously accepting the last sacrament.' The others laughed out loud. Joseph stuck to his convictions and shouted angrily: 'Heathens! (SS 8)

When fellow scavengers discuss what has to be done next, they decide to bury Ishukkumuttu that very night, as in the morning they all have to go to work. Then the discussion leads to the problem of the burial fee that they have to spend in the burial ground. Chudalamuttu weeps without answering them. He has no money to spend on his father's funeral. Shuppu, a fellow scavenger, says they must collect the money for the burial process. But Joseph shared his idea that:

'What if we do it at the church? All we shall need there is enough for the burial fee. The present priest is a good man. I'll speak to him. Even if there is no money, he'll perform the rites!

Nobody cared for that idea. (SS 9)

This shows how an individual convert in a community, is isolated from his clan and fellow workers, and his suggestions are summarily brushed away.

In the novel *Two Measures of Rice*, Thakazhi brings out the reasons behind the conversion of the downtrodden. This novel displays the conversion of farm labourers, which is certainly not for religious reasons but as a means of protection. The church promises them religious equality with the landowners. The major reason behind the conversion is that if a

farmworker dies, there is no place to bury the dead other than in the homestead. The landowners never provide them with a piece of land for burial. But after conversion to Christianity, the church will arrange the burial place for labourers.

In the novel, *Two Measures of Rice*, the characters Kunjappi and Mani are the couples converted to Christianity and become Patrose and Maria. Thakazhi brings out the fact that conversion will not reduce the distance between the haves and have nots. Thakazhi substantiates this through the character Samayal, the oldest labourer among the farm labourers. When one decides and ventures conversion from the native original identity to some new identity, this is done with and for a purpose. Better living standards or uplift, if not in all factors of life, at least in a few strategies of life, motivates the people to undergo conversion. Either they are so alluring promised or their pitiable living conditions pressurize them to look for an oasis. Their hapless living condition and their dire needs prompt them to look for betterment despite the apparent illusion. The conversation between Kunjappi and Koren brings out the status of the downtrodden after the much-coveted conversion. Koren expresses the status of the downtrodden after conversion, which is as miserable and hapless as ever:

"This is what the Thambran said. If we joined the Christian faith, we and the Thambran would be of the same caste, Kunjappi said.

Koren couldn't help laughing.

"If that is so, look at Samayal Achchan. He was baptized when he was a boy, but he is treated as a Pulaya even to this day," he said (TMR 46) Depressed castes are handled as shuttlecocked in the scheming political games of the heartless landlords. While conversion to Christianity is thus going on, a leading Sanyasi, living under the patronage of the Manath family, has also been carrying out reconversions to Hinduism of those Parayas and Pulayas who had once become Christians, by performing a purification ceremony. "If Kujappi become Patrose, Yohannan became Anantha . . . But even in those days their daily wage stayed put at two quarts of grain!" (TMR 44-45)

Conclusion

Though the depressed caste seeks conversion believing that to be emancipation, and paving way for self-respect, equality and protection, their experiences are different from their expectations. Particularly in individual conversion, the support expected from their clan is denied and there is inevitable disruption of landlords who are staunch upholders of the old faith. Ironically the individual conversion does not get equal treatment in their new community. They are invariably identified as the member of the converted religion but with the inevitable stigma referring to their castes. This indicates the ever prevalent subaltern position even in the new religion they have embraced. The caste-associated customs stay intact despite conversion.

As the saying states, "a rose will smell the same even with a different name", the living conditions, the inhumanistic treatment in the hands of the upper caste, the helpless oppressed and marginalized position and the heartless inequality experienced remain the same in the lives of depressed before, during and after their conversion into a new dogma. This element of proselytism helps them with a ray of hope. The outcome ultimately is nothing significant or life-changing. Thakazhi in all his creations and specifically in these two works have analysed all possible avenues that would improve the status of the oppressed and highlighted the futility in all its goriness.

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**POETIC PORTRAYAL OF SCIENTIFIC AND PHILOSOPHICAL UNDERSTANDING IN
A UNIFIED INTELLECTUAL NARRATIVE: A STUDY OF ALAN P. LIGHTMAN'S
SONG OF TWO WORLDS**

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ABSTRACT

Until in this twentieth-first century, the question regarding human existence in comparison to the endless universe has profoundly been delved deep into the generalized understanding by the sciences and the humanities, the two widely regarded fundamental disciplines of human knowledge. Alan P. Lightman, being a physicist, novelist and essayist as well as a poet laureate of science discourse, has brilliantly furnished his recently-published a book of narrative verse entitled Song of Two Worlds with discussion of everything associated with the intersection of poetical science and poetical philosophy. His poetic layout is characterized by exhibiting and exploring the life's thought-provoking enquiries, of which some are answerable and some are shrouded with philosophical or metaphysical implication which hinges on poetic matrix. His dealing with scientific and cosmological phenomenon speaks of about our earthly existence and nonexistence, the swinging dilemma of have and haven't, great insights of physics, philosophy, free will, religion, the nature of time and space, reality, biology, art, sociology, the paradox of nothingness, and the constant affliction in human search for validation and meaning amid this vast cosmos which remains utterly indifferent to human lot or entity. In this verse, the narrator's personal experience and understanding revolve around the multidimensional enquiries into the nature of reality through his existential combat between scientific and philosophical domains in single mind. In his poetic discourse, he alludes to the great minds of the human civilization including scientists, philosophers and poets, such as Galileo, Newton, Einstein, Lao Tzu, and Darwin and so on. He pays special homage to physicist Lise Meitner and scientist-poet of Persia called Omar Khayyam. Despite having an elegiac tone concerning his tragedy for being unable to write and exiled from his motherland, the narrator's account ultimately emerges as an excellent poetic ode to science as our key vehicle of knowledge and instrument for worldly understanding of this enormous universe.

Keywords: Existence, Cosmological, Lightman, Poetical, Philosophical and Scientific.

Introduction

Besides being a noted scientist and an essayist, Alan Paige Lightman is perhaps best-known to the world for his international best-selling novel entitled Einstein's Dreams (1992). As in novels, so in his poetry, his divided, ambivalent attitudes between scepticism and faith, personal lamentation, professional limitation, scientific boundaries, all are remarkably portrayed in his Song of Two Worlds. It is a book-length narrative in verse. The book consists of two parts. The par-I deals with 'Questions with Answers' and the Part-II with 'Questions without Answers'. In her essay, entitled--"Song of Two Worlds: Alan Lightman's Poetic Ode to Science, the Unknown, and Our Search for Meaning, Illustrated by a Teenager in India."(2017), published in the blog 'Brain Pickings', Maria Popova (1984--), a Bulgarian-born writer, blogger, literary and cultural critic, writes that Lightman has--"furnished the world with a masterwork at the intersection of 'poetical philosophy' and 'poetical science' in

an epic poem exploring life's largest questions, some answerable and some not: questions about existence and nonexistence, free will, the nature of time and reality, the paradox of nothingness, and the human search for meaning amid an indifferent universe." (Popova)

In the fashion of maintain personal accounts, the narrator or the poetic persona views the world newly. He starts examining the world and its happenings by dint of practical vehicles applying his tools of logic and reason. The conventional emotional feelings and traditional faiths have no value to him. He is always eager to welcome 'some newness'. Obviously, his scientific career enables him to expose the mysteries of the world around. He sets out on a Dante-like journey to search out something to believe in. For this, he first turns to the world of science and then to the world of philosophy, religion and the human world. He confesses that he possesses a great innate ability to hear the 'song of discovery' and he will 'move and

explore' silent stars and involve himself in 'splitting the blackness from light'. To fulfil his purpose, he realizes that it is the time to:

"...knock on the door of the universe.

Here, this small villa, this table, this pen.

I ask the universe: What? and Why ?

Now weakened, I must remake the world,

One grain at a time."

('Song of Two Worlds', Part-I, Poem No.7,

Lines: 8-12.)

Remaking the world as 'one grain at a time' is quite amazing and thought-provoking. In order to examine the whole world, he wishes to view everything as a whole and as small as one grain. This metaphorical implication echoes the lines of William Blake, a Romantic mystic, in the poem entitled-'Auguries of Innocence' where Blake famously writes:

"To see a World in a Grain of Sand

And a Heaven in a Wild Flower

Hold Infinity in the palm of your hand

And Eternity in an hour."

('Auguries of Innocence', Lines: 1-4.)

(Black & Bloom 490)

Waiting 'in the dark for the opening door', he wants to visualize through the darkness the cosmic spirit, the secret of time, the space of his mind and the secrets of matter. He is evoked newly to carry on his scientific research with a view to unravel the mysterious of this vast cosmos. He believes his scientific lab to be his temple. He views his microscope as 'prayer mat', stopwatch as 'my candle', 'test tubes and beakers' as 'my sacraments' along with other scientific tools. These analogical perspectives of the narrator are quite interesting and awe-inspiring. Above all, taking into account al-Haytham (965 AD--1040), Sir Isaac Newton (1643--1727), Antoine Lavoisier (1743--1794), Charles Darwin (1809--1882), Albert Einstein (1879--1955) as 'my guides' highlights his adorable sentiment to them. He now looks for some to hold in science. He shows his special interests at first in light and its various movements like 'rectilinear, reflection, refraction'. He again refers to great Al-Haytham, an Arabian mathematician, astronomer and physicist of the Islamic Golden Age. He considers him to be 'finder of Fermat's "least time" before Fermat' (Poem No.16, L-3.). The narrator expresses his belief that Fermat's principle is based on Al-Haytham who

was the first to explain that vision occurs "only as a result of the passage of something from the visible object to the eye, whether a ray issues from the eye or not." (Alhazen 79). Also he was the first man to indicate that vision happens in the brain, rather than in the eyes. This scientific fact and phenomenon related to light, vision and image are drawn precisely in the following lines thus:

"Great Al-Haytham,

Show me your faith.

You found the way that we see:

Light starts from beyond the body,

Then enters the eye,

Slanting through crystalline humour

And vitreous gels.

Light does not streak from the eye,

As others thought.

With sight tubes

And taut string and chambers,

You found out the movement of light ---

Rectilinear, reflection, refraction."

('Song of Two Worlds', Part-I, Poem No.16,

Lines: 7-19.)

Next, the narrator holds poetic notion while comparing the free movement of an electron to the free flying of a bird. The Irish physicist George Johnstone Stoney (1826--1911) first introduced the term 'electron' as the 'fundamental unit quantity of electricity' in 1874, and the English physicist and Nobel Laureate in Physics Sir Joseph John Thompson (1856--1940) first identified the electron. He discovered it as a subatomic particle in 1897. Being a negatively charged, an electron can be either free, i.e., not attached to any atom, or bound to the nucleus of an atom, whereas the 'atoms conjoined by the dipolar force'. He further attributes electrons to be 'contained by the quantum'. In physics, a quantum is defined as the minimum amount of any physical entity or physical property which is involved in an interaction. The word was first used in 1902 by a German physicist and Nobel laureate Philipp Leonard (1862--1947) who credited another German physician and physicist Hermann von Helmholtz (1821--1894) for using the word 'quantum' for the first time in the field of electricity. Quantum mechanical properties of the electron include an intrinsic angular momentum (spin), which is expressed in units of the reduced Planck constant. Thus, the

interrelationship between electrons, quantum, atoms, gravitational force and angular spinning --- all is poetically expressed in a nutshell in the following way:

“Electrons in orbits contained by the quantum,
And atoms conjoined by the dipolar force,
Gravity balanced by pressure
And flap of a wing.
Here, I remember the angles and curves,
Calculus, I learned it all –“
(‘Song of Two Worlds’, Part-I, Poem No 18,
Lines: 13--18.)

He feels pleased with the cosmic world ‘while the breeze of the universe/ ruffles’ his hair. He involves in searching the colours of stars through his telescope and in the process, he speaks of dying and formation of stars in the galaxy where nebula “is nearing the end of its life cycle.” (Owen 30), as when its core will cool into a white dwarf and then into a black dwarf following a process taking a few billion years. This entire cosmic happening is depicted very aptly in poetic manner in the following lines:

“In chasms of space
I see stars born from gases,
Great thrumming furnaces oozing their heat,
Convective motions, electron opacities ---
Elsewhere stars dying,
Cold cinders
Or giant explosions, eruptions of light,
Cities consumed in a nuclear blast,
Billions of years dimmed in a second.”
(‘Song of Two Worlds’, Part-I, Poem No.25,
Lines: 11--19.)

through his scientific observation, he learns thus the ‘violent and fragile’ characteristics of the heavens which are ‘doomed to destruction’. He firmly asserts that the natural happenings can be estimated through equations. Even the Big Bang theory, the birth of the universe, too follows equations. Here, he explains how universe was ‘born by some chance, or not’. In 1927, Georges Lemaitre (1894--1966), an astronomer, mathematician and a professor of physics at the Catholic University of Louvain, first asserted that an expanding universe could be traced back in time to an originating single point and in 1929, Edwin Hubble (1889--1953), an American astronomer, concluded that galaxies are drifting apart. To estimate the features of the cosmic birth in back in time to

an initial phase of extreme density and temperature, physical laws of nature are applied. The physicists, astronomers, astrophysicist and other scientists engage in revealing that primordial explosion that will unite all the mysteries of the birth of this vast universe. In his recent book called *Probable Impossibilities* (2021), Alan Lightman raises his enquiry that “whether time had a beginning, and why we can tell the future from the past. ...Such questions are also related to Pascal’s notion that we, and the universe, emerged from ‘nothingness’. According to modern cosmologists, the entire observable universe was once microscopic in size. Thus, Pascal’s idea of the infinitely small, his ‘nothingness’, might be associated with the origin of our universe.” (Lightman 24-5). This theory of Big Bang, the idea of time and space, expansion of the universe--- all are poetically recorded by the narrator in the following quote:

“.....the birth of the cosmos --- the heat
And the densities follow equations,
The temperature 1.5×10^{10} degrees at 1 second.
Twelve billion years
In the past, all began:
Time formed from nothingness,
Space formed from nothingness,
Universe born by some chance, or not,
Moment of ripe probabilities,
One of uncountable eggs.
And then the explosion,
The energetic opening space
And the boiling of light
In the Bang without eye without ear.”
(‘Song of Two Worlds’, Part-I, Poem No.31,
Lines: 9--22.)

He is much more concerned with ‘a cosmos of endings’ and the ‘density dwindles to nothing’. At this critical juncture, when the stars are on the verge of destruction, he expresses his interest especially in the abstraction of numbers. He is conscious of the incident that even in the end of the universe:

“With no heat, with no life.
But the numbers remain.”
(‘Song of Two Worlds’, Part-I, Poem No.31,
Lines: 35--36.)

The speaker asserts that ‘To know of this world’, one needs to be deeply plunged in love with this endless cosmos. He is tormented inside his mind to clearly know about the time

and space and its relations. To have his reply, he looks at 'Great Einstein' whom he regards as the 'master of time and of space'. His 'special theory of relativity' concerning the relationship between space and time, lessons the narrator to realize that 'All speed is relative'. Despite not finding all the answers of his questions, the narrator feels a little bit of satisfaction as in this mysterious 'cosmos of time and space', he has some answers in hand which sound reasonable and pleasing to him as he entertains in the following way:

"I knock on the door of the cosmos of life
 And ask: What is the reason I breathe?
 I'm answered: You breathe to make energy.
 I ask: What is energy?
 I'm answered: The movement and heat of your
 body.
 I ask: What is the measure of movement?
 I'm answered: A change of place over time.
 I ask: What is the nature of place and of time?
 I'm answered: You return to the centre.
 I ask: What is the nature of thinking?
 I'm answered: The spasm of cells in your brain.
 I ask: What is the thing that makes spasms?
 I'm answered: The movement of positive
 particles.
 I ask: What is the nature of movement?
 I'm answered: You return to the centre."
 ('Song of Two Worlds', Part-I, Poem No.51,
 Lines: 10--24.)

In the second part of the Song of Two Worlds entitled- 'Questions without Answers', the narrator is afflicted much with 'the cosmos of answerless questions'. In this world of continuous struggle between good and evil, he wishes his psyche his temple. Besides scientific understanding of the cosmos, artistic and humanistic following of the world is desirable in order to maintain peace and prosperity in earthly life. He refers to Lao-Tzu, an ancient Chinese philosopher and humanistic writer who is the founder of philosophical Taoism. Literally, it emphasizes the living in harmony with the 'Tao', i.e., the way the world goes on. Therefore, he feels that his scientific devices are not sufficient enough in all respect

to estimate the universe. To soothe his painful mind owing to unsolved questions, he seeks shelter in the poetic world. He reads the poetic work of the Persian-born poet, astronomer, philosopher and scientist Omar Khayyam. Reading his poetry, he calmly accepts what the world is around him. He says:

"Softly I utter from Omar Khayyam:

"Into this universe,
 Why never knowing, nor whence,
 Like the water, willy and nilly flowing."
 ('Song of Two Worlds', Part-II., Poem No.59,
 Lines: 21--24.)

In his course of continuous searching, the narrator feels that 'time is no healer' as he asserts that 'time too will die in the vanishing stars' and ultimately 'All lost in the sea of uncertainties'

Conclusion

Thus, along with accounting his personal and professional understanding of the self and world, bit by bit, the great enquiries of the cosmos and of the human heart, some scientific and philosophical questions with answers and some others without replies--- all are highlighted in this free verse. His scientific and philosophic mind finds its best expression in this poetic matrix. The critic Maria Popova in the same essay writes that "What emerges is an ode to science as our finest instrument of knowledge, but also an energy-- in the proper sense of lamentation and celebration--for its limitations in the face of questions of meaning, best answered by philosophy and best savoured in their unanswerableness by poetry." (Popova)

Inspired by Rabindranath Tagore's Gitanjali ('Songs Offering'), published in 1912, Lightman has taken the two epigraphs entitled Questions with Answers and Questions without Answers for his two-parts work respectively. The poetry lays bare several layers of thought-provoking questions related to our existence in this vast universe. It offers an appealing poetic take on the investigation through scientific questions and notably stirs our minds to the possible utmost.

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A COMPARATIVE ANALYSIS OF SURROGACY LAW IN THE UNITED STATES AND INDIA - A PROPOSED MODEL STATUTE

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Introduction

Surrogacy has become an entire elective course for infertile couples in the United States and India. With the expansion of the scope of use, the action plan for surrogacy has also been recognized by society. However, many controversial topics involve surrogacy. Surrogate mothers' desire to stay with their children is just one of the many ethical and social issues associated with surrogacy gameshows. The different topics include moral beliefs about allowing a woman to give birth to another woman, the enforceability of the surrogacy contract, the appropriate payment of the surrogate mother, and how to choose to care for the child if there is a dispute. There are two types of surrogacy: traditional surrogacy and gestational surrogacy. A typical surrogacy program has multiple arrangements with the surrogate mother to allow the surrogate father's sperm to be mistakenly inseminated by the surrogate. The surrogate will use his egg so that it will be genetically identified with the offspring. The partner of the deliberate father is regarded as the firm mother of the young man brought to the world for surrogacy. An example of common surrogacy can be found in Genesis. Ishmael's introduction was because Sarah asked her worker, Hagar, to give birth to a child for herself and Abraham, given Sarah's infertility. The second kind of surrogacy, Called surrogacy, can happen in different ways. A deliberate mother can use her eggs. A deliberate father will use his sperm. Then, the initial organism prepared outside the abdomen will be rebooted in the surrogate mother's uterus. In this case, the replacement will not be passed on to the child but will be used when the determined mother is not suitable to raise a child alone. Different options include using sperm from an intentional parent and eggs from an unknown donor or using donor sperm and eggs to create the initial organism included in the surrogate. Some states only

control gestational surrogacy, while the laws of other states apply to both gestational surrogacy and traditional surrogacy.

Surrogacy law in the developed country

United States

The United States has long had the habit of reproductive freedom, and each state has a responsibility to ensure the established freedom granted to its residents. Some states have decided to provide more insurance to their residents, while different states have chosen laws restricting or guiding reproductive rights. In the widely publicized case of *In re Baby M.2* °, New Jersey became the leading state in solving the surrogacy problem. The New Jersey Supreme Court ruled that the surrogate's contract was invalid. Since this agreement went into effect, she was unable to pay the government agency fees because surrogacy conflicts with national laws and public strategies. The court held that infertile couples desire the depth of having their children, but noted that instalment payments to surrogate mothers are illegal, can be criminal acts and can be little women. The legally binding consent to waive parental rights or not contest the end of the activity will not be authorized in our court. The court also stated, our current behaviour does not offend anything. The law stipulates that a woman deliberately and without payment agrees to go as an alternative mother because she does not have the official consent to surrender her child. The court's decision does not prevent the legislature from adjusting the current legal plan within the protected cut-off point for surrogacy contracts.

There are a large number of surrogacy laws in the United States. Some states have already planned surrogacy rules. Surrogacy kills all types of surrogacy; others have formulated the terms and requirements of surrogacy contracts as much as possible.

At present, many states cannot order any regulations that favour surrogacy. This

different treatment of surrogacy in the United States leads to different surrogacy arrangements in each state. Arizona, Indiana and North Dakota treat all surrogacy contracts as invalid and not as a public strategy. At the same time, New York and Utah have declared that any form of surrogacy contract plus instalment payments (commercial surrogacy) is invalid and unenforceable. Kentucky, Countries, Nebraska and Washington also declared the surrogacy contracts invalid and unenforceable. Alabama, Arkansas, the District of Columbia, Iowa, and West Virginia also have penalties that substitute for surrogacy. Rules. Michigan has gone the extra mile and indeed condemns the acquisition of surrogacy, including paying for surrogacy. However, the resolution is limited to gestational surrogacy. In *Doe v. Chief Legal Officer*, the Michigan New Trial Court held that it included the child's parents as women. Created is invalid and unenforceable. In the case of *Surrogate Parenting Associates, Inc. v. Armstrong*, the Kentucky Supreme Court held that the inclusion of an organization in an alternative parenting strategy did not negate the legal restrictions on the purchase of youngsters for the reason of the reception, which agreed to give birth to the child has entered before birth. Subsequently, the Kentucky legislature passed a resolution declaring that the agency contract is legal as long as the surrogate mother is not paid.

Only three express couriers have developed a comprehensive legal plan to control it through specific non-commercial methods. Surrogacy is legal and enforceable: Florida, New Hampshire, and Virginia. These states boycott surrogacy fees, but the law contains many exemptions that allow agents to pay reasonable fees because agents should not depend on paying out-of-pocket costs. Virginia and New Hampshire provide a comprehensive administrative design, including clinical and psychological examinations, allowing the surrogacy agreement to be maintained if the surrogacy agreement is approved by the court and meets the prerequisites determined in the resolution of each state.

Surrogacy law in a developing country

India

India has several legal cases and laws in the field of surrogacy. In 1985, Kim Cotton received £ 6,500 (the US \$ 11,610) to give birth to an infertile couple, and India found the first surrogacy.

This child is called Children's Cotton. In this case, the United States surrogacy office and Ms Cotton (agent) formulated a business surrogacy action plan for a couple in the United States (a determined guardian). The British forces in the neighbourhood carried out the mediation and appointed Baby Cotton as guardian. The couple, still pending, will be reasonable guardians, and the child will be awarded to the contracting couple. The designated authority stated that they must find the most suitable method for the child. Since no request was made to accept the young man, the arbitrator did not consider whether the payment to the surrogate mother would ignore. The court had to include the adoption request later. To solve this problem, one couple agreed to pay power of attorney of £10,000 (US\$17,860) in exchange for the mother to give birth. 2 The surrogate mother was only paid £5,000 (US\$8,780) and did not find this. Part of the money did not deny the Adoption Law. The designated authority believes that the cost should compensate for the burden of the surrogate and the cost of pregnancy.

In 1982, with the development of suspicious surrogacy cases, the British Parliament established the Human Fertilization and Embryology Investigation Committee and called for a review of the moral impact of improvements in human reproduction (including surrogacy). The group put forward the Warnock report No. 5-16 of 1984. The recommendations put forward will restrict the most common way for anyone outside to organize or help establish a surrogacy game plan under any circumstances. Most members believe that the bill clearly states that surrogacy Arrangements are divided into illegal arrangements and therefore cannot be enforced in court. Public authorities recognized the committee's proposal Warnock and implemented some of the 1985.11 Surrogacy Resolution Act proposals. Only commercial

surrogacy offices are banned, and women are refused to be represented as representatives. A surrogate mother has been given rights throughout the surrogacy procedure, obligations have been put on the "intending pair" or "intending lady," and harsh penalties have been granted to discourage any prospective offenders, according to the 2020 bill.

Proposed model statute on surrogacy

Purpose

(a) If all parties to the agreement comply with the attached arrangements, it is announced that the demonstration of non-commercial surrogacy contracts is permitted and reliable regulations are established to control surrogacy to ensure that all parties involved in surrogacy operations are surrogacy need help for the well-being

(b) The council recognizes that surrogacy is occurring and that such game plans involve many good, ethical, social, and doable issues. This is a sensitive public disposition space. The management agency also believes that surrogacy cannot be ignored or allowed regardless of these subtle issues. Furthermore, these plans will be made in secret and completely unsupervised, including all meetings. Supervision can ensure that surrogacy agreements meet specific minimum standards.

Comments

Treats the replacement agreement as invalid and invalid, and contrary to public policy. The act of surrogacy will not end. Couples that do not have results will gradually replace the game plan to allow the couple to have the ability to give birth to a young man. Surrogacy agreements that cannot be enforced will not prevent insane couples from making such arrangements. Making a legal plan will manage surrogacy behaviour and ensure that the cycle is completed correctly. The party will look forward to reaching an authoritative understanding through informed choices.

Issues

Regarding other placement issues, including surrogate paternity agreements, the House of

Lords passed the 1990 Human Embryology and Fertilization Act.

According to Article 30 of the Human Insemination and Embryology Act, the court can declare the intentional guardian as a young agent through the parents' request. The intended guardian must request the parents of the court and meet some requirements:

1) Every parent in the world must be over 18 years old, the couple must be married, and at least one of them must live in India;

2) A member must be hereditary with the child and cannot confirm indirect pregnancy through regular sexual intercourse;

3) From now on, the child should live with the confirmed partner; and

4) Cash or other benefits paid or obtained by the attorney shall not be used as reasonable compensation for the expenses incurred. The Law also stipulates that a guardian promotion commissioner will be appointed for each case, and the guardian will decide whether to meet all the prerequisites. In June 1997, the British Minister of Health coordinated an advisory group to discuss specific parts of the surrogacy action plan in the public interest.

Recommendation

The UK is increasingly concerned that the UK will become a surrogacy haven in Europe because other European countries have stricter laws on surrogacy, and couples who have no results come to the UK to find a replacement mother. The team It will be decided whether the current laws of India should be changed or not. The group was asked to make clear whether it would continue to pay fees, including fees, to surrogate mothers, whether one or more perceived institutions should administer such plans, if it is necessary to change existing laws or if current laws are satisfactory. The audit team made some recommendations about the legal situation:

- First, the surrogate mother's instalment payment should be limited to the actual expenses caused by the pregnancy.
- Second, organizations currently engaged in surrogacy operations must only work under non-beneficial conditions and must be registered by the Ministry of Health.

- Third, the UK health department should formulate a code of conduct and set minimum standards for surrogacy programs.
- Finally, government assistance to children should be the primary concern of all those involved in surrogacy arrangements. The surrogate child should not be forced to abandon the child because she adjusted her perspective.

The Surrogacy (Regulation) Bill, 2020 (Surrogacy Bill) is a moral, good and friendly piece of enactment which ensures both double-dealing of the proxy mother and the privileges of a kid brought into the world through surrogacy. One of the Bill's most observable elements is that it has proceeded with the restriction on business surrogacy. The Bill prevalently proposes/as far as possible charitable moral surrogacy to aiming barren Indian wedded couples just between the ages of 23-50 for ladies, and 26-55 for men. Couples ought to be residents of India, or non-occupant Indians, people of Indian beginning or abroad residents of India. There are, anyway admonitions several Indian beginning deciding on surrogacy courses of action. They can't have an enduring youngster, either natural or embraced, with the exception of when they have a kid with a psychological or actual inability, or who experiences a hazardous issue with no long-lasting fix. This tragic position should be affirmed by the suitable authority

with a due clinical authentication from a District Medical Board.

Conclusion

Countries sign surrogacy contracts every year. More and more couples and infertile people want a child madly to raise their children from the beginning. The legislature must pass laws to protect the safety of Countries residents and ensure that everyone can get the full benefit of conceptual innovation from our public. By ignoring the issue of surrogacy and the inclusion of a legally binding plan, the legislature cannot guarantee that the well-being of Countries residents is served and, most importantly, that our children are guaranteed.

Through the guidelines, all meetings of the surrogacy agreement can be secured. Because the well-being of young people in the educated meetings and plans agreed in the agreement is guaranteed, insurance can be established to help ensure a lasting plan. Declaring an alternative agreement illegal or contrary to public strategy is not feasible. It opens the door to illegal behaviour without the possibility of obtaining legal authorization through our general laws. The Countries team should focus on this model solution because they summarized how to enter the unstoppable field of specialized multiplication and implement the above arrangements to control surrogacy arrangements.

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PORTRAYAL OF HUMAN RELATIONS AND EMOTIONS BY RUSKIN BOND**S. Chopra¹ and V. Kumari²**^{1,2}Amity University**Introduction**

Writers write not for fame or wealth but for self-actualization and to present their comments on the societal scenario around them. This paper explores Ruskin Bond's depiction of love as a reflected in his character's subconscious behavior. Bond's characters do not seem like characters, instead their relatability factor is so high that every reader finds a little bit of themselves in the characters. His characters feel like they are real people from the real world facing real challenges and feeling real emotions. The names of the characters are names we all have heard in our regular lives and the locations his stories are set in are commonplace. His character's real, mundane, at times uncomplicated monotonous lives reflect our trivial and beautiful lives and is what make his work approachable to all kinds of readers. This blunt, honest, and appealing portrayal of his characters is what made Bond stands out amongst his peer writers in these contemporary times. An idealist who writes like an optimist, finding the silver lining while acknowledging the greyness of the cloud it surrounds. This quality of subtly unraveling each layer of the reader's emotions is something even the finest of authors struggle with and thus makes him a master of his craft. Bond believes in art for art's sake and thus he presents life in all its glory with all its colors on display. This stark presentation of life's vices, follies, drawbacks, and the vulnerability of human character exhibits the balanced co-relation between Nature and humans as it is in the cosmos. What made him successfully convey his deep insight of humans without any alterations or exaggerated emotions was his unique methodology of maintaining focus on realistically portraying human nature, their ideas, thought process, and emotions, while staying true to his passion towards nature and each creature in it.

Ruskin Bond's Understanding and treatment of human emotions

A human mind can experience around 34,000 emotions and very commonly more than one at a time. Emotions are a subjective state of mind which can be influenced or triggered by multitude of reasons. The written word for one is extremely efficient and capable of stirring up emotions and igniting the need to analyze, evaluate, and rethink everything we ever believed in. In fact, literary discourse is designed for this very purpose of arousing and giving shape to the reader's feelings. The one feeling that has over ages succeeded in evading all of mankind has to be love. Every author, poet, philosopher has tried to give an apt definition to this emotion, only to be contradicted by another. Love is the most misunderstood emotion out there that never takes one form or color, and yet we tend to focus on the intended bond amongst human beings. The contemporary world had shifted our focus inwards and encouraged self-love and learning to enjoy our own company, but in the process solitude and selfishness has also come tagging along. As natural and automatic an emotion love feels like, it takes work, unselfishness, and a vulnerability. Despite the harmonious nature of the emotion people fail to reciprocate the love and affection they receive and instead cater to their psychological turmoil. Bond has the mastery on the creativity that emphasize on practical contemporary episodes unlike forecasting rebels and revolutions. His literary sense paves a reflective medium to convey his expressions in the most convincing form which are otherwise purely overlooked. Author's range of characters in his love-stories is very significant. He relates his love-feeling with the mind of his protagonists and transmits the character's feelings, hidden or not, and their conscience with a considerable ease without the aid of elated devices and literary terms. According to Robert Liddell, the real essence of the art of a novelist is to relate his identity with that of the character. The big source of character production has an impact on the author's own self. The author put himself forth in the shoes of other people and can see

through their eye lens, and he may have some time to change his age, sex, social position and also to develop to the full every suggestion of every vice or virtue he may possess. Bond achieved an abundance of expression, emotional and spiritual intensity, and suggestiveness through his love-stories. As far as his love stories are concerned, he may seem to reign the literary world in his time. He is no stranger to human-sentiments at any level. The disturbing influence and sad plight of the lovers in his love-stories recur like in most Indian fiction. Once in an interview he was asked why do his love-stories usually end with a sad note? For which his answer was – “Those stories were most of the times written when I was quite young and romantic by nature... There are many famous love-stories which usually ended on a sad note. If they ended on a happy note, some of them were not quite so memorable.” The treatment of love in his love stories, we find the author cleverly retains the temperament of love that showers beautifully in a natural realistic manner. His views about the treatment of love are too firmly molded to alter. His love-stories have kept an exceptional charm and youthfulness. Neither fashion nor the changing trends in reading have created any serious effect upon them. He believed in optimistic endings and traditional story setting unless following the unities, plot, seriousness, and chaotic representation. Most of his literary text has simple and natural representation unlike narrating complex and confused plots. Thus, being a realistic writer, he never believed in a meta plot and unsolved chaotic structure. “He remarks that he believes he didn’t have much of a personality but was always a person with strong likings and enough stubbornness to get his way while being old fashioned enough to believe in loyalty in friendships and despising money for money’s sake. He was eager to discover himself and the nature around him and eager to express all his finding in a language he had come to love. Bond is intimately acquainted with the past of India which he had explored in documents, legends, and history and by discovering its latent presence in the manners, traditions, and languages he has given everything in reality with concrete form. No sort of alliteration and alignment has done by the writer. His mere

intention lies on the narrative sequence. Unlike following the blind classical strategy given by Greek and Latin writers like Virgil, Ovid, Euripides, Bond has the concern towards his eloquent updated accent, simple precise style and portraying the human emotions as it is without elevated norms. In a press note by Miss Marry, the book reviewer and critic, after the publication of “The Room on the Roof”, has given a noteworthy remark saying that Mr. Ruskin Bond, while really belonging to India saw it through the sharp and often satirical eye of a westerner, so that what Indian writers could not make intelligible to us, suddenly took center stage. At the same time Miss Marry also affirmed that Ruskin had risen above the consideration of religion, race and even money to choose the country he loved. In this regard he is truly Indian. The conventional treatment of love themes is not dealt by Bond in most of his stories. It is not necessary for him to take young heroes and young heroines in his stories to make them fascinating. The tone of the plots is not fanciful, at least in most of their parts. A psychological truth is always there in his treatment of love that is sufficiently deep and to a grasp of man’s nature that is large and extended enough to satisfy the needs of our mind. Bond never seeks for complicated tangles of man-woman relationship which could sense in earlier British and many psychological interpretations too. His efficiency lies on treatment of considering emotions in the Indianness segment. He cautiously avoids triangular love knot, psycho-analytical issues and didactic principles. In certain cases, he desires to make a searching analysis of the characters especially females. He thoroughly depicted the sub consciousness and the inner consciousness of the human folk. He has the vivid sense of depiction and he has taken Lacans concept of interpretation related to intensified emotions. In most of his love stories the protagonist is usually a writer, a lonely and sad man. The pain of separation is necessarily put in his love-stories. Otherwise, Bond says that his love stories wouldn’t have been remembered so far. In such stories the initiative for breaking the relationship usually comes from the women protagonist. His keen focus on nature and its finest details highlights his observant nature which was

never limited to his surroundings but also explored all worldly characters, and their role in their own perception. His realistic and genuine portrayal of his characters and the use of simple language makes his work accessible and easily prompts an attachment with the characters. Known for his clear, detailed and concrete narration, Bond's distinct writing style explores the depths of his characters through carefully crafted simple words. His work represents a sense of harmony across all beings and not only instigates an unassuming love for his characters but also manifests a deep instinctive love for fellow human beings. While Bond doesn't claim to be a philosopher nor is he a propagandist, but his work remains high in morality, imparts human values, and highlights its universal appeal and relevance. Bond's treatment of love is so pure that he very easily explored the tender love shared between a man and a woman or a parent and a child, across ages and circumstances. He paints his character's relationships in favorable colors which makes them well acceptable and relatable not just in India but across the world. The emotions, feel, love, and sense are highly modest and factual in his sense of expression and the inverted Narratology. He illustrates emotions in all its original unadulterated beauty and glory.

While Bond holds up the aura of a writer who imparts values and idealism, his approach towards human relations is very practical and understandable. Love as we all have heard holds no limit, and his protagonists also seem to be well aware of this. His protagonists are the masters of their own emotions and do not have any internal conflict rooting from deep rooted norms and values. They go far from the confines of social values and know no bar of caste, religion, age, or country, which often, ends their love story in separation with a sort of loneliness left behind. Those who find human relations intriguing and wish to understand the intricacies of bonded human relationship find bond's work very appealing. By the mere simplicity of his stories and the unbound emotional strata, bond's work receives international critical acclaim while reaching the commoners. He presents his many discoveries over the love relationship by feeding the love ad even the infatuation infused his stories and

wishes to produce with great accuracy a deep-rooted reality which lies behind every such-relationship. Throughout this journey bond never lets go of realism amidst all the smoke of sentiments and imagination.

Bond's most self-portraying novel *The Room on the Rooftop* is written in third individual portrayal in which he introduces himself through the hero Corroded. Whenever Corroded gets freedom to instruct English to Kishen-Kapoor's child, as wages for his work he is given a room on the rooftop in Kapoor's home. Mr. Kapoor is a drunkard individual and twenty years senior than his significant other Meena. Mr. Kapoor loves his better half definitely yet his energy for her was less than ideal as when the glow of old wine filled him with verse. She slowly comes extremely near Corroded. In a wilderness scene, Meena and Corroded react to one another's energy. "Corroded recalled that it was for this man Kapoor-this wimp, this self-stubborn, self-centered alcoholic that Meena had given her life, every last bit of it, devotedly she had stayed close by when she might have left, when there was no more battle in him and no more love in him and no more pride in him; and, had she left then, at that point, she would be alive, and he-he would be dead...." Bond features the delicateness of sentiment and extreme sensations of his characters. To support the anguish and dejection of Corroded, Bond presents a gadget in the story as Meena Kapoor's sad passing. She is twisted away from Corroded by a deadly fender bender while Kapoor's ventured out down to Delhi from Dehra in mission of a task. Corroded defeats by a sensation of weakness and pointlessness, and of the insignificance of life.

Through his energetic romantic tales, Bond has grabbed the eye of the pursuers, it is just the start. It is his endurance and harsh consistency of direction that caused him to have a corpus of innovative romantic tales of adequate mass normally acknowledged quality. The idea of his love stories is pretty much as clear as could really be expected. He is an incredible author for he can channel his enthusiasm into the making of heart contacting romantic tales. His treatment of affection, in every one of his romantic tales, the end segment is practically something similar, prompting a dismal

consummation. On which Bond himself offers his perspective: throughout a long composing vocation, it is unavoidable that an author will at times rehash the same thing or return to subjects that have stayed with him even as novel thoughts and details enter his brain. The significant thing is to continue composing, noticing, tuning in, and focusing on the excellence of words and their course of action of it as engaging him. Without a doubt! Love is excessively wonderful and incredible such that we as a whole wish to be contemplated, really focused on, and appreciated. The work additionally shows that communicating love in words or activities really makes good feel however excruciating feelings in the provider just as the beneficiary. Articulations of mindful, sympathy, and compassion can rouse these sentiments in others. In this way Ruskin Bond is a nonconformist who plans to achieve a change not just in the topic, structure, and the construction yet additionally on the attitude of

the crowd. He effectively attempts to annihilate the outdated devotions, speculations, and furthermore generalized convictions. To finish up, Bond's treatment of affection is totally a kaleidoscope of human relationship. It projects both the excellence and corruption of human instinct and their enthusiastic conduct. Ruskin Bond's milieu as an author of fiction and brief tales is the family. In his accounts, he has dove profound into the mind of man - lady relationship, incorporating the whole mankind. As a matter of fact, Bond is attempting to accomplish it in his accounts, what he truly couldn't get in his life. His life has been long adventure of the quest for the original mother figure and genuine romance. His whole scholarly works takes individuals to an excursion. It's an excursion into oneself and one's secret mind. It assists with inciting humanly nature - as human as could really be expected.

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DALIT AUTOBIOGRAPHIES: A RELATIONAL CONCEPT OF EMOTIONAL JOURNEY AND DEVELOPMENT

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ABSTRACT

This paper aims to give an overview of the fact that how dalit autobiographies today have become one of the most important and strongest medium of putting across your opinion on a specific subject specifically caste, community, pain, sufferings etc. It also focusses on the point that may be people, family and circumstances are different but they have some common grounds to share i.e. experiences, reasons, consequences and solutions for the betterment and upliftment of their community. Though everyone has their own share of experiences but when it comes to the public domain or social platforms that too in the translated form it becomes a pool and helps people to understand their plight and look forward to the solutions which will help their coming generations to empower themselves, as they unite in a team to overcome the situations they are in or their ancestors were in. The autobiographies taken into consideration are Om Prakash Valmiki's Joothan, Urmila Pawar's Aaydan (The Weave of my Life), Baby Kamble's The Prisons We Broke and Bama's Karukku.

Keywords: *Autobiography, Dalit, Pain, Women, Education, Struggle, Community, Emotions.*

Introduction

Autobiography is a presentation of the wholeness of personal identity in only a particular work and 'self-knowledge' is then a primary motive of any autobiography. Understanding an autobiography is to know the psychological insight of the writer. Literary meaning of autobiography is an account of a person's life written by himself or herself. Susanne Langer has rightly defined autobiography as, "The achievement of art which explores the intuitive knowledge of some unique experience". Autobiography, as a genre of literature, is a presentation of self and the roller coaster ride of authors own life and achievements. Through this influential genre a realistic picture of Dalit world is portrayed by none other than but people belonging to dalit communities only. Thus, authenticity and liveliness is the essential feature of dalit writings as it is based on experiences rather than speculation.

Dalit autobiography is the most important tool of Dalit literature and has emerged as a recent development in writings. It is described as narratives of pain which binds all dalits of different communities. It is a journey which transforms painful experiences to narratives of resistance, in which their social life is analysed. Regarding the purpose of Dalit autobiography, Arvind Malagatti said:

'The main purpose of the Dalit Autobiographies is to highlight the emancipation of the oppressed and exploited people, to show their emotional journey and also how they evolved from such traumatic experiences of their life, as Dalit literature is one of the integral parts of the Dalit movement. Dalit literature is not a recent one but it has been there for centuries. Since the Dalits were not recognized, their writings were relegated to the background'.

The important features of Dalit narratives is the oppression, struggle, sufferings, humiliation, quest of identity, emotional outburst and that they never isolate the individual one from his environment, family, community and society. Autobiography has become an important genre of literary-critical discourse. Its boundaries are unlimited in the sense that the form can be discovered both in literature and non-literature. It not only stops here but this autobiographical note can be found in poem, fiction, drama, travelogue etc. The location or place of the narrative self is also an important subject of investigation in autobiographical studies. The identity of a person is directly related to the location to which he/she belongs. Accordingly the person will undergo the experiences in life. Many critics are of the thought process that writing autobiography is a privileged act because of self-glorification. But this seems to

be a general statement. If we take examples from Dalit personal narratives they have a different perspective to share. Instead of celebrating their life achievements dalit narrators has to record a life which is full of pain and sufferings because of the caste system so their autobiographies are bound to be different from others. Through their writings they are trying to mobilise their lives and fight against all forms of oppressions which they have been experiencing for ages.

Om Prakash Valmiki's *Joothan*, is a Hindi Dalit autobiography which is translated into English and not only talks about the life story of an individual but also about the entire chura or chamar community, who have been pushed to the brink of caste based discrimination for ages. They are commonly known as bhangis in many parts of the country. This community feel proud to be descendants of Valmiki, the author of Ramayana but according to Om Prakash Valmiki they have nothing to be proud of such a lineage because they have been treated by the Hindu society worse than street dogs and cats. He describes how an entire community totally depends upon the scrap food of the upper castes in return of their hard but humiliating work. They were responsible for cleaning villages, taking away dead animals etc. from upper caste locality. The entire community had to depend upon the mercy of the upper castes.

Valmiki had to face a lot of humiliation from the upper caste teachers and students as he broke his community's rule by going to school, still he continued his studies. He narrated one such school experience out of many wherein discrimination was very clearly visible. He says: "During the examinations we could not drink water from the glass when thirsty. To drink water, we had to cup our hands. The peon would pour water from way high up, lest our hands touch the glass" (Valmiki, 16). He also writes, "I was kept out of extracurricular activities. On such occasions, I stood on the margin like a spectator. During the annual functions of the school, when rehearsals were on for the play, I too wished for a role but I always had to stand outside the door" (Valmiki, 16) In another such instance he states "Not only did I do very poorly in the lab tests in the board exam, I also got low marks in the oral, even though I had answered the examiner's

questions quite correctly" because he was not allowed to enter inside the lab and was not given permission to perform the tests giving one reason or the other. (Valmiki, 65)

He was able to set his family free of the traditional scavenging duties by getting a government job but was still not happy with his individual freedom. His heart still was flooded with the painful emotions to see his fellow members of the community doing the same. By writing his autobiography Valmiki renders a great service to his community. As along with his life history he penned down the sufferings and painful experiences of his community. He has mentioned the issue of his autobiography about 'identity' which is also equally concerned about 'caste' as well. He ends his book by writing:

'Why is my caste my only identity? Many friends hint at the loudness and arrogance of my writings. They insinuate that I have imprisoned myself in a narrow circle. They say that literary expression should be focused on the universal; a writer ought not to limit himself to a narrow, confined terrain of life. That is my being Dalit and arriving at a point of view according to my environment and my socio-economic situation is being arrogant. Because in their eyes, I am only an SC, the one who stands outside the door.' (Valmiki, 134)

Unlike Dalit men, only a few Dalit women have written their autobiographies. Most of these have been written in regional languages. A big hurdle in this is their lack of education. Illiterate women cannot write their autobiography, but given a chance, can narrate their joys and sorrows to one who can help them to document their voices. Talking about the social reform movement of nineteenth and twentieth century which has a limited agenda. The concern was to reform some of the social evil practices that existed in the upper caste Hindu families targeting women. A few examples like child marriage, sati ban, purdah system, widow remarriage etc. clearly suggest that these reforms were not addressing issues related to lower caste women. Thus, Dalit women were left out from the social reforms as well though they were the one who needed it most. Later with some enlightened projects Dalit women got an opportunity to organise themselves and voice their issues. Education

was given the top priority so that they can derive benefits from such programmes. Phule was perhaps the first person in India to set up a school for Dalit girls in 1848 in Poona. He was very well accompanied in this project by his wife Savitribai who helped her to run this school. As a consequence they had to suffer many hardships and social boycott from their community and outside but they worked whole heartedly for the liberation of dalit women.

Apart from education, new social practices were introduced among Dalit women which challenged the hegemony of upper caste people and helped to bring revolutionary changes in their day-to-day lives. For example, Narayan Guru encouraged women from the pulaya community in Kerala to cover the upper parts of their bodies which they were forbidden to do by the Brahmins. This new practice, gave Dalit women some dignity and self-respect. Ambedkar too mobilised a large number of Dalit women to join in the various phases of his movements. To name a few the historic Mahad Satyagraha of 1927, the Nasik Satyagraha of 1930 and his conversion to Buddhism in 1956. All his movements were concerned to achieve equality and social justice. These women were inspired by B.R Ambedkar and Phule's movement. According to Ambedkar in one of his speeches,

'I am conscious of the fact that if women are conscientized the untouchable community will progress. I believe that women should organize and this will play a major role in bringing an end to social evils ... The progress of the Dalit community should be measured in terms of the progress made by its women folk. Every woman should stand by her husband, not as his slave but as his contemporary, as his friend. (Dr. B.R. Ambedkar, speech to the Dalit Mahila Federation in 1942).'

Urmila Pawar's *Aaydan* was originally written in Marathi and later was translated in English. She is a self-made woman. From her autobiography we come to know that she went through very difficult and hard phases in her life before she became an established writer in Marathi. In her writings she is critical about how Dalit women are badly treated in her community. The language she uses is very rural and earthy. She has even used the local dialect

mostly in her creative writings. She is in fact of the opinion that,

'Any language is beautiful because it reflects the human mind. Language is an important part of social life. So every spoken language should be a part of literature. It is not that only codified language is the privileged language of literature. Society is divided into languages and castes and section has different experiences and these should be welcomed.' (25)

Her writings were objected by men and they even warned her not to focus on men of her community. This was mentioned as,

"You write, but write about how the upper castes misbehave with us. But it is not nice to point out shortcomings of our men" (24)

'*Aaydan*' generally means weaving of cane baskets. The concept of weaving baskets plays a very important role in this autobiography. As weaving the bamboo baskets was the chief occupation of her mother and the community as well, It shows that they have seen utter poverty, hunger and destitute. Their economic condition was so poor that she could hardly afford school uniform and had to repeat the clothes for three to four days. When she was in fourth class she got a scholarship of twelve rupees which she has not seen in her life time. Her teacher asked her to get a new frock and told her about the importance of cleanliness and hygiene. When Urmila told her mother about the scholarship her reaction was described as,

'Aye was weaving her baskets as usual. She did not see me when I crossed her and entered the house. Her face looked worried. She was engrossed in her own thoughts and her fingers flew over the basket. Going to her, I told her about the scholarship and held the twelve rupees before her. Suddenly her face lit up with a sunny smile and eyes sparkled' (Pawar, 91)

Urmila had to face terrible personal tragedy as well, the untimely death of her son (p. 297) and husband (p, 317). This is what make her work more for betterment of herself, her community and society. She writes,

'My head would be swimming in the clouds of lofty ideas such as making dalit women speak and write about their lives, which could be published (p. 278).'

The theme of caste discrimination and untouchability has been portrayed in this autobiography. After the death of her father she

has to bunk school many a times to help her mother financially. She also feel humiliated when other students of her class used to bring nice dishes in their tiffins. She remembers an incident of her life in school when her classmates planned to cook food in the school, and every student was to bring something from their home like rice, lentils etc. She was told to bring money "You must bring some money" (107) instead of any eatable because she belonged to an untouchable Dalit family. She was not allowed to touch anything though they sat together to eat but again she was mocked and whispered in the group about her eating.

'They did not allow me to touch anything. However, we all ate together. I really enjoyed the meal. The next day I was horrified to hear that my eating had become the hottest topic for juicy gossip. Girls were whispering in groups about 'how much I had eaten' (Pawar, 110)

Urmila was poor in English and her English teacher once scolded her saying, "This is English, the milk of tigress; it is not easy like acting in plays" (160) it was her school, family environment and the social situations that inspired her to improve their financial condition and social status.

Exploitation of women was another theme in the autobiography. Daughter-in-laws were exploited to the maximum. Women were not given equal food to eat while men got comparatively better food. That is why it was difficult for girls to control on the sight of food. Urmila describes one such incident when she went to a wedding at her sister-in-law's place with her two niece. They jumped over the food like gluttons and the cook got angry on repeatedly asking for the rice and called them monster. Urmila refused to have more food as she could not digest this word monster. This is another emotionally traumatic experience wherein someone is constantly being judged on asking for more food. It is described as,

"However, when we three spout girls sat down to eat and begun asking rice repeatedly, the cook got angry, 'Whose daughters are these anyway?' He burst out. 'They are eating like monsters' then someone answered 'they are from our Sushi's family! Daughters of Arjun master!' On hearing this, the host came forward. Oh! Are they? All right, all right let them eat as much as they want. Serve them

well. The cook returned with more rice but being called monster was not easy to digest and we politely declined. (Pawar, 117)

Apart from this Urmila has mentioned about her personal moments to her readers. Sharing any kind of personal moments is undoubtedly a very gutsy move for anyone especially women, but Urmila overpowered her emotional side and gathering all the courage she narrated how she felt after getting married and the impoverished condition of her husband's home:

'The tiny room with its peeling walls, the single iron bed with its creaking iron strips, the smelly, moldy mattress with hard lumps of cotton, the dirty, stained, old bedspread, the flat hard pillow smelling like a naphthalene bag.... The sharp yellow strip of light from the bulb piercing the eye'. (Pawar, 18)

Urmila Pawar emerged as a bold woman who kicked out the problems coming her way in life and career. She continued her studies, kept writing also and raised voice against many prevalent customs and rituals which she considered were not good for women. Sonali Rode has rightly said, "Urmila Pawar's *Aaydan* describes her long journey from Konkan to Mumbai bringing the struggle of three generations for a Dalit modernity about which readers have heard so little." Because of the hardships and circumstances in her life Urmila Pawar became an iron woman and found her path herself, she raised her voice for the emancipation of Dalit women and rejected the traditional set of rules devised by patriarchal society. She has mentioned in her concluding paragraph of her autobiography:

'Life has taught me many things, showed me so much. It has also lashed me till I bled, I don't know how much longer I am going to live, nor do I know in what form life is going to confront me let it come in any form; I am ready to face it stoically. This is what my life has taught me. This is my life and that is me'. (Pawar, 320)

Baby Kamble's autobiography *The Prisons We Broke* has very deep concerns regarding the discrimination on the basis of caste. She has mentioned some incidences which throws light on the cancer of caste. On one hand dalits are untouchables but on the other hand all the works of upper castes are done by dalits only. It provides a graphic insight into the

oppressive, caste and patriarchal tenets of the Indian society, but nowhere does the writing descend to self-pity. It transcends the boundaries of personal narratives and is at once a sociological treatise, a historical and political record, a feminist critique, a protest against Hinduism and the sordid memoir of a cursed community. (The Hindu)

The self-assertion can be felt in these lines:

When the Mahar woman labour in the field, the corn gets wet with their sweat. The same corn goes to make your pure rich dishes. And you feast on them with such evident relish! Your palaces are built with the sweat and blood of Mahars. But does it rot your skin? You drink their blood and sleep comfortably on the bed of their misery. Doesn't it pollute you then? And you have been flogging us with the whip of pollution. This is all that your selfish religion has given to us. But now we have learnt how worthless your religion is. (Kamble, 56)

Baby Kamble has also described about the marriage ceremony of the Mahar community in her autobiography. The bride's family had to perform all the rituals and bear all the expenses. Another main issue which has raised in her autobiography is child marriage. The girls were married at a raw age. She herself was the victim of one such marriage and was married at the age of thirteen. Girls were sent to their in-laws place and had to face violence and go through suppression. At the age of eight or nine they had to prepare bhakris for the family. How the conversation goes on is described as:

'Attyabai, come and see what is happening here. Didn't you think that I'd brought the daughter of a good woman into my house? Look at the bhakris this slut has prepared. She cannot even make a few bhakris properly. Oh, well what can one expect of this daughter of a dunce'? (Kamble, 94)

They were expected to do all the household chores silently without any complaints. If somehow they returned their parental home their parents too scold them and were sent back to their in-laws place. During the course of narration through her autobiography Baby Kamble has thrown light towards a world that is identified by 'difference in location'. And it not only geographically different but socially as well. In the narration her love for her community is visibly reflected that to without

glorifying their traumatic emotional condition. Though she has very subtly and transparently showcased the internal psychological trauma of the people of her community.

One more example which reflects the pure emotions of a women is how they wanted to dress up. There have been occasions and moments wherein every woman wants to showcase the best of their beauty side and otherwise also. But just imagine if any such caste rule is imposed on anyone related to clothing then it is actually a restriction which is seen in the present context as well as some things never dies at the core and are somehow keeps on transferring to generations. One such incident is narrated in this autobiography. It appears in text as,

'They wore the saris in the traditional way, the front pleats taken through the legs and tucked behind. There were caste rules even for how one tucked the pleats. Mahar women had to tuck them in such a way that the borders remained hidden. Only high caste women had the privilege of wearing their saris in such a way that the borders could be seen. A Mahar woman was supposed to hide the borders under the pleats; otherwise it was considered an offence to the high castes. Their foreheads were smeared with huge kumkum marks. Their blouses were also made from rags'. (Pawar, 54) Bama's *Karukku* is considered to be the first Dalit autobiography written in Tamil. Through her narrative Bama condemns all forms of oppression be it caste, class or gender. It represents the traumatic experiences and a search for their identity. She tells many instances where she has to face the problem of caste discrimination. She asks:

Are Dalits not human beings? Do they not have common sense? Do they not have such attributes as a sense of honour and self-respect? Are they without any wisdom, beauty, dignity? What do we lack? (Bama, 27)

But at the other hand Bama's autobiography shows us a very positive insightful example of how the young generation are turning into true social beings following their culture, rituals and sharing some common experiences of their community. She explains the situation by giving an example of one of the games which young children used to play. It was noticed that the play replicates the social relations and

discrimination in some way as the 'high' and the 'low'. One pretends to be a 'Naicker' and rest of them as labourers. The former would humiliate the others and often insults them as well in an imaginary situation working in a field. She further explains the scenario with more examples which states,

"Sometimes we played at being nuns and priests who came and gave us blows. Then we played at being married and setting off on a bus journey; the husband coming home drunk and hitting his wife; the police arriving and beating him up". (49)

This excerpt from Bama's autobiography has both the positive and negative experiences of the community. On one side it talks about the pain and humiliation of the Dalit people both men and women and on the other side it beautifully narrates about all the attempts of the community people to deal, overcome and survive with dignity amidst this exploitation which in turn has become an integral part of their culture.

Conclusion

To conclude whether it is a male or female autobiography, geographical location of Dalit people plays an important role. Valmiki's *Joothan*, Bama's *Karukku*, Kamble's *The Prisons We Broke and*, *Urmila Pawar's The Weave of My Life*, all these autobiographies open with the geographical difference that dalits live in a separate place away from the main area where high class or upper caste people live and were not allowed to take part in social activities. Baby Kamble's *The Prisons We Broke* elaborately documents both the mental and physical tortures the Dalit women had to undergo in their daily lives. If the Mahar community comes under the category of 'other' for Brahmins, then Mahar women become the 'other' for the Mahar men. The emotional turbulences of Mahar women are also highlighted in all the texts which shows that emotionally also women were abused. Dalit autobiography, like Dalit literature has to go a long way. It has to be written, published, translated, read and analysed to break an age-old wall of silence to achieve the desired and required effect and impact.

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ANALYSIS OF COPING STRATEGY TOWARDS COVID WARRIORS**N. P Devadiga¹, Geethashree K² and P. S. V. Rao³**^{1,2,3}Department of Commerce & Management, Acharya Bangalore B-School, Bangalore, Karnataka-560091**ABSTRACT**

The world has facing huge pandemic because of Covid-19 Virus. COVID Warriors are all public healthcare providers including community health workers, who may have to be in direct contact and care of COVID-19 patients and who may be at risk of being impacted by this. During the work time covid warriors has faced more stress because of restless working, not able to meet their family members, sleepless days, fear about the virus etc... in this situations what kind of strategies has following them to overcome the stress and how effectively protect the people against the virus. In this study focused on various coping strategies of covid warriors during the pandemic duration.

Keywords: People, Protections, Covid-19 virus, Covid-Warriors, Pandemic.

Introduction

Coronavirus disease 2019 (COVID-19) has had an enormous covid warrior's health impact. In addition to its serious physical health consequences, the virus and the resulting societal changes have had major impacts on the mental health of warriors. The virus has introduced new stressors (e.g., fears of virus, concern for loved ones' affecting the virus, economic uncertainty, social distancing) and challenges.

Covid warriors may find it more difficult to cope with existing problems in the context of new restrictions, or the pandemic may have introduced entirely new problems into their lives. In our view, understanding how individuals are responding to problems in their lives could be important for several reasons. First, individuals who are seeking advice (e.g., about how to navigate stressors relating to the pandemic) may be interested in learning about the coping strategies that others have found most effective (i.e., those that people have perceived as most helpful in coping with stress). Such strategies could also be included in outreach activities and could inform efforts to provide mental health advice to the public. Second, mental health experts could prioritize evaluations of strategies that are commonly used, and those that are consistent with evidence-based practices (EBPs) could be promoted. Third, mental health professionals, policymakers, and public health officials could benefit from understanding the specific problems, stressors, and challenges that people perceive as most important during times of immense stress, such as this crisis. Research activities and funding targeted at problems that

are commonly reported could be especially useful in combating the current crisis. Fourth, even beyond the COVID-19 crisis, such research could help us better understand adaptive ways of responding to stressful circumstances. Even under normal circumstances, researchers have been highly interested in emotion regulation, coping with stressors, and resilience in response to difficult circumstances. While the COVID-19 crisis represents a unique period in human history, some of the insights acquired during the COVID-19 crisis may generalize to other kinds of stressful situations. In summary, an assessment of top problems (i.e., the problems that people perceive as most stressful) and coping strategies (i.e., the strategies people are engaging in to handle stress) could have practical implications during the COVID-19 crisis while also generating knowledge that extends beyond the pandemic.

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It was first identified in December 2019 in Wuhan, China, and has resulted in an ongoing pandemic. The virus is primarily spread between people during close contact, most often via small droplets produced by coughing, sneezing, and talking. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illnesses.

Covid Warriors of India is a belief system wherein we wish to enshrine, enlighten, kindle, empower the indomitable spirit of fearlessness and Nationalism in every child of our great motherland India against this modern-day adversary with the golden statement “Rise, Awake, Stand-up, fight fearlessly with undeterred faith in oneself”. Together we shall bring a paradigm shift in this hour of need of Global pandemonium and mayhem. Covid19 has signed, scorched every soul nationally and globally, physically economically emotionally, and most importantly destabilized, derailed, traumatized and disoriented everyone psychologically.

REVIEW OF LITERATURE

J Med Virol, (2020) Different Natural factors prompted fast early transmission elements, and this made Wuhan the flashpoint of the pandemic. In 2018, Wuhan had a reported Populace of 11.08 million; this made Wuhan one of the main five most populated urban areas in China.

Health worker (2020) A report on the Pan American Health Organization (PAHO) declared that nearly 570,000 COVID-19 infections and at least 2500 death among HCWs across the region by September 2, 2020.

Health worker (2020) India reported 87,176 contaminations and 573 deaths among F-HCWs by August 29, 2020. However, there still exists a lack of official data reported by the responsible bodies.

Olim R, Asad A, Khan MU, Shah s (2020) That has put the F-HCWs at a higher risk of infection, further leading to increased risk to the patients. Meanwhile, Nepal also reported the 1st COVID-19 case among F-HCWs (a nurse) on May 12, 2020, which has increased to 986 F-HCWs with at least 2 deaths on October 13, 2020. The knowledge, attitude and practice (KAP) regarding pandemic among healthcare workers have been reported differently in different studies.

Li J, Shen X (2020) COVID-19 infection among local F-HCWs was common at the initial stage of the disease outbreak in Wuhan. However, the infection rate was reduced to nil among the F-HCWs, who were deployed from different provinces to combat COVID-19—the

reason they reported having infections at the initial stage was negligence and lack of knowledge

Papagiannis D, Malli F (2020) also reported that the lack of knowledge among F-HCWs is the causative factor for disease infection & transmission. A similar study from Greece found that a high level of knowledge among healthcare workers was significantly associated with a positive attitude and practice towards preventive health measures.

Albarrak AI, Mohammed R (2020) Unfortunately, the shortage of PPEs, such as facemask, face shield, gloves, goggles, and gown, during this COVID-19 crisis are the major problems faced by not only the developing countries like Nepal, but also the developed world like the USA, UK, and Italy. Being a developing country, an adequate supply of PPEs is a tremendous challenge in Nepal. Even if the government or local bodies supplied PPEs, especially the facemask and gown, the quality could not be assessed as most of them are prepared by local factories in an emergency situation. In this survey, only 56.4% of the participants were using PPEs. Most of them were using facemask, gown, and gloves. A negligible amount of N95 respirators were available for the F-HCWs.

IANS (2020) an article Published “This is a troublesome time. We are likewise confronting forceful responses from the patients however we feel for them. We can’t meet anybody, nor can they. We attempt to assuage them. This is a troublesome time for everybody,” said Dr. Anushruthi, a Delhi occupant yet has not had the option to see her relatives for a considerable length of time.

Ashutosh Mishra (2020) A cop’s hand was slashed off and barely any others were harmed when a gathering of Nihangs supposedly assaulted them at a vegetable market in Punjab's Patiala locale on Sunday, police said. The episode occurred when limitations are set up in the state because of the COVID-19 lockdown. Four cops including SHO have been harmed in the conflict. An ASI’s hand has been hacked off right now.

Nihangs (2020) an article Published Police in India have been utilizing power against Individuals violating isolate laws after the Administration declared a 21-day lockdown of

1.3 Billion individuals to contain the spread of the Corona virus. wellbeing scientists have cautioned that beyond what a million people in India could be tainted with the infection by mid-May.

AasMohdKaif (2020) Maharashtra Police on Thursday turned to a surprising method to rebuff the individuals who were discovered damaging Covid-19 lockdown guidelines in Bibvewadi territory of Pune. The police work forces were seen causing the violators to perform yoga. The violators were seen on a morning stroll on Thursday morning when the whole country has been set under a severe lockdown and residents are asked not to step out of their homes except if exceptionally critical.

Hindustan Times (2020) A doctor in the Indian city of Bhopal, Madhya Pradesh, who lives in 'vehicle isolate' to keep his Family protected simply won the web after his Photo, became a web sensation a week ago on Twitter. Dr. SachinNayak who works in JP Hospital in Bhopal has been remaining in his vehicle so as to shield his family from getting contaminated with the novel corona virus.

Statement of the Problem

During the pandemic duration, most of the people/ volunteers were worked as covid warriors includes; doctors, nurses, health department workers, front line workers (FLW) and police people. They were worked for people welfare and protect them from corona virus by continuous working hours without sleep and staying away from family made them stress and restlessness. Even taught they have more stress; they made more effort in controlling and by coordinating with patients/ public. So, in this study the researcher made an attempt to know what kind of stress they had and how they overcome and managing pandemic.

Scope of the Study

The study is only restricted to Bangalore. And it focuses on covid warriors includes; Doctors, nurses, front line workers(FLW), police people.

Objectives of the Study

1. To find out perceived stress by covid warriors
2. To assess the psychological impact on covid warriors
3. To analysis the risk factors of covid warriors during the pandemic situation.
4. To analysis the coping strategy used by covid warriors to overcome from pandemic.

Research Methodology

Research methodology is the specific procedures or techniques used to identify, select, process, and analyze information about a topic. It explains the various steps that are generally adopted by a researcher in studying the problem along with the logic behind them and also why a particular method or technique are used, so that the research results in study's overall validity and reliability.

Sampling Design

The questionnaire was issued to collect data from respondents. The researcher adopted questionnaire for obtaining the information, data were collected form every unit of the population, which is to complete set of items, which are of interest in any particular situation. The results obtained from questionnaire method are likely to be more representative, accurate and reliable.

- (a) **Sampling method:** The researcher has adopted judgmental sampling method under the non-probability sampling techniques.
- (b) **Sampling size** the total number of respondents contributed for the study was 100

Method of Data Collection

Primary Data

- **Source:** Primary data are the first-hand information, which are obtained by a study specifically designed to fulfil the data needs of the problem to handle. They are original in character.
- **Method:** Primary data was collected from the covid warriors through a questionnaire.

Secondary Data

Secondary data are those, which have been already discovered by others. It is the data collected for some purpose other than the problem at handle. Before starting the study,

the researcher read the existing literature and learnt what is already known of the general area in which the specific problem falls. The

coping strategy on covid warriors' relevant materials and the website are the sources of the secondary data.

DATA ANALYSIS

Occupation/Profession

PROFESSION	NO OF RESPONDENTS	PERCENTAGE (%)
Doctor	24	24
Municipal Officer	20	20
Nurse	29	29
Police	27	27
Total	100	100

(Source: Primary data)

From the above Table 6 and graph No 6, the study found that out of 100 respondents 24 of the respondents are doctor and 20 of the respondents are municipal officer. The other respondents are categorized under nurse and

police to 29% and 27% respectively. From the data, it is clear the above profession are the respondents shown more interest on this coping strategy on covid warriors project.

The Perceived Stress Category

PARTICULARS	NO OF RESPONDENTS	PERCENTAGE (%)
High	48	48
Moderate	35	35
Low	17	17
Total	100	100

(Source: Primary data)

From the above table 8 and Graph 8, It is clear that out of 100 Respondents maximum percentage that is perceived stress category is Moderate of 48%. According to the remaining

perceived stress category of an covid warrior is high 35% of respondents and 17% of low perceived stress as per respondents.

Daily Life Has Become More Challenging

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE (%)
Never	8	8
Very Rarely	18	18
Sometimes	29	29
Very Often	29	29
Always	16	16
Total	100	100

(Source: Primary data)

INTERPRETATION

From the above table 9 and Graph 9, it is clear that out of 100 respondents the maximum percentage that daily life as became more

challenging is 29% by sometimes and very often. And the remain are 18% by very rarely, 16% by always and 8% by an never is an response received by an respondents.

Feel Financially Insecure During Covid-19

PARTICULAR	NUMBER OF RESPONDENTS	PERCENTAGE (%)
Never	10	10
Rarely	28	28
Sometime	31	31
Often	19	19
Always	12	12
Total	100	100

(Source: Primary data)

From the above table 15 and graph 15, it is clear that among 100 respondents 31% says sometimes and 28% by rarely and 19% often and 12% always and 10% never is an respondents received by an respondents.+

It is clear that maximum number of respondents are facing financially insecure due to the current covid 19 pandemic.

Facing The Quality Time You Spend With Your Family Has Been Compromised

PARTICULAR	NUMBER OF RESPONDENTS	PERCENTAGE (%)
Not At All	10	10
Not Very Much	37	37
Yes, To Some Extent	30	30
Yes, definitely	23	23
Total	100	100

(Source: Primary data)

Duty Shift and Actively Managing Public/ Patients During the Pandemic

PARTICULAR	NUMBER OF RESPONDENTS	PERCENTAGE (%)
<4 Hours	5	5
4-6 Hours	21	21
6-8 Hours	31	31
8-12 Hours	28	28
>12 Hours	15	15
Total	100	100

Source: (Primary data)

From the above table 17 and graph 17, it is clear that among 100 respondents 31% of respondents working/ duty shift belongs to 6-8

hours, and 28% by 8-12 hours and 21% by 4-6 hours and 5% by <4 hours.

Feeling Down Depressed Or Hopeless During The Pandemic

PARTICULAR	NUMBER OF RESPONDENTS	PERCENTAGE (%)
Not At All	13	13
Not Very Much	40	40
Yes, To Some Extent	34	34
Yes, definitely	13	13
Total	100	100

Source: (Primary data)

From the above table 18 and graph 18, it is clear that among 100 respondents 40% are feeling not very much and 34% by yes, to some

extent and 13% by not at all and 13% by yes, definitely was a response received by a respondent.

Having Feeling Stressed What Activity Do You Resort

PARTICULAR	NUMBER OF RESPONDENTS	PERCENTAGE (%)
Exercise	12	12
Listening To Music	21	21
Yoga And Meditation	24	24
Watching Movies	15	15
Talking To Friends	17	17
Reading Books	11	11
Total	100	100

Source: (Primary data)

From the above table 19 and graph 19, it is clear that among 100 respondents 24% of respondents resort from yoga and meditation and 21% by listening to music and 17% by

talking to friends and 15% by watching movies and 12% by exercise and 11% by reading books. It is clear that maximum number of

respondents resort stress from the yoga and meditation.

Strategies Used by AnCovid Warriors to Break the Chain

PARTICULAR	NUMBER OF RESPONDENTS	PERCENTAGE (%)
By Lockdowns	16	16
By Containment Zones	29	29
By Vaccination	23	23
All The Above	32	32
Total	100	100

Source: (Primary data)

From the above table 20 and graph 20, it is clear that among 100 respondents 32% respondents says all the above and 29% by containment zones and 23% by vaccination and 16% by lockdowns. It is clear that maximum number of respondents says to break the chain is containment zones, by vaccination and by lockdowns.

Ever Felt Depression/ Upset About Covid Warriors

PARTICULAR	NUMBER OF RESPONDENTS	PERCENTAGE (%)
Never	3	3
Very Rarely	29	29
Sometimes	30	30
Very Often	23	23
Always	15	15
Total	100	100

Source: (Primary data)

As per the table 30% of the respondents are feeling depressed sometimes to be as covid warriors and 29% respondents are very rarely feeling depression to work as a covid warriors.

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE	
Daily Life Has Become More Challenging	Never	8	8.00
	Very Rarely	18	18.00
	Sometimes	29	29.00
	Very Often	29	29.00
	Always	16	16.00
	Total	100	100.00
Feeling Nervous, Anxious to Work as Covid Warrior	Never	13	13.00
	Seldom	24	24.00
	Sometimes	42	42.00
	Always	21	21.00
	Total	100	100.00
Sleep Quality Is Rated By An Covid	Terrible	14	14.00
	Poor	29	29.00
	Fair	24	24.00
	Good	28	28.00
	Excellent	5	5.00
	Total	100	100.00
Worrying Too Much About Different Things	Not At All	7	7.00
	Not Very Much	40	40.00
	Yes, To Some Extent	37	37.00
	Yes, definitely	16	16.00
	Total	100	100.00
reasons for getting fear	Fear Of Spreading The Infection To Your Family Member	47	47.00
	Staying In Quarantine After Being Exposed To A Covid Positive Patients	32	32.00
	Fear Of Controlling Public / Patients	21	21.00
	Total	100	100.00

Findings

- The majority of the respondents 48%, perceived stress category is moderate.
- Out of the total respondents 29% were sometimes and very often that their daily life has become more challenging due to the current covid pandemic.
- The majority of the respondents 42% feeling nervous anxious to work as covid warriors.
- The sleep quality rate of the respondents belongs to 29% poor.
- Out of total respondents 37% are trouble concentrating on things.
- The majority of the respondents 40% are worrying too much about different things as covid warriors.
- 47% of the respondents have the fear in their mind during the pandemic about fear of spreading the infection to their family members especially elderly members.
- Out of total respondents 31% feel financially insecure by sometimes in the pandemic.
- The majority of the respondents 37% feel that the quality time spend with their family has been compromised due to the current covid 19 Pandemic is not very much.
- 31% of the respondents duration of duty shift belongs between 6-8 hours per day.
- Out of total respondents 40% feeling down depressed or hopeless.
- The majority of respondents 24% resort the stress by yoga and meditation activities.
- 32% of respondents to break the chain the strategies used by covid warriors by containment zones, by vaccination, by lockdowns.
- Out of total respondents 30% is neutral for age is risk factor for a covid warriors.
- The majority of respondents 30% felt depressed/ upset about the violence on covid during the pandemic.
- 39% of respondents are opinion is no, for the facilities and schemes made by the government are received.
- Out of the respondents 37% is positive attitude towards covid 19 prevention and protection is moderate.

Suggestion

- The suggested modifications including good quality PPE, bring strict law on assaulters of doctors, need of 24 x 7 helpline number and psychological counselling for doctors who are stressed.
- Issue related to no break hours made them restlessness, the strict rules from government for working hours of an warriors should be divided on shift bases.
- Proper safety measures for covid warriors should be implemented and to be followed regarding the work environment includes; sanitizing, maintaining distance and by getting vaccinated.
- Stress related to physical and mental health should be relaxed by an activity includes; yoga, meditation, exercises, proper sleep, listening music etc.

Conclusion

Due to the pandemic, government has taken so many initiatives to protect the people, in that one of the initiatives only appointed as covid warriors. The study has been conducted in Bangalore-Karnataka, to understand covid warriors' situations and how they are overcome the stress.

Doctors to know their perceived stress and also the problems and possible ways of overcoming it, in the context of on-going COVID 19 pandemics. They were also worried about various psychosocial aspects of the disease including violence on them and the most affected were doctors working in ICU and emergency services. Despite the well-known limitations of such response, we believe that our findings are applicable to implement with proper requirements of covid warriors. We believe the findings of this study can help positively influence Governmental authorities, professional organizations and hospital management to take the lead and establish mechanisms at multiple levels to support doctors' financial security, ensure adequate access to PPE at work and set up dedicated helplines and counselling facilities for those needing them.

In our study, respondents had at least one of the psychological symptoms of stress, anxiety, and depression. Resident doctors and nurses had a higher incidence of psychological symptoms. The presence of chronic illness was

significantly associated with psychological symptoms. Increased use of avoidant coping strategies correlated with severe anxiety and depression. HCWs work at a position of great responsibility which could make them more vulnerable to psychological impact. Thus, ongoing psychological interventions for dealing with psychological symptoms and enhancing adaptive coping skills are vital to reduce the psychological distress of the HCWs and to enable them to effectively continue their essential roles on the frontlines. However, our study has certain limitations. First, the data were obtained from self-reported questionnaire which is susceptible to some bias in responses. Second, HCWs at only one covid warriors were included and the participation was voluntary. we recommend promotion of mental health among all health-care professionals. Lessons learnt from previous pandemics show that having clear guidelines, policies and procedures, occasional drills and having knowledge of how they fit into the whole operation reduces worry and anxiety-provoking uncertainty among health-care workers. Psychosocial programs that are mindful of

providing services for the families of health-care workers and lending cellular phones, laptops, or tablets to health-care workers and their families to ensure they can maintain ongoing communication, can go a long way in protecting their morale. They should keep themselves updated about the latest COVID-19 guidelines provided by the World Health Organization and Center for Disease Control and Prevention as well as national policies to reduce worry arising out of lack of knowledge in handling such cases. Health-care professionals should look after their mental health by avoiding substance abuse and excessive caffeine, practicing relaxation techniques, working in evenly spaced shifts with opportunity to rest in between whenever feasible keeping in mind scarcity of trained workforce. Deaths and errors should be analyzed objectively instead of blaming or shaming members of the team to reduce risk of self-harm/mental stress in health-care professionals. Hence, the sample size was small. And only restricted to mental and physical health of a covid warriors.

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A RESEARCH EXPLORING WAYS OF SOLVING YOUTH VIOLENCE THROUGH NON-VIOLENCE: EVALUATING CRITICAL APPRAISALS OF PEACE LEADERSHIP PARADOXES IN POST PANDEMIC ERA

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ABSTRACT

Leadership is an inevitable part of post-modernism. Peace leadership plays a decisive role in the betterment of any organization. Strategic peace leadership can solve the dire socio-economic and cultural threats such as youth violence, drugs trafficking, gender injustice, depression, etc., that are endangering the twenty first century civil society. A capable leader guides his/her organization on how to be focused on the actions that are the most needed at that point of time. Leaders set direction, build an inspiring vision by creating new dimensions of peace. During trailblazing conditions and crisis, the leader has to be proactive and predictive in order to make the right decisions even at uncertain times. The disorienting effects of COVID-19 on our daily lives, global health and on our economic activities have so emotionally overwhelmed people that the pandemic has had a negative impact on their mental health. A large-scale crisis such as COVID-19 strips the leadership back to its most fundamental element to make a positive difference in people's lives. This can trigger a range of physiological and psychological responses that will include heightened sensitivity and distress. It can also create a mass scale trauma responses, as collective fears and existential threats disrupt equilibrium and social isolation which weakens the bonds that normally provide emotional support. For leaders, this significant uncertainty exacerbates the challenges associated with decision making and requires a rapidly adaptive response not usually associated with leadership in more 'business-as-usual' times. Leadership in an uncertain condition and its adverse effects are addressed.

Keywords: COVID-19, Drugs Trafficking, Gender Injustice, Leadership, Peace Leadership, Post Modernism, Socio-Economic and Cultural Threats, Strategic Peace Leadership, Twenty First Century Civil Society, Youth Violence.

Introduction

Professor Warren G. Bennis quotes, “Leaders are people who do the right thing, managers are people who do things right”. Leadership is about mapping out where you need to go to win as a team or as an organization. Leadership is to maintain a *dynamic equilibrium* in the organization. He is the most dynamic, exciting and inspiring person guiding the people to the right destination in a smooth and efficient way. A Leader will create an inspiring vision, motivates and inspires people, manages the delivery of the vision and coaches and builds a team to achieve the vision. The pandemic has accelerated a trend that has been unfolding over the past few years. It has been particularly intense, pushing the leaders to make decisions for which they had no previous experience and do so quickly. The inability to deal with stress and trauma can exact a human toll on individuals and portend dire consequences for organizations. An organization mired in collective fear and focused on control will not

unleash the creativity and innovation necessary to navigate a crisis and emerge healthy on the other side. Enhancing the capability to work well during the crisis is vital. As it is also addressing how to meet the leadership outcomes during the crisis, Also, in order to increase the agility and insight of the workforce, now remote.

The year 2020 will be remembered as the year of the most significant global pandemic. Leaders across all the sectors have been required to respond to both direct and indirect effects of this crisis, with little time for preparation, and in a constantly changing environment. To succeed in this new era of value creation, leaders need new skills and capabilities to tackle the crisis conditions.

Women's empowerment and youth empowerment are the most effective weapons for growth in India, as women and youth all over the world are actively working as leaders and exceeding others in many sectors of life these days. Women and the youth are the nation's forerunners. Women and youth who

make up half of the world's population, are highly valued in Indian culture. According to a UN survey, women and youth account for half of all human resources, making them the second most valuable human resource behind men with high potential.

The importance of education in achieving success cannot be overstated. Women's empowerment would become more important if they were better informed and educated. A woman must be aware of her rights in order to walk alongside males. Mother Teresa, IndraNooyi, PratibhaPatil, Kalpana Chawla, and many others have made important contributions in their fields and are role models for women in India and around the world. The word "*Women Empowerment*" refers to the power bestowed on women who share equal rights. The concept speaks to women's liberation from socioeconomic dependency constraints. Women account for roughly half of the country's population, and the majority of them remain economically dependent on one another in the absence of employment. In the age of feminism, a small number of women in India have gained the freedom to use their free will and carve out their life as they see fit.

One of the methods to promote the message of women's empowerment is through education. No matter how wealthy or large our country is, without proper education, our inhabitants' hopes and dreams would remain unfulfilled. Education not only educates a person, but it also helps her see her value as a contributing member of society. The effective application of education will secure a variety of things, including occupational success, self-awareness, and satisfaction. Women can choose their employment and establish career trajectories with the support of guidance and counselling supplied through education. Education will allow women to handle the difficulties of today's technological age by providing them with scientific and technological expertise. It also aids them in obtaining information from all around the world via the computer. A woman's education not only teaches her, but also empowers her to make decisions and assume responsibilities in her household and in the wider society. Education enables a woman to comprehend her rights to equal treatment as a man in this country's society.

Solving Youth Violence with the help of Non-Violence: Paradoxes of Peace Leadership in the Post Pandemic Era

Education frees the mind and exposes it to possibilities that would not be considered otherwise. Hence, the youth of today must be both mentally and spiritually educated to lead the world. A paradox involves contradictory but yet interrelated elements that exist simultaneously and persist over time. These paradoxes are not new to the leaders, but they are becoming increasingly difficult for them to manage. There are namely six paradoxes to be mentioned which are becoming increasingly important for the leaders to navigate. These are not the only paradoxes leaders face, but the ones most urgent in today's context and will remain important in the future.

These paradoxes should be considered as a system, they impact each other and all need to be balanced simultaneously.

"*Ten Years to Midnight*" written by Blair Sheppard, addresses the six Paradoxes of Leadership. They are as mentioned below:

1. Strategic Executors;
2. Humble Heroes;
3. Tech-Savvy Humanists;
4. Traditional Political, Cultural cum Socio-Economic Innovators;
5. High-Integrity Politicians;
6. Globally Minded Localists.

These are some of the most common Paradoxical Characteristics of Leadership which are elaborately dealt with in this research article.

Strategic Executors

A Leader who wants to be the successful in his business has to be a good Strategic Executor. They too have clarity about what the new world will look like and what their company's place in that world is going to be. Strategists know that there are lot of gaps, holes, and challenges in their strategies. It is their tireless efforts to keep a critical eye on the viability of their plans and stay curious continuously and questioning themselves to know whether they are in the right track.

An executor cum efficient administrator should know that he/she must earn a seat at the strategy table to add value. They must actually move

things forward by providing relevant and thoughtful considerations that strengthen the strategy. They are visionaries who can step back from the day to day socio-economic, political, and cultural threats to see where the world is headed, understand how value can be created in the future in ways that are different from that of the present day, and stake out a powerful position in the post-modernist society.

They need to be able to translate strategy into specific executional steps so that to see execution through to the end. They also need to be able to make rapid operational decisions in order to help deliver the path to the future. They need to own the transformation of the company needed to reach the future.

Humble Heroes

This digital age actually calls for hero leaders and people who are willing to make bold even in times of uncertainty and risk. The paradox is that more than ever our leaders feel like they need to behave like heroes exuding confidence in these anxiety-inducing times. But having confidence is not the same as the arrogance to presume truth or unwillingness to change course when insurmountable challenges arise. Leadership in this context requires to take advice from many quarters, ask for help when it's needed, and make decisions based on a variety of inputs. Leaders should need deep personal resilience to admit when they are wrong and also allow others to make mistakes, and foster confidence throughout the organization to stimulate ongoing success. They need to be smart, make timely decisions and navigate through failure are the critical opposing characteristics our leaders need to possess, so that they will enable people to experience their leaders as humans.

Tech-Savvy Humanists

Today's world, where technology replaces the human workforce, it is crucial to discern what is best done by people versus what is best done by machine. It is also concerned about how the two should work together most efficiently and to deliver the greatest impact. Leaders should possess traditionally technical skills to understand technology and work with people in today's scenario. The leader's role is to steer

and nurture the success of the business, by doing so they offer a better future for their people. In today's context, that means balancing being technically savvy with a focus on humanity.

Traditional Political, Cultural cum Socio-Economic Innovators

To succeed in today's world, innovation is a non-negotiable part of any business. Leaders create momentum and by building the culture that will drive their organization into new areas, technologies, methods, products and services.

Innovation is one of the most crucial elements of the competitiveness of the economy in the future. Innovation capability is one of the most important determinants of any organizational performance. It means that there are an ability and motivation to undertake a continuous search and to apply the results of this research, new ideas, concepts and inventions.

Additionally, it encompasses boosting and developing production processes and operating technologies also used in services, the application of new solutions in organization and management, advances in the development of infrastructure, and most importantly, accessibility to information.

High-Integrity Politicians

Politics is a harsh reality in any organization. Within political science, honesty in politicians is an example of a valence issue – something on which all will agree that “more is better than less”. This is not to say that all are politicians to be honest all the time. Leaders are expected to be good politicians who need to make compromises, be flexible in tweaking their approach and go one step back to be able to go more steps forward.

However, they can only be successful if they establish trust and integrity as the bedrock of all their actions. Customers are willing to share privileged insights and participate in ecosystems only when they can trust how their data is used and how they are treated.

Globally Minded Localists

Global-minded leaders are those who understand the world's most daunting challenges, are aware of cultural, religious and socioeconomic differences, and can facilitate

dialogue and solutions that foster opportunities for humanity. The world is rapidly changing, that educators are struggling to keep up and constantly looking for ideas and perspectives.

Globally-minded leaders are the pillar that established the Academies. Global-mindedness stems from a good sense of people's history, their language, their culture, their heritage.

At the same time, leaders in the digital age also need to be deeply aware of and responsive to the situation and preferences of individual customers and to the local communities and ecosystems in which they operate. Customers, partners, and institutions expect companies to be responsive to their specific needs, and leaders will certainly have to adopt a locally conscious mindset.

Conclusion

In each crisis, the resilience of people is under pressure. A crisis will always require a leader who score high on keeping employees and organizations resilient and flexible. These leaders generate a warm human connection among their employees. They are leaders not only because of 'what they have accomplished' but because of 'who they are'.

After a crisis, you notice that it is precisely these leaders who have looked to the future, have listened carefully to the market and have invested in their people. Their company and

their offer in the market will prevail. Leaders understand better what to do during and especially after the crisis. They are leaders with sense-making qualities. They know very well where they want to go, what they want to achieve and also how they are going to get there.

Any form of empowerment begins with education and awareness. Because of the development in education, women's desire for emancipation of their human and civil rights is progressively declining. Education for women is critical to the country's overall growth. It is reasonable to consider education to be the development of half of a society's or nation's human resources. This example demonstrates the importance of female empowerment and education in improving the quality of life at home, outside, and even within a country. The most significant weapon for empowering women in society is education. It is not just confined to the development of an individual's personality, but it also has a significant impact on economic, social, and cultural growth. Generations can be shaped by an educated, liberal, independent, and professionally successful woman. Only a society that educates and empowers women can be considered advanced. It is past time for us to recognize that education is a woman's birth right.

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A STUDY ON NEED RECOGNITION FACTORS OF RURAL CONSUMER OF PUNJAB**P. Tikku¹ and S. Singh²**¹IKGPTU, Jalandhar, Punjab²USB, Chandigarh University, Gharuan, Mohali, Punjab¹82prerna.singh@gmail.com, ²76satinderpal@gmail.com**ABSTRACT**

A big percentage of Indian population resides in villages and this in turn provides a big opportunity to FMCG companies for marketing their products. Marketers conduct many marketing activities to influence the decision making of the consumers in their favour, so that they are able to grab a major market share for their product. Need recognition which is the first step of decision making process is very critical step for marketers. An effort has been made through this study to gain an insight on factors triggering need recognition in rural consumers. For this study the data of 400 respondents is collected with the help of well-structured questionnaire method. Statistical tools like Independent sample T test and Anova are used for analysis. From this study it is clear that customers have different opinion among them for various factors of need recognition. This study also discovered that promotional offer like price discount plays a major role in recognising the need for FMCG products among rural consumers. This study also forms a platform for developing various marketing strategies which can help in effectively responding to consumer needs.

Keywords: Consumer Behaviour, Pre purchase, Need Recognition, Rural Consumer.

Introduction

Consumer behaviour can be defined as the behaviour exhibited by the consumer while searching, purchasing, consuming, assessing and disposing any product or service which the consumer feels will satisfy their needs (Schiffman and Kanuk (2004)). According to Lamb, Hair and McDaniel (1992) consumer behaviour is the study of methods or routes that consumer follows to take any decision related to purchase, usage and disposal of the purchased product. It also includes studying the factors which have an impact on the purchase decision of goods and services. Consumer Behaviour can also be defined as the study of the processes used by consumers to take decisions related to what product to buy to fulfil their needs and also the manner in which the product is to be used and then disposed (Hair and McDaniel 1992). These days consumer behaviour is a very sought after area of study as it helps the marketers to understand the reasons or factors which influences the customers to act in a certain manner and choose a product/ service to fulfil their needs. This helps the companies to improvise their strategies and achieve greater results.

Consumer decision making process can be understood as the series of stages which a consumer undertakes while taking a decision of choosing a product to fulfil their needs (Philip Kotler, 2003). The very first stage of decision

making process is need recognition or problem identification, this happens when a consumer comprehends that they want or need something. An imbalance is created between consumer's present state and their preferred state. This particular imbalance will give rise to need and to fulfil this particular need that consumer will purchase a product. Factors like customer motivation, past experience, personality, social influences form the present state and the preferred state of consumer (Mahatoo, 1985). Consumers needs can occur because of two kinds of stimuli- internal and external. Internal stimulus is something which is a very basic impulse and on the other hand external stimulus is something which happens because of external influences. (Alina Stankevich, 2017). Need recognition is very important as it signals a customer readiness to act. By mere realisation of the need the process of consumer decision making shall not start and continue, but only if consumer believes that a solution is available to his problem and the need or problem is important to the consumer, only then it will continue (Baker, 2000). By collecting information from various customers marketers can find out the stimuli that frequently sparks interest of consumers in a particular product category and develop marketing strategies accordingly (Kotler, 2003). A big challenge faced by marketer these days is how to motivate or influence the purchase

decisions made by the consumers in their favour. Hence the understanding of consumers need recognition or problem identification gives an insight on the consumer's thinking patterns, their selection criteria's, how consumers surroundings and background influence his/her decision making. Every individual is a consumer and hence takes various purchase related decisions every day. It is vital to have an understanding of the factors which influence buying decisions of the consumers (Alina Stankevich, 2017).

In today's times marketers combine customers' social, psychological and demographic data to analyse consumer's decision making so as to have a better understanding of the consumers. Such data helps to give an insight to the marketers' about the life style of consumers and which in turn will help the companies to segment the most appropriate customer whom they should target for better performance and productivity (S.Prem Kumar, 2013)

Review of Literature

(Vibhuti, Ajay Kumar Tyagi, Vivek Pandey, 2014) studied the factors influencing the consumer buying behaviour regarding FMCG and decision making process. They concluded that factors like place, price, product, and promotion, psychological and physiological factors influence the consumer buying behaviour and decision making to a great extent. (Disha Chhabra, Asma Farooque, 2018) stated that factors like promotion, product, place etc. affect consumer decision making process and it is expected that in future more innovative channels could be found which will help in innovating new products and services to satisfy customer's needs and wants. This result were drawn after conducting a study on the factors affecting the consumer buying behaviour as well as decision making process of consumers. (Andrej Miklosik, 2015) studied the changes in consumer decision making process due to digitalisation. The study was conducted over Slovak Republic and respondents for this study was selected from various different socio economic background. His study shows that due to the digital age the consumer decision making behaviour is changing as now the consumer has access to plethora of information. Reviews

about the product spreads very fast. The time taken by people for each step of decision making has shortened as compared to earlier times which means that due to digital channels consumers are taking quick decisions as compared to what it was earlier. (Adunola Oluremi Oke, 2015) studied consumer decision making process for green tea in Thailand. The data for the study was collected from 50 consumers and statistical tools like chi-square, correlation analysis was used to find the results. It was found that the factors impacting consumer decision towards green tea are brand awareness, brand association, brand loyalty. It was also seen that factors like taste of product, ease of purchase, flavours, packaging also influence consumer decision process. (Yap Wai San, Rashad Yazdanifard, 2014) conducted a study to compare the decision making or young consumers and older consumers. It was observed that the younger generation are very much involved in the buying decision and hence are opinion leaders whereas the older generation requires motivation for making purchases and trust word of mouth the most. (Ann-Charlotte Ewerhard, Karel Sisovsky & Ulf Johansson, 2019) studied the consumer decision making process for consumer good. An endeavour was made to study decision making of consumer, retailing through multi-channel etc. Findings of the study showed that multi channels had an impact on the consumers' decision making process and customers used various devices and channels in various phases of decision making process. (Suraj Verma, Kuldeep Chand Rojhe, 2018) reviewed the criterias used for evaluating the consumers purchase decisions for FMCG products. The study is exploratory in nature. It was revealed that the main criterias for evaluation are quality, brand, price, lifestyle, packaging, advertisements etc. Factors like consumer's educational qualification, accessibility and awareness of products also plays a key role in consumer decision making process.

Zaltman and Wallendorf (1979) used two theories for model building for consumer recognition of needs. First theory i.e., Maslow's theory of need hierarchy and the second is McClelland theory of needs. Maslow's Theory says that needs can be

classified into various categories depending on their importance or priority in hierarchy. Consumers firstly fulfil those needs which are of higher order than those which are of lower order in the hierarchy. As per McClelland theory, needs are learned by consumers. Bruner (1985) opined that whenever a consumer realises a difference between his current state and expected state, this is a time when need recognition is experienced by the consumer. Mahatoo (1985) said that whenever a consumer realises that there is a difference between his current state and preferred state, a need arises. (R. Vijayalakshmi, Dr.T.R.Gurumoorthy, 2019) investigated the consumer decision making process for FMCG. The study was conducted over 200 respondents who were selected based on non-probability convenience sampling method. Descriptive statistics and Chi Square was used for analysing the data. The study shows that quality is the most important factor which encourages a lot of customer to choose a particular product over others. The study also concludes that there is a significant relationship between need recognition and demographic factors like gender, age etc. (S. Prem Kumar, 2013) analysed the impact of consumers educational qualification on need recognition with respect to cars. Primary data was collected from nearly 400 respondents and simple random sampling was used for collecting the data. Statistical tools like one way ANNOVA has been used to conduct the study. It was found that a higher degree of need recognition for cars is experienced by consumers whose educational qualification is up to graduation.(S. Prem Kumar, 2013) analysed the impact of social class on need recognition of consumers. The results showed that family necessity was the most important factor influencing the need recognition of the consumers followed by comfort, transportation facility etc. It was seen that social class has no impact on the need recognition of customers in cars of small segment. Consumers who belong to upper middle class have higher need recognition for cars as compared to other classes.

Scope of study and Research Gap

About 70% of Indian population resides in rural areas, which is a massive market for

FMCG products. Indian rural market has huge potential and is yet to be fully tapped. Need recognition is the first and foremost step of consumer decision making process. As rural consumer is very different in their needs and wants from the urban consumers hence the factors triggering the need recognition of rural consumers are different. This study analysis various variables which influence the need recognition behaviour of rural consumers. The results of the study can be beneficial for the marketers of FMCG sector as they will be able to understand the factors realising the need of FMCG product to rural consumers.

According to the review of literature, it can be observed that hardly any research has been done to analyse the need recognition pattern for rural consumer of Punjab.

Objectives of the Study

- To analyse the factors influencing the need recognition of rural consumers of Punjab for various FMCG products.
- To ascertain the impact of promotional offers on need recognition of rural consumer of Punjab for various FMCG products.

Research Methodology

Both primary and secondary sources of data collection were used for the current study. Questionnaires were administered for collecting primary data from the rural consumers of Punjab and sources like indexed journals, research paper publications, and various government reports were studied to gather secondary data. The current study adopts a descriptive research design methodology. The data was collected from 400 respondents chosen through convenient sampling with the help of well-constructed questionnaires. All the respondents for this study have been selected from the rural population of Punjab. For analysis statistical measures like factor analysis, T test, ANOVA is applied with SPSS. For this current study Descriptive Research Design has been used

Analysis and Interpretation

Section (A): Factors influencing need recognition of rural consumers of Punjab

An attempt has been made to study the factors which have an impact on the need recognition patterns of rural consumer of Punjab for FMCG products. The need recognition of rural consumers of Punjab consists of 9 variables i.e., Changes in Ecological Condition (NR1), Changes in monetary condition (NR2), Rising awareness about FMCG(NR3), For health benefits (NR4), To look stylish (NR5) , To reduce the harmful effects of pollution (NR6),

To adapt to changing lifestyle of society (NR7), Marketing activities of FMCG companies (NR8), To impress others (NR9) . The reduction of these factors is accomplished by applying Factor Analysis using Principal Component Analysis Method.

KMO and Bartlett’s Test is applied to check the data adequacy for the study. Table I shows the results of the test.

Table No I: KMO and Bartlett’s Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.736
Bartlett's Test of Sphericity	Approx. Chi-Square	1053.729
	df	36
	Sig.	.000

From the above Table No I it is evident that data is adequate enough as KMO test value is .753. Further the sig value of Bartlett’s test of sphericity suggests that correlation among the variables with the factors are statistically significant.

Reduction of factors is performed during factor analysis and the contribution of variance before and after rotation is also found. Table No II shows the same for need recognition variables.

Table No II: Total Variance Explained

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.362	37.355	37.355	3.362	37.355	37.355	2.269	25.207	25.207
2	1.497	16.634	53.988	1.497	16.634	53.988	2.101	23.349	48.555
3	1.041	11.568	65.556	1.041	11.568	65.556	1.530	17.001	65.556
4	.769	8.541	74.097						
5	.711	7.900	81.997						
6	.536	5.956	87.953						
7	.426	4.736	92.690						
8	.374	4.155	96.844						
9	.284	3.156	100.000						

Extraction Method: Principal Component Analysis.

From the above Table No II it is clear that total factors extracted by using principal component analysis method are three and before the rotation the variances contributed by these factors are 37.355 %, 16.634 % and 11.568 % and after rotation the variances contributed by

these factors are 25.207%, 23.349 % and 17%. It is found that three factors are contributing to 65% of the variations.

Variable loading on the three extracted components after rotation are shown in below Table III

Table III Rotated Component Matrix

	Variables	Component		
		1	2	3
NR1	Changes in Ecological Condition	.860		
NR2	Changes in Monetary Condition	.757		
NR3	Rising Awareness about FMCG	.641		
NR4	For Health Benefits		.665	
NR5	To look Stylish		.717	
NR6	To reduce the harmful effects of pollution		.789	
NR7	To Adapt to Changing Lifestyle of Society		.490	

NR8	Marketing Activities of FMCG Companies			.677
NR9	To impress others			.854

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

From the above Table No III it is clear that Changes in ecological condition (NR1), Changes in monetary condition(NR2), Rising awareness about FMCG(NR3) form factor 1 which is named as Consumer Condition and Awareness whereas for health benefits (NR4), to look stylish (NR5), to reduce the harmful

effects of pollution(NR6) and to adapt to changing lifestyle of society NR7 form factor 2 named Health and Lifestyle and marketing activities of FMCG companies (NR8) , to impress others(NR 9) form factor No 3 named Marketing and Customer impression.

To understand whether there is any significance difference between the means of Gender of the people and the various need recognition factors, T-Test is applied at 5 % significance level in the below table no IV.

Table 4:T-Test between Gender of Respondent and Need Recognition Factors

Factors	T Test for Equality of Means			
	T	Sig(2- tailed)	Mean	
			Male	Female
Consumer Condition and Awareness	-1.419	.157	3.60	3.71
Health and Lifestyle	-2.224	.027	3.71	3.87
Marketing and Customer Impression	1.625	.105	3.49	3.35

From the above table no IV it can be seen that significance difference exists between males and females realising the need for purchasing FMCG on the factor of “Health and Lifestyle” as sig. value is .027 which is less than .05. As the mean of females (3.87) is greater than the mean of males (3.71), hence it suggests that females are more towards agreement that health and lifestyle factor influence their need recognition for FMCG products than males. On factors “Customer Condition and Awareness”

and “Marketing and Customer Impression” there is no significance difference between males and females for their need recognition for FMCG products as their sig value is .157 and .105 which is greater than .05. This also means that on these factors males and females have same opinion.

Moreover, below table no V shows whether there is any significance difference between the means of Marital Status of the people and need recognition factors for FMCG products.

Table V: T- Test between Marital Status and Need Recognition Factors

Factors	T-Test for Equality of Means			
	T	Sig(2- tailed)	Mean	
			Unmarried	Married
Consumer Condition and Awareness	-2.695	.007	3.51	3.73
Health and Lifestyle	-2.851	.005	3.65	3.87
Marketing and Customer Impression	.339	.735	3.44	3.41

From the above table no V it is clear that there is significance difference between the unmarried and married people realising the need for buying FMCG on “Consumer Condition and awareness” factor as its sig. value is .007 which is less than .05. As the mean of married people (3.73) is more than mean of unmarried people (3.51), hence it signifies that married people are more influenced by consumer condition and awareness as compared to unmarried people. Next there is also significance difference

between unmarried and married people on health and lifestyle factor as its sig. value is .005 which is less than .05. Also as the mean of married people (3.87) is greater than mean of unmarried people (3.65), this suggests that married people are more towards agreement that “Health and Lifestyle” factor influence their need recognition for FMCG as compared to unmarried people. On factor “Marketing and Customer Impression” there is no significance difference between married and unmarried people as sig. value is .735 which is greater

than .05. Hence, it suggests that married and unmarried people have same view about this factor.

Furthermore to know that whether there is any significance difference between mean of

different kinds of families and factors of need recognition, T-Test is applied as in below table no VI.

Table VI: T- Test between type of Family and Need Recognition Factors

Factors	T-Test for Equality of Means			
	T	Sig(2-tailed)	Mean	
			Nuclear	Joint
Consumer Condition and Awareness	.329	.743	3.67	3.64
Health and Lifestyle	1.452	.147	3.86	3.75
Marketing Activities and Customer Impression	2.100	.036	3.53	3.35

From the above table no VI it can be seen that there is significance difference between the people living in joint families and those living in nuclear families on the factor “Marketing and Customer Impression” as its sig value is .036 which is less than .05. Also it is observed that the mean of nuclear family (3.53) is greater than mean of joint family (3.35), this suggests that people living in nuclear families are more towards agreement that marketing activities and customer impression on others influence the need recognition for FMCG products. Further on factors “ Customer Condition and Awareness” and “ Health and Lifestyle” there is no significance difference between the people living in joint families and people living in nuclear families as there sig value is .743 and .147 which is greater than .05. Hence

people living in joint families and nuclear families have similar views regarding this factor.

In order to find out whether there is any significance difference between the various age categories of rural consumer of Punjab and factors of need recognition for FMCG products, one way ANOVA has been applied, whose results along with descriptive statistics are as in Table No VII(a).

To understand which age category of rural people of Punjab are influenced more by which need recognition factor, multiple comparison of various categories of age have been done using Tuckey HSD Post Hoc test. Its results are as in Table no VII (b). The results of both Table no VII (a) and Table no VII (b) have been discussed together.

Table No VII (a): One Way ANOVA between different age categories of rural people of Punjab and

factors of Need Recognition.

Factor	Age	N	Mean	Std. Deviation	ANOVA	
					F	Sig
Consumer Condition and Awareness	Below 20	58	3.43	.949	3.862	0.004
	21-30yrs	120	3.54	.784		
	31-40 yrs	92	3.78	.731		
	41-50 yrs	86	3.84	.634		
	Above 50 yrs	44	3.65	.704		
	Total	400	3.65	.772		
Health and Lifestyle	Below 20	58	3.70	.757	4.768	0.001
	21-30yrs	120	3.65	.771		
	31-40 yrs	92	3.99	.612		
	41-50 yrs	86	3.94	.636		
	Above 50 yrs	44	3.61	.780		
	Total	400	3.79	.721		
Marketing and Customer Impression	Below 20	58	3.47	1.047	1.926	0.105
	21-30yrs	120	3.41	.747		
	31-40 yrs	92	3.28	.789		
	41-50 yrs	86	3.60	.825		
	Above 50 yrs	44	3.28	.898		

Total	400	3.42	.843
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Table No 7 (b): Tuckey- HSD Post Hoc test for multi comparison between mean values of different age categories of rural people of Punjab

Dependent Variable	Age (I)	Age (J)	Mean Difference (I-J)
Consumer Condition and Awareness	31-40 yrs	Below 20	.350*
	41-50 yrs	Below 20	.412*
		21-30yrs	.301*
Health and Lifestyle	31-40 yrs	21-30yrs	.334*
		Above 50 yrs	.378*
	41-50 yrs	21-30yrs	.284*

From Table No VII (b) it is seen that for factor “Consumer Condition and Awareness” people belonging to age category of 31-40 yrs (mean =3.78) are more towards agreement than people who fall in the age category of below 20 years and believe that consumer condition both ecological and monetary and consumer awareness about FMCG products influences their need recognition for FMCG products, with the mean significance difference of .350. Moreover, for the same factor people in the age category of 41-50yrs (mean =3.84) are more towards agreement than people falling in the age categories of below 20 yrs (mean = 3.43) and 21- 30 yrs (mean = 3.54) and believe that consumers ecological and monetary condition and consumer awareness for FMCG products motivates need recognition for FMCG products in them with mean significance difference of .412 and .301 respectively.

Likewise from Table No VII (b) it is clear that for factor “Health and Lifestyle” people belonging to age category 31-40 yrs (mean=3.99) are more towards agreement as compared to people falling in the age categories of 21-30 yrs (mean= 3.65) and Above 50 yrs (mean =3.61), they agree that

health and lifestyle reasons influence need recognition for FMCG products in them with mean significance difference of .334 and .378 respectively. Similarly, it is observed that for the same factor people from the age category of 41-50 yrs (mean = 3.94) are more towards agreement than the people in the age category of 21-30 yrs (mean =3.65) and believe that health and lifestyle factors influence need recognition for FMCG products in them with mean significance difference of .284.

From Table no VII (a), it is observed that no significant difference exists between the age of rural consumers of Punjab with respect to the need recognition factor “marketing and customer impression” as its significance value is .105 which is greater than .05 and hence people of age categories have same opinion about this need recognition factor.

Similarly, to ascertain whether there is any significance difference between the various occupations of rural population of Punjab and the factors of need recognition for FMCG products, one way ANOVA is used , the results along with descriptive statistics are as in table no 8.

Table No VIII: One Way ANNOVA between different occupation categories of rural people of Punjab and factors of Need Recognition.

Factors	Occupation	N	Mean	Std. Deviation	Std. Error	F	Sig.
Consumer Condition and Awareness	Homemaker	53	3.64	.691	.095	1.264893	0.278287
	Private Job	119	3.68	.740	.068		
	Govt Job	76	3.71	.750	.086		
	Agriculture	81	3.72	.758	.084		
	Student	58	3.43	.949	.125		
	Own Business	13	3.67	.638	.177		
	Total	400	3.65	.772	.039		
Health and Lifestyle	Homemaker	53	3.84	.685	.094	0.385577	0.858677
	Private Job	119	3.78	.630	.058		
	Govt Job	76	3.86	.789	.090		
	Agriculture	81	3.79	.798	.089		
	Total	400	3.79	.798	.089		

	Student	58	3.70	.757	.099		
	Own Business	13	3.75	.654	.181		
	Total	400	3.79	.721	.036		
Marketing and Customer Impression	Homemaker	53	3.26	.886	.122	0.612088	0.690705
	Private Job	119	3.45	.755	.069		
	Govt Job	76	3.39	.742	.085		
	Agriculture	81	3.48	.831	.092		
	Student	58	3.47	1.047	.137		
	Own Business	13	3.27	1.092	.303		
	Total	400	3.42	.843	.042		

From the above table no VIII it is observed that no significant difference exists among the occupation of rural people of Punjab and various factors of need recognition “consumer condition and awareness”, “health and lifestyle”, “marketing and customer impression” as there significance value is .278,.858 and .690 respectively. The opinions of rural consumers coming from different occupation are the same for the factors of need recognition.

Section (b)--: Influence of Promotional Offers on need recognition of FMCG.

Table No IX: Impact of Promotional Offers

Response	Frequency	Percent
No	87	21.8
Yes	313	78.3
Total	400	100.0

It is evident from the above table no IX that 78 % of the rural consumers are influenced by various promotional offers and hence promotional offers successfully act as a measure to impact the need recognition of rural consumers for FMCG products.

Table No X: Dominant Promotional Offers in Rural Markets

Promotional Offer	Frequency	Percent
Price Discount	232	46.4
Extra Quantity for same Price	134	26.8
Free Gift	134	26.8

From the above table no X ,it is clear that price discounts are the most dominant promotional offer (46.4%) which influences maximum consumers need recognition, followed by extra quantity for same price and Free gifts with

Findings

It is observed that consumers belonging to various demographics profiles have different views and opinions with regard to various factors of need recognition namely “consumer condition and awareness”, “health and

Marketing campaign and promotional offers play a pivotal role in spreading awareness about the FMCG products and influencing the rural consumers with respect to their FMCG need recognition. As rural consumers are quite different from their urban counterparts hence it becomes imperative to understand the behaviour of rural consumers with regard to various promotional offers offered by the FMCG companies. The results of the analysis is as in below table no IX.

FMCG companies bring about various types of promotional offers in rural markets, some of them being price discounts, super saver packs, free gifts etc. Below table gives us the most dominant promotional technique launched in the rural markets.

FMCG products (26.8 %) each .Therefore, FMCG companies should work on framing various price discount offers to attract maximum rural consumers towards their brand products. lifestyle”, “customer impression and marketing activities”. Female consumers are more towards agreement as compared to males with respect to “health and lifestyle” factor of need recognition. Married consumers are more influenced by factors “health and lifestyle”, “consumer condition and awareness” as

compared to unmarried consumers. Similarly nuclear families are more inclined towards marketing activities and customer impression as compared to joint families. Various consumers of different age brackets have same views over “customer impression and marketing activities factor” of need recognition. Moreover the views of consumers from the age category of 31-40 yrs are more towards agreement for “consumer condition and awareness” factor as compared to consumers who are below 20 yrs of age and for consumers in the age category of 41-50 yrs are more towards agreement as compared to consumers who are below 20 yrs of age and consumers from the age category of 21-30 yrs. In case of “health and lifestyle” factor of need recognition consumers from the age category of

Conclusions

This research summarises that the views and opinions of consumers from different demographic profiles are different for various factors of need recognition, like female consumers’ opinion is different from their male counterparts. Married and unmarried consumers have different views regarding “health and lifestyle” and “Consumer condition and awareness” factors. Likewise consumers from different age brackets also have different opinions regarding different factors of need recognition. Price discount is the most influential promotional tool for making the rural consumer realise the need for FMCG products in rural markets. This research gives an understanding regarding the views of rural consumers from different demographics and hence can be fruitful for FMCG companies to design their marketing and promotional strategies accordingly.

Implications of the study

FMCG products are those products which are used in every household on daily basis and

31-40 yrs is more towards agreement as compared to consumers from the age category of 21-30yrs and above 50 yrs. Likewise consumers from the age category of 41-50 yrs is more inclined towards “health and lifestyle” factor as compared to consumers in the age category of 21-30 yrs. Moreover consumers belonging to different occupations have similar views i.e., they think alike for all the factors of need recognition.

Additionally majority of rural consumers need recognition is influenced by various promotional offers tossed by FMCG companies in rural markets. The most prominent promotional offer is found to be price discounts as rural consumers are very sensitive to pricing of the product.

hence has a very huge market potential. Majority of the population of India resides in rural areas which is still unexplored to a great extent by FMCG companies. The results obtained by this research can prove beneficial for the marketers of FMCG companies as it can help them to draft their marketing strategies for rural areas of Punjab. The study shows that female consumers are more towards agreement with respect to “health and lifestyle” factor of need recognition as compared to their males’ counterparts and hence this information can be used by marketers to design their advertisement in such a way that they position their products with reference to health of the consumers. Similarly as the study highlights that rural consumer is very sensitive to pricing of the product hence FMCG companies should offer more frequent price discounts or launch their FMCG product in rural market at lower price as compared to the competitors so as the consumer is attracted to the product and fulfils his need by purchase the FMCG companies product.

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MITIGATING THE EMOTIONS OF THE PANDEMIC PLIGHT: A MINDFUL ODYSSEY THROUGH SHIVAJI SAWANT'S MRITYUNJAYA

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Introduction

The two unforgettable years of mankind are 2020 and 2021. These two years have taught priceless life lessons to human beings. The Coronavirus disease has caused mental and physical destruction among fellow human beings. Negative emotions play dominant roles in this uncontrollable situation. Each individual's reaction to the pandemic crisis is different. A sample of emotions like anger, fear, anguish and agony are those negative and predominant emotions. However, in this predicament, it is important to balance all the emotions for the betterment of the family and the society.

The extreme forms of emotions like sadness, fear, phobia, anger and love are to be managed in an appropriate manner to maintain a healthy mind and body. The emotional aptitude of a person must be strengthened to lead a healthy life. Moreover, it is evident that an individual who is emotionally stable is better in handling difficult situations caused by the pandemic. In addition, such people are in a healthier position to lead a well-knit life in future. Well renowned personalities of Indian history and Indian epics are explicit examples of strong emotional quotients.

Model personalities like Mahatma Gandhi, Dr. A.P.J. Abdul Kalam, Mother Theresa and Nelson Mandela are great personalities with a strong emotional intelligence. The endeavors of these successful personalities were highly productive. Intelligence quotient (IQ) is not the only reason for the success of these respectable personalities. Intelligence Quotient (IQ), combined with Emotional Quotient (EQ) enables one to achieve perfection in life. Dr. Jyotsna Codaty, A General Physician, Gynaecologist and a Transfusion Medicine Specialist says that Emotional Intelligence is the mantra for better human relationships. Codaty writes:

And the new magical word is EIQ-Emotional Intelligence Quotient. The last couple of decades have passed by with an accent on IQ or the Intelligence Quotient, the so called quantifying element of a person's intelligence. Various tests have been used for this purpose, and the resultant figures attached as labels to a person. One was automatically 'slotted'. And since these quantifying tests were constantly happening consciously or unconsciously to people at various levels—from early school days to middle years in the job market—a person tended to have this label attached to him on a permanent basis. (Codaty 12)

Therefore, a person with a balanced Emotional Quotient and Intelligence Quotient achieves perfection in life.

Moreover, the incomparable epic characters from *The Mahabharata* like Kunti, Draupadi, Arjuna, Yudhishtira and Karna are estimable examples with an esteemed emotional personality. The present generation can read these stories to lead a productive and a wholesome life. These innumerable examples from the great Indian epic, *The Mahabharata* are being highlighted to study the behavioural patterns of great personalities, and at the same time, these valuable examples from the epic enables an individual to handle the traumatic experiences of the pandemic with a balanced state of mind.

The main purpose of literature is to project the ways of life. *The Mahabharata*, being the greatest epic in literature, provides various examples to handle terrible situations in life. The demise of a loved one, failures in life, unexpected losses, Post Traumatic Stress Disorder and other mental agonies are common during this pandemic. Shivaji Sawant's *Mrityunjaya*, is the story of Karna's life. In addition, the emotions of Kunti, Vrishali and the Pandavas are recorded intelligibly in this novel. Though these characters had to

experience various obstacles and pitfalls, they were good at using their emotions appropriately. Therefore, these characters were able to contribute for the betterment of the society. Every individual must therefore come out of the emotional shell and contribute for the wellness of the society.

Tragedy is an integral part of life. But one must try to heal these negative emotions and clear the stumbling blocks of the mind to attain a wholesome life. Tragedies are to be accepted with a balanced state of mind. ShivajiSawant writes:

Brave mother, Queen mother, control your grief. One has died; don't lose the five you still have. At midnight I will take you for his darshan. At least, let the secret remain for the time being a secret. She wiped her eyes. When that suffering heroic mother, who had passed through so many tragedies in so many forms, reached the corpse of Karna at midnight, she trembled like a red indrayana creeper in a buffeting storm. Her feet seemed to be rooted on to the earth. I took her hand and pulled her to her dead son by the Sun-God. She did not have the courage to remove her shielding hands from her face. (Sawant 695)

Every individual born in this world has to experience losses and emotional pain. But such incidents must not affect the complete life of a person. One must learn to heal such wounds and proceed with enormous strength. One must lead his life with a purpose. A meaningful life helps an individual to proceed with integrity.

ShivajiSawant's *Mrityunjaya* is a mixture of recorded emotions. It is a wonderful read to know how the great warriors and other characters of the epic tackle negative feelings. Dr. JyotsnaCodaty, in her book *Understanding Emotional IQ* explains how to tackle emotions and these ideas will help an individual to tackle negative feelings in this pandemic predicament:

Yes, feelings are 'those things' that come on to you with a rush. The sort of thing that happens when you cannot burst out laughing-even when you know it is impolite to do so-or to wipe the tear that is threatening to drop on to your cheeks in a little while. What can we do about this sudden deluge of feelings? Can we not, rather should we not, keep them in check for a more private or sometimes more appropriate

occasion? I do not believe so. For that is what we have been doing all the while for the last few decades, and somewhere along the way, lost out on 'something'. That something, scientific research says is the capacity to feel with others, and to feel for others. (Codaty 31)

Codaty makes it clear that one must have a constant check on emotions for a peaceful mind. Moreover, emotions must be named and said aloud to go to the next step of tackling it. Codaty proceeds by writing:

It is time we lifted all the barriers, opened all the floodgates, and let our body in its entirety (mind plus heart) experience all the feelings, totally and fully. The first step in dealing with the feelings is to express them appropriately. That means doing something physical-speaking, writing, crying, shouting, laughing or otherwise, acting out our emotions. (Codaty 31)

Outspoken verbalisation helps in dealing with unpredictable feelings. Literature helps an individual to handle such emotional injuries. There are emotional wounds that do not show on the physical body, but are deeper and more hurtful than anything that heals. Such emotional wounds can be healed by reading or listening to the stories of strong characters from the great Indian epics. ShivajiSawant's *Mrityunjaya* serves the purpose of the study. The deep emotions of the warriors are portrayed in such a manner that the reader or the listener realizes that, pain and tragedy is a part and parcel of one's life.

Karna, the incomparable warrior of *The Mahabharatha*, had to face various obstacles throughout his life. Karna is ill-treated, taunted, insulted, mistreated and manipulated in every stage of his life. In spite of experiencing such painful situations in life, Karna is still considered to be one of the greatest warrior due to his strong will power and tolerance. Tolerance and perseverance is obtained only if an individual learns to tackle the emotions in an appropriate manner. ShivajiSawant projects the power of tackling emotional wounds:

My mind agonized as if beaten by a thorny stick. Who is the lion and who the dog? What is the test? Birth, that's all. How many people are these flaunters of high family flags going to trample under their feet? My veins throbbed and glowed. But controlling myself, I said, "I

am the son of a charioteer. Is that my fault? Can anyone decide which family to be born in? (Sawant 528)

Therefore, it is important to develop a strong emotional self. One must learn to live with a balanced state of mind. In addition, a person must mature emotionally throughout his life. It is time to come out of the shell and think with the heart. The adaptations of *The Mahabharata* helps one to think with the heart, for the heart feels.

Millions of people have endured traumatic experiences for the past two years. Anxiety, fear, depression, grief and isolation are the consequences of the pandemic. Though the vaccines were developed faster than expected, the emotional trauma caused by the pandemic is yet to be healed for a healthy future. Reading or listening to the traditional epics like *The Mahabharata* can ease one's emotional pain. The elderly people can watch movies or series on the epic to ease their stress. On the other hand, youngsters can read the adaptations of the great epics to calm their minds. Some of the adaptations that can enlighten one's mind are Ashok Banker's *The Forest of Stories*, *The Seeds of War*, *The Children of Midnight*, *The Darkness Before Dawn*, *The Eclipse of Dharma*, *The Sons of Misrule* and Shivaji Sawant's *Mrityunjaya*. These stories are powerful tools to get rid of the stumbling blocks of life like sadness and fear.

Moreover, a simple way to heal the wounds caused by the pandemic is affirmative statements. An affirmation strengthens one's

mind and is an effective way to treat mental trauma. Affirmative ideas replace negative emotions caused by the pandemic. In short, it is good to deal with emotional pain by expressing it appropriately. One must be able to grieve but at the same time one must learn to come out of these uncontrollable situations caused by the pandemic. Karna is one such character who is capable of handling the uncontrollable situations of life. Due to these positive qualities like affirmations and visualizations, he was able to convert his adversities into opportunities:

My way was different from those of all the other princes here. Our births decided that. I would learn bowcraft because I wanted to. I also wanted to shoot arrows by sound, and to release countless arrows simultaneously in ten directions. As for having a Guru- what did it matter? What mattered was a pupil's desire to learn. I would be firm in body and mind. I would learn for learning's sake. The vow I took was irreversible. (Sawant 53)

Therefore, Shivaji Sawant's *Mrityunjaya* is a self-help book to handle the extremes of emotions. It exports the reader to an ancient world where the warriors have overcome unbearable pain with a steady state of mind. Similarly, the unpleasant events of the pandemic can be eased by reading priceless adaptations of the epic. It enables an individual to convert the hardships into opportunities. These valuable stories are life lessons that has to be nurtured forever.

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MAKE FOR WOMEN – CAR DESIGN AND ADVERTISING TO SUPPORT EVERY WOMAN TO DRIVE

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ABSTRACT

Women and men drive differently and their attitude to other drivers is also different. This paper examines the biological differences in genders' ability to drive with their attitude and expectation. The spatial and risk taking abilities of men has helped them while women find it difficult to navigate unknown routes and crowded parking space. There is evidence that women are good drivers and have contributed to car manufacturers with valuable innovations that helped them make the car design friendly toward women drivers. These innovations have become the standard in all cars today, yet there exists limitation in the employment and career growth of women in the auto industry. Purchase decision for a car is made differently too with men making the final decision and women seeking assurance from friends and other members of the family. Car makers must utilize the advances in technology to design cars that are female-friendly and communicate through advertisements that make a positive social difference.

Keywords: Driving, Gender-difference, Car-design, Advertising.

Introduction

Women and men differ in their ability and willingness to drive and there are biological implications that must be accounted for before any suggestions are made on how to make cars that more women will want to drive. When the gearless scooters came into the market the biggest beneficiary of the innovation were women and young girls. The same must be done with cars. Self-driving and self-parking cars are yet to make it into the mass market but what can be done now to help women feel safe, navigate complex routes or back into narrow parking space – this becomes an area for car designers to explore till artificial Intelligence becomes as ubiquitous as mobile phones. Much has been done to make cars at low cost and many more innovative efforts have gone into making cars more spacious, luxurious and safe. Most of these changes no longer enjoy returns on investment or differentiation. The competitive space has become cluttered with more of the same and the standardization is so predictable that engineers are in a loop with limited product features to drive differentiation. To understand women would require insights into their biological make-up, the socio-cultural set-up. For several decades now there has been considerable effort on gender equality; the policy movement to bring women into the mainstream has led to demand for car among

women. This offers considerable scope to automakers to design a car that will make women more confident drivers. When it comes to any effort to make cars meant for women the most that can be recalled is the idea to paint it pink. Such announcement of the gender of the driver is known to change the behavior of other motorists.

Objectives

1. To understand whether women are naturally good at driving using biological evidence
2. To discover what made women to drive in the first place
3. To outline the empirical findings that explain the difference (if any) between men and women in driving abilities
4. To suggest Car Design imperatives and messaging techniques to help car adoption among women

Methodology

The literature for this study has been taken from the field of cognitive psychology, anthropology and biology. Research from the field of management studies have been used to understand the standard advertisement copy principles used by automakers. The article reviews from the field of biology was used to determine if there exists any true difference in the ability of men and women to drive a car.

Further investigation was done to determine what influenced the early women to drive and whether such desire is an exception or whether more women want to do the same but are limited by constraints not yet outlined. To determine if men and women exercise different approaches while deciding on the car to purchase is done by comparing and contrasting findings from studies published in the last five years. Once the attitudes have been ascertained, suggestions have been made on features and attributes auto manufactures can include in their car design to attract more women and also, what advertising messages can support the sales; this is preceded with an understanding of the current messaging techniques in car sales. The emphasis is to make women independent and support their career path.

Are men and women biologically different in their ability to drive

The Biological Difference

Human mind is the product of evolution and is wired to help it survive the dangers they were to overcome in their nomadic existence. According to Steven Pinker, "*Behavior is the outcome of an internal struggle among many mental modules, and it is played out on the chessboard of opportunities and constraints defined by other people's behavior*" (Steven Pinker, 2015, p. 44). Women are free to drive but women fail driving license test, are plagued with self-doubt, depend on men in the family for safe transport or are victims of road rage. All this means that women are different and they have to be understood to make them adopt driving. This requires not only a study of male and female attitudes but also the study of underlying biological responses that cause men and women to behave differently, especially in the thick traffic populated by men. Biologically the hormone testosterone in young males gives men the rush to drive fast and take risks. One of the studies in UK showed 40000 men were failed for moving too fast while 30500 were failed for jumping signals (The Economic Times, 2011).

Women with high testosterone level will also show similar behavior – they will smile less and have a firmer handshake among other things. According to a study 'Toward

Understanding On-Road Interactions of Male and Female Drivers (Sivak & Schoettle, 2011), the authors studied different crash scenarios and compared these with expected crashes if there was no gender influence. It was found that in certain crash scenarios male-to-male crashes were underrepresented while female-to-female crashes were overrepresented. The author explained the difference could be due to the difference in exposure or capabilities to handle specific scenarios or due to difference in the driver expectation if they can see the gender of the driver as possible reasons for the higher rate of accident among women although they drive less compared to men. These results alone do not confirm if one gender is biologically superior to the other in driving, it only outlines experience, exposure and expectation as factors that can explain the difference between the two genders' crash reports. In competitive situations men are more likely to act violently or even lethally. As boys they are more likely to practice and excel in games that involves violence and when it comes to the ability to spatial abilities and manipulating three dimensional objects, men have an advantage over women (Steven Pinker, 2019, p. 344). In a study on spatial cognition, computational fluency, and arithmetical reasoning, no difference in IQ between the two genders was found. But when it came to 'arithmetic reasoning mediated by male advantage in both computational fluency and spatial cognition' men had an advantage (Geary et al., 2000). Men compete (often with violence) for status or occupational achievement while women use verbal methods as ways to show aggression. Women feel emotions, except anger, more acutely; they laugh and talk a great deal more than boys. Men are better at mentally rotating objects and maps. Women remember landmarks and position of objects better. For mathematical word problems, men score higher while women do better in mathematical calculations. Men are good at throwing while women are more dexterous; Women have a keen sense of smell and sound, better depth perception, match shapes faster and better at reading facial expressions and body language. Men are more likely to engage in risky behavior and have a higher pain tolerance (Steven Pinker, 2019, pp. 344–345). These

biological adaptations in men and women are demonstrated in how they drive or deal with other drivers and also how they will react under provocation.

Gender Difference in the Ability to park

Ability to park has been studied and the results point to men being faster in parking compared to women. According to a study done by researchers at Ruhr University Bochum in Germany. Incidentally this research finding was reported differently by two different leading newspapers. If an independent research can be understood differently by reporters then the chances of reinforcing stereotypes or overlooking the merits of stereotypes is likely. Economic times reported 'It's Official: Women Worse at Parking' (The Economic Times, 2011) and Hindustan Times, another popular newspaper, reported that women are better at parking than men based on the same research, 'Women are better parkers than men' (Hindustan Times, 2012). The study required male and females with different driving experience to park an Audi 6 into various parking ways. Women were reported as taking longer than men to park - an aspect attributed to the risk taking capabilities of men. Also, the fact that women took longer to back into a parking space did not result in their parking better than men instead considering the space and the time taken, men parked accurately (The Globe and Mail, 2010). Spatial cognition assists men in parking better than women (Wolf et al., 2010). Self-assessment of male and female drivers can become equal with increasing experience i.e. benefits of mental rotation for men can be replaced with the skill training for women.

Gender Age with Risk perception, Safety and Confidence

In another study (Cordellieri et al., 2016) conducted on young people to study the attitude on road safety among male and female aged 18 to 22 across nine European nations. This age was likely to show higher risk orientation across both genders. The respondents answered to scales on road safety issues, driving behavior in hypothetical situations, accident risk perception, and concerns about risks. The authors studied the

difference between perception about road accidents and attitude toward risk. They found that both male and female drivers showed similar risk perceptions, but on matters of concern, males were less concerned about the risk of an accident compared to females. The consequence of an accident bothered males less than females – a possible explanation on the difference in accident rate between the two genders. Women report low confidence compared to men about their driving skills and self-regulation was different for both elderly men and women (D'Ambrosio et al., 2008). Another study (Romano et al., 2008) found that the increase in the number of accidents involving women were not only because more women were driving but because of young women (mostly underage drivers) were more involved in risky driving than the older ones. According to research (Nancy L. Wayne and Gregory A. Miller, 2018) done on novice drivers, there was no impact of gender on driving skills although females were significantly less confident compared to males but it did not result in any difference in the driving skills. However, with increasing age the ability to learn driving also diminishes. In another study the gender of the driver did not correspond to the number of accidents. It was also reported that the higher perceptual motor skills reported by men may be due to the quantity and quality of driving experienced by men. Women were associated with safety skills while skillful driving was associated with men (Özkan & Lajunen, 2006). Even when young men and women were under substance use, women were more likely to retain their lower-risk driving profiles (ELLIOTT et al., 2006).

Gender difference in Navigation

In the ability to navigate to new locations, men and women have different approaches. In a study on college undergraduates from middle and lower middle class, women were more particular about using instructions on how to reach a place than men who followed their orientation i.e. a sense of their position with reference to the environment reference point. In terms of anxiety, women were more concerned about navigation. Ability for orientation among men was directly correlated with spatial ability

and negatively correlated to spatial anxiety common among women (Lawton, 1994).

Gender and Driver Aggression

Aggression among drivers is common, but male and female aggression differs on the basis of context. Aggression is an intention to harm physically or psychologically while driving and aggression is heightened with frustration over others who are driving slowly, badly or causing road congestion. Male aggression has been commonly reported in research studies but female aggression is also visible where women use indirect ways (Social structure or other people) to harm their target and there is no difference in verbal aggression of both genders (Hennessy & Wiesenthal, 2001). They also found that women were more likely to engage in aggressive behaviour when it would be difficult to tell who is behind the wheels. But violent driving behaviour is more likely among men who might show verbal and physical confrontation and do not draw back. Women prefer mild aggression because they want to avoid personal risk or danger and they even endure mild aggression from other drivers. Women were more likely to experience road rage than men. Often men resort to violence over petty reasons such as insults, curse or jostling. Most common offenders of road rage are young and male (Sansone & Sansone, 2010).

From the above analysis of past research there appears some advantage for men on account of spatial abilities and risk orientation. Women are less likely to drive long miles or explore unknown territories without accurate information and this reduces their ability to acquire skills through experience. Culture plays a key role in what men and women are likely to do and while this is true there is also the emotions that will be general standard to a gender no matter which culture the person may come from. According to Steven Pinker, emotions follow the dictates of nature or biology while intellect is the product of civilization. Fear of attack or being lost could be a major reason why many women do not drive, but fear can be overcome with experience (Steven Pinker, 2015, p.386).

The differences mean that there is a need to make cars that empowers more women to drive

given the difference in the spatial cognition and emotions in dealing with road realities like mild and severe forms of aggression.

What made Women Drive – A source for ad inspiration

Women are mostly relegated to passenger seat if men are around. The common perception is that men are better at driving and tend to become impatient when women drive. In the year 1897, thirty-one years before women even got the right to vote, American-born British actress Minnie Palmer became the first woman to own and drive her car. That was the start and many more male bastions in automobile manufacturing and driving had to be challenged before real change could be witnessed. Dorothee Pullinger designed the first car for women that showcased changes such as placing gear levers inside the car, raised seat, better capacity storage space, lowered dashboard and smaller steering wheel. An engineer of such merit like Dorothee Pullinger was once refused entry into the institution of automobile engineers because of her gender (Fleetpoint, 2021). Women like Dorothy Elizabeth Levitt established women into car racing; she advised women to carry gloves, chocolate and a revolver in her 1909 book. Women have fought their way into what can be done in car design to make it accessible to more women yet, women make only a quarter of the workforce in the auto industry. In the Deloitte report (Deloitte, 2020) reasons such as lack of work/life balance, lack of promotion opportunities, and lack of diversity, equity, and inclusion were the main reasons for them to consider leaving the automotive industry. The effort to retain and advance the career of women seem to be the change most women seek from their employers in the auto industry. Clärenore Stinnes became the first woman to brave heat, cold and storm to cover her world expedition in a car. She drove for 25 months in areas that lacked roads or regular petrol pumps or habitation and all this compounded by the absence of google maps (*Pioneering Spirit*, 2021). Women have contributed to the auto industry and recognition of their feats could be one of the messaging themes for advertisers to correct the attitude among the general population that man and machine is sacrosanct. More women should be shown driving with messages that prove that

roads are nicer and safer when more women drive.

Gender Representation and Mobility

Gender representation is how the media presents gender, age, ethnicity, social issues. Media is a powerful influence and all decisions made by it has powerful implications. Factors used by media in making ads can deliver meanings that show women as either dependent or larger-than-life but not asreal to make a social change. The factors that determine how an ad is perceived include choices related to: scripting, editing, camera angles, image cropping or captioning decisions, retaining or removing certain facts, context/setting, the ease in using stereotypes to communicate complex issues with simplified conclusions, the ruling ideologies of the media agency (United Nations, n.d.)

According to the (McKinsey & Company, 2018) report, India has the largest relative opportunity to increase GDP by 18 per cent (\$770 billion) over what comes today with the usual business practice. The factors keeping women from contributing is societal attitudes where the report refers to the World Value Survey which found that in Asia, 45 percent respondents against the global average was 39 percent, felt that when jobs are scarce, men should be given more right than women. The report suggests, 'Reshaping deep-rooted attitudes about the role of women in work and in society,' as one of the measures to ensure more women join the non-farm labour force (*MGI India Parity_Full Report_November 2015.Pdf*, n.d.)

Given the huge GDP loss every attempt to make women part of the workforce becomes necessary. Safe commuting and independence to drive whenever she needs to makes it important for the auto industry to design cars that can help achieve these using the advanced technologies currently available.

Any reason to make women more willing to own a car would rest on her career needs and that does not look too positive. According to CMIE, only 9 percent of all women of working age are employed compared to 67 percent of men. Men continue to be the primary earners and women take up a job only if there are no demanding schedules that keeps her away from

her primary role of care giver in the family. The job loss for women has been more- 49 percent by November 2020 after the lockdown. Although the recovery is happening, finding a job continues to be difficult for women than for men. Labour participation of rural and urban women shows rural women work 11.3 percent against the 9.7 per cent of urban women and this could be because they are more educated and there are not enough jobs to absorb them. Therefore, while education gap is smaller, the job opportunity gap has become wider still. That's discouraging given that the participation of women is already low compared to global standards. By April 2020 the urban female labour participation dropped from 9.7 to 7.35 then to 7.2 in October to a distressing 6.9 in November (CMIE, 2020). Because women (80 percent according to Oxfam) are in agriculture work on an informal basis, there is no data available on the effect of pandemic on them.

Car penetration in India is 10 per 1000 population and is therefore the market with the highest potential. According to the Nielsen report (Chandra, 2014), the number of women buying cars is increasing, owing perhaps to the employment status or lifestyle changes. Purchasing a car is an important decision in a family and a visit to the showroom is often done with the entire family. The decision to use car less than intended after purchase happens on account of traffic problems that robs the family of the joy of driving. When it came to gender differences in car purchase men and women showed different approaches:

- Made final decision on their own : 53% men vs 23% women
- Likelihood of asking spouse and other family members on the car to be purchased : 24%men Vs 48% Women

Conclusion

There are biological differences such as spatial capabilities and risk taking abilities of men that make them navigate the terrain better. There are stereotypes that work as self- fulfilling prophecy for men to continue building their skills while women start with fear of ridicule and insult from other drivers should they fail to adequately demonstrate their command. Road rage, both mild and aggressive work against a woman's desire to drive in crowded streets.

Parking is another area where women have shown a general problem. Value of experience, confidence and good technology to support women should become the core idea in designing car for women. Automakers can design cars with built-in features to help women navigate confidently, feel safe and fix

technical issues. Advertisers must educate men and women on road safety and gender equality. A combination of engineering innovations in auto industry with positive gender messages will improve the adoption of cars among women and thereby improve their image of independence and self-confidence.

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CURRENT STATUS AND PROSPECTS OF VERTICAL FARMING

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ABSTRACT

Vertical farming is a type of farming that is to be done in buildings, warehouses, terrace other than land. Whole world is practicing this type of farming techniques and it is a successful outcome. India is in a trackway to adopt the practice and to sustain with the world technologies. Association for Vertical Farming summit held for the growth of vertical farming and the spread of vertical farming all over the world. The main reason for more rise in vertical farming is Greenhouse gases, Global warming, sudden increase in pollution. Vertical farming leads to more amount of food to be produced in less space more crops to be cultivated more gain to be earned.

Keywords: Vertical farming, Artificial Intelligence, Robotics, Greenhouse gases, Poly houses, Aquaponics, Hydroponics, Aeroponics.

Introduction

Vertical farming is also known as farmstead, farmhouse, and closed plant production system. It is the practice of growing produce in enclosed structures similar to greenhouses. The structures include tunnels, shipping containers, abandoned mine shafts and buildings. IT helps the mountainside towns, deserts and cities grow different types of vegetables and fruits by using skyscraper design and precision agriculture methods. Protected cultivation started a long back in Europe at 200 years ago. Most of the countries in the Mediterranean region such as Italy, Spain and Morocco were used plastic technology for crop production and they utilized greenhouses for production.

Association of Vertical farming summits

First vertical farming summit held at Beijing China in 9-10 May 2015 and discussed the way to resolve the potential lack of resources. As the concept main idea is full utilisation of resources and maximisation of output of a particular crop. It is estimated by 2030 that 800 million people living in China need a safe and stable supply of nutrients. Dickson Despommiers plans a 30-story skyscraper with vertical farming could offer 50,000 Manhattan residents. While the commercial plants for vertical farming are not yet mature in China. Cost of building a vertical farm is extremely high, it ranging from 5000 to 10000 yuan per square meter.

Second Association for vertical farming summit held on 13th June 2016 at Netherlands

and discussed that VF makes our planet as a healthier place to contribute to a stronger economy. It is discussed that technical developments in vertical farming such as hydroponics, aquaponics, artificial lighting and high-tech vertical farming. The aim was to integrate vertical farming in to urban planning. They first time hosted a pavilion and integrated the vertical farming to a larger audience.

Third vertical farming summit held at University of the District of Columbia's Agricultural summit on 22nd September 2017 it enables a rich diversity of companies, city planners, research institutions and governmental bodies to exchange experiences, perspectives and ideas in field of vertical farming. AVF is a non-profit organisation on a mission to foster the sustainable growth and development of vertical farming movement. AVF has valuable ideas but how to put these ideas in practice and gain visibility in policy making is to be checked.

Fourth vertical farming summit is held on 7th September 2018 at Honkong Science Park. They discussed about the vertical farming production business, logistics and technology and they build a road map to connect the producers and consumers for the fresh produce market of vertical farming. The agenda of the meeting is to analyse the current situation and take-up the necessary steps and creative solutions for vertical farming for the upcoming five years.

Fifth vertical farming summit is held on 22-23rd May 2019 hosted an indoor farming conference in Oslo the 2019 Europe Green

capital. The aim is to create more sustainability with the innovation. It concentrates more on Urban mobility, Built environment, leadership, Green Business & Innovation. Its main focus in on indoor farming in cities is the future of the world.

Next vertical farming summit event will be held on 29th July 2021 with the theme of Personalised nutrition through vertical farming, it explores the types of foods that are grown in those areas and how the combination of food, technology and business will exist will be discussed. It also points out the technology and business development of Vertical farming company since 2015. Those traditional seeds give a more impose on giving growers, retailers and consumers. Agriculture consulting will discuss regarding the urban agriculture, water issues and emerging technologies as the firm has more tie-ups with urban agriculture projects with countries.

Review of literature

Uphale, S. *et al.*, (2021) in their article “Hydroponics as an Advanced Technique for Vegetable Farming” the concentration is on the lack of resources such as land & water and droughts in India. As the growing of different vegetables for daily needs is cost effective as there is a high concentration of chemicals and fertilizers used for early growth for large populated countries like India. So, we can easily setup and manage hydroponics setup with the cheaper way in already constructed space.[1]

Sharma, A. *et al.*, (2021) in their study “Utilization of protected cultivation for crop production and preservation in India” it concentrated on technology utilization for protected cultivation and how the crop production, plant propagation to be managed in sustainable agriculture. In India area under the protected cultivation highest in Chhattisgarh, Odisha, Andhra Pradesh, Gujarat, Madhya Pradesh and Maharashtra (Saravaiya *et al.*, 2014, Prakash *et al.*, 2019)[3,4] It also assist institution as well as commercial sector. Effective utilisation of waste land were done by fertigation, in-situ crop preservation, nursery raising, water conservation, micro irrigation (sprinkler and drip irrigation) etc. Most of the protected cultivation techniques such as poly

house cultivation/technology, shade net cultivation/technology. It balances modern agriculture in to smart agriculture and generates employment for human growth.[2]

Bhuvanewari, P., & MG, P. (2021) in their article “SMART INDOOR VERTICAL FARMING MONITORING USING IoT” have proposed that vertical farming is the practice of growing plants in vertically stacked layers or in vertically inclined surfaces and it also uses the zone wise crops production with artificial photosynthesis and internet of things. In indoor farming they make a note of all the data with the help of sensor and if any improvements to be plotted in the system are to be done. Smart way of cultivation to be implemented by monitoring soil moisture, temperature, humidity was performed. Android app interface for remote control of garden functioning and systematic alerts regarding the status of garden is to be known. [5]

Teo, Y. L., & Go, Y. I. (2021) in their article “Techno-economic-environmental analysis of solar/hybrid/storage for vertical farming system: A case study, Malaysia” a pilot study of solar/hybrid/storage system of farming with the support of government first site should be selected and resource such as electricity requirement for the farm for artificial photosynthesis requirement should be checked. If there is more area of cultivation more power to be consumed. A photo voltaic(PV) module should be developed to adjust the power in the solar PV systems. At second stage to convert the DC power from PV arrays to AC power. In the third phase battery energy storage system is classified into electrochemical energy storage system and it is converted in to electrical energy via an electrochemical reaction. Energy will be discharged using several technologies such as lead acid battery and LI-ions battery. Harmful substances such as sulphur dioxide and nitrogen oxide were reduced by 10.2% per year. The systems also produce carbon monoxide, unburned hydrocarbon and particulate matter that accelerate climate change and affect human health. These type of systems to be implemented in less populated area.[6]

Zhang, Z., Rod, M., & Hosseinian, F. (2021) in their article on “A Comprehensive Review on Sustainable Industrial Vertical Farming Using

Film Farming Technology” discussed that in VF growing in racks and beds to maximise grow space per square foot and uses hydroponics to reduce water use. Film farming is a technology that is cheaper in long term usage that is developed in Japan for soilless cultivation by reducing water usage and improves food safety. Compare to aeroponics and aquaponics have higher requirement for maintenance and care. Due to lack of primary production and demand for food is expected to grow even faster in future. Due to lack of land there is a limited supply, VF could be a part of solution to global food security due to its efficient land usage and any factory or warehouse can be used for production. It can also supply fresh, nutritious and safe food from local farmers to local food markets. [7]

Statement of Research Problem and Study Objective

Vertical farming or Vertical agriculture has come in demand due to more population growth and shrink of agriculture labourers and their movement from farmstead to metropolitan cities gave rise to new era in agriculture such as market garden. And the usage of less water, less soil, more output took a leap to the new changes. Recycling is to be done that took a upturn to this concept. It is of no external environment effects such as disease, pests or predator attacks and gives more yield and consistency compare to traditional farming.

Vertical farms are selling those crops in open market and they are earning profits from the farm but in developing countries it is started in practice recently and start-ups have been started for vertical farming and they are observing the farms growth the input and output that came from farm. Farming in India has not that much grown there should be more awareness and more investment is to be needed as the assistance from government also involve high costs to setup the farm and there is a fear to accept new technology that it contaminates the urban area and lack of skills and knowledge in handling the vertical farm systems. But if it is implemented hunger deaths, starvation problems, suicides of farmers will also be decrease if they implement this farming technology in their land.

History of vertical farming

The entire world is verge of population and there is a challenge of feeding the population all over the world. It decreased the percapita land (total land available per person in the country). Agriculture scientists stretched their innovative approaches to develop hybrid/improved high yielding varieties, improved tools and techniques and integrated practices in water, nutrient management and insect ,pest management ,greenhouse technology.[10,11]

In 1915, Gilbert Ellis Bailey formulated the term vertical farming and wrote a book titled “vertical farming”. In the early 1930s, William Federick Gerick introduced hydroponics at the University of California at Berkley. A spiral-shaped rail system ,invented by Swedish ecological farmer for growing plants and for production of vegetables in cities in 1980.[9]In 1999 Professor Dickson Despommierin came with an idea of vertical farming. He conveyed that with the excessive use of pesticides make the agricultural runoff the single most damaging source of pollution. Chemicals manifest their toxic effects in human body it is subtle and implicate in the disease process. To address all these problems an alternative way of production is proposed it grows large amounts with high-rise buildings. It offered practical approach to prevent already natural landscape. First vertical farm project established in 2001 at Mailman School of public health at Columbia University in New York City. It survived almost 4 years and had a worldwide exposure in the internet and accepted worthy of consideration at some practical level. They identified that vertical farming as a solution to global process as diverse as hunger, population growth and restoration of ecological functions and services. [12]

In India ICAR experts worked on the principle of vertical farming in soil less conditions in which crops can be grown in multi-story buildings in metros like Mumbai, Kolkata, New Delhi and Chennai ,Bengaluru without using soil or pesticides ,introduced in 2019 in vertical farming. [14] In India vertical farming can be implemented in buildings, warehouses, rooftops and balconies [13]In order to produce

as much food as possible for hungry stomach the vertical farming concept was introduced. The new concept uses indoor farming techniques and Controlled Environment Agriculture (CEA) technology.

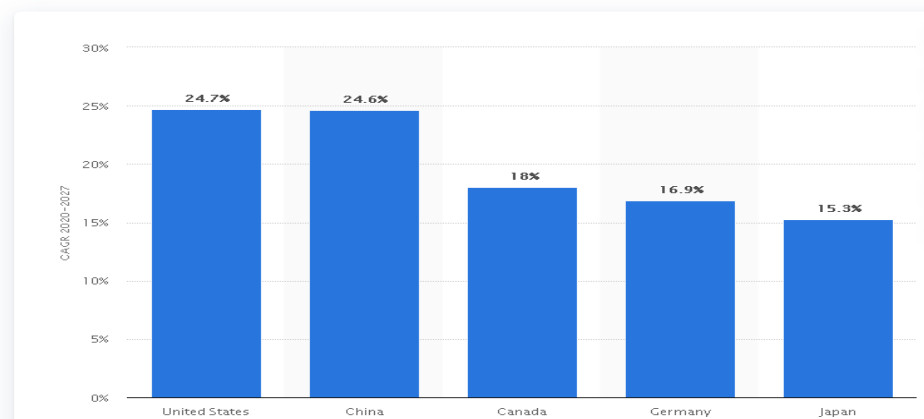
Indoor farming is a modern concept in the form of greenhouse for centuries but in recent years it grown new interest and popularity because of more advantages of indoor farming compared to outdoor farming.As of 2016,2.3 million square feet of indoor farms worldwide it expected to grow between 8.5 million square feet to 16.55 million square feet by 2021.Vine crops such as tomatoes and greens grown in indoor farms is more compared to traditional farms and annual revenue of 175 US dollars

per square foot is generated. (<https://www.statista.com/statistics/273090/worldwide-sales-of-organic-foods-since-1999/>)

Global vertical farming market in 2019 reached some 4.4 billion US dollars but market value expected to increase to 15.7 billion US dollars by 2025.Demand for vertical farming is to be increased due to popularity of organic food. (<https://www.statista.com/statistics/487666/projection-vertical-farming-market-worldwide/>).

Global sales of organic food have increased between 2000 and 2019 from 18 billion dollars to 106 billion US dollars. In 2018 nearly 72 million hectares of organic farms worldwide. In India alone nearly 1.4 million organic food producers more than any other country.

Table 1.



(Source: [https:// www.statista.com](https://www.statista.com))

The compound annual growth rate (CAGR) of the market for vertical farming in US estimated to be 24.7% between 2020 and 2027.During that time, Germany market is forecast to grow at a CAGR of approximately 16.9%.The revenue of vertical farming worldwide in 2018,by technology is hydroponics bought about 1.18 billion US dollar revenue to global vertical farming. In 2018 the market value of aquaponics in the US amounted to approximately 226 million US dollars and is forecast to reach 1.4 billion dollars by 2026.

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Vertical farms over the world

The largest vertical farm in the world is in Newark,New Jersey named as Aerofarms,there aeroponic method of plant growth is in a large warehouse.(<https://www.dwh-newyork.org/en/2020/10/01/the-worlds-largest->

indoor-vertical-farm/)At present the highest number of vertical farms is the USA .Asian countries have farms in Japan,China,Southkorea,Taiwan and Thailand. In Europe farms found in Germany,france,UK and the Netherlands.

In Singapore farm that grows veggies in A-shaped aluminium towers the technology it is called is A-Go-Gro. Plenty vertical farm is a pesticide free farm and located at South San Francisco, California Green spirit farm is in Michigan, US. Bowery vertical farm is situated in United states it serves more than 850 grocery stores in Northeast and Mid Atlantic regions. Bright farms produce fresh baby greens for locals located in Irvington, New York Gotham Greens Farm in New York city with four production scale facilities.

Iron Ox farm uses robotics more than others ,it is fully autonomous indoor farming. It supplied to local markets in California. It is best known for robotics greenhouses in Lockhart, Texas. Infarm is a German Company is cultivating exotic herbs market,it uses 95% less water and 75 % less chemicals. Agricool is a French vertical farm uses aeroponic system more famous in strawberries it uses shipping containers as “Cooltainers” in which aeroponic farms can be set up. Cropone world’s largest vertical farming facility in Dubai, UAE it supplies a lot of products to Emirates Airlines for its flight passengers as it has joint venture with Emirates Airlines.

Illumitex is a company that specialises indoor and vertical farming with the help of LED lights, it creates Commercial & Industrial space for Horticulture solution situated in Texas, United States. Surna is located at Norway it is specialised for indoor cannabis cultivation.It told in a statement that it can grow anything anywhere ,including “potatoes on Mars”. VoeksInc is located at Netherlands, Europe it covers mostly the heating and irrigation systems as well as nutrient delivery.

SananBio is vertical farming leader in China. It is one of the leading suppliers of vertical farm systems in Asia and is expanding in the US . HelioSpectra is in Sweden the company lights are used to grow a variety of lettuce types, tomatoes and peppers. Agrilution is European-German based using Plant Cube product using

a less amount of space such as largefish tank or dining table.

Altius Farms is located in Denver, Colorado one of the most populous city of the United States, it integrates farms in to variety of spaces to urban youth centres and veterans home. It is more like a social venture than a private enterprise. Badia Farms is to be building in Middle East Gulf states first indoor vertical farm supply micro green and herbs in top restaurants in Dubai. It has a multi storey greenhouse attracts a prestigious client base.

Intelligent Growth Solutions (IGS) is a Scottish company it more emphasized on automation that it uses towers and overall system uses robotics and reduce labour costs by upto 80%. Farm One’s is installed in basement of Manhattan uses the hydroponics method and provide application to manage system it is readymade or tailor made for individual customer.

Sky Greens is in Singapore it has influence in South-east Asian economy ,used patented systems it builds a tall systems use hydraulics or soil-based process. Spread is a Japanese Company covered by Robotics and Automation News the projects of the company include “the world’s largest plant factory” it developed Internet of things platforms and it uses artificial intelligence as well.

Sasaki is in Shanghai, China one of the major projects is “Sunqiao Urban Agricultural District” it want to integrate vertical farming systems such as spinach, kole, bok, choy etc. Urban Crop Solutions is a Belgian start-up which is most popular in leafy greens and in traditional growth takes 70 days whereas in green house growth takes 40-50 days, but the company grows crops in just 21 days.

Vertical farms in India

With the growing urbanisation in India UN predicted that projected population is expected to reach 8.6 billion in 2030, 9.8 billion in 2050, and 11.2 billion in 2100. “Over the past 40-50 years, the proportion of humans who farm has dropped by 20% to under 45%.” (A unified theory of urban living Luis Bettencourt &Geoffrey West).With the increasing population in urban areas and movement of urban areas to metropolitan cities has increased the food consumption and decreased the

production of food. As out of large populated countries in India more land constraints and difficult to designate land for farming to ensure the food security with innovative technologies like roof top gardens (RTF) or vertical gardening is an option of urban farming. It is not only the option of urban farming but it also contributes to the survival of future cities and also helps in reducing urban heat island effect (natural cover with dense concentrations of pavement, buildings and other surfaces that absorb and retain heat) is major issue in near future to global warming and climate change [7]

AS AGRI & AQUA LLP is in Maharashtra it mainly concentrates on mass production of Turmeric vertical farming under Poly-house. It uses Hi-technology and assure secure sustainability for urban areas with no environmental damage nor it effects the human health and environment. The Living Greens in Jaipur Rajasthan India uses Rooftop farming, Organic Farming, Indoor & Outdoor Living Green Walls. The main concentration is to grow fresh organic vegetables, it is to be implemented by schools, hospitals etc.

Fresco Greens is in Hyderabad is promoting toxin free home grown veggies cultivation in urban space. City Greens is located in Karnataka and received Runner-up award in Agri-Startup awards in 2021 by FICCI. It generally grows salad greens, peppers, tomatoes, cucumbers, zucchinis etc. These

farms concentrate on health conscious and premium segment customers.

Wolly farms is a private limited company set up in Bengaluru in Karnataka it grows Indian Veggies, Exotics, fruits, spices. Future farms is located in Chennai it works on Hydroponic solution and the team members has work experience in working with the projects across the globe from Thailand, UAE and Germany for bringing the sustainable growing to our reach.

Conclusion

In 1997 vertical farming came in to more noteworthy and existent and more development of VF has took place due to success and more output of the farms. We use only 20% of soil and sustain to biodiversity and use 70 % of fresh water and serve the seven billion people with the help of human brain. We can disrupt the soil and ecosystem and have agricultural runoffs and due to natural disasters crops will be loss and more to spend on all these gave arise to vertical farming.

We can conclude that vertical farming can maximise the output in a limited space using hydroponic, aeroponics, aquaponics systems. We can get fresh fruits and vegetables and sustain healthy. There are more purviews for less-pesticide fruits and vegetables and huge population food demand to be cleared. All these can be done with the help of robotics, artificial intelligence and such more new technologies.

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STUDY OF PHOTOGALVANIC EFFECT IN DYE SENSITIZED PHOTOGALVANIC SOLAR CELL CONTAINING ACID BLACK 82-ASCORBIC ACID -NALS SYSTEM**S. Kumar¹, V. Singh² and K. Singh^{3*}**^{1,2}Department of Chemistry, Shri Khushal Das University, Pilibanga, Hanumangarh-335801, India³Department of chemistry, SGN Khalsa PG College Sri Ganganagar-335001, India³kewalpreet0983@gmail.com**ABSTRACT**

Photogalvanic effect of Acid Black 82 dye (photo-sensitizer)- Ascorbic acid (reductant)-Sodium Lauryl Sulfate (surfactant) has been observed in basic medium at low intense light with objective of finding relatively proper combination of chemicals like photosensitizer, reductant and surfactant for further enhancing the efficiency of these cells. The best conditions for cell have also been observed for highest cell performance. The solar conversion efficiency, fill factor, cell performance (as $t_{1/2}$), power at power point, open circuit potential and equilibrium current at 10.4 mWcm^{-2} has been observed of the order of 2.28 %, 0.2509, 110.0 min, 237.93 μW , 1475 mV and 735 μA respectively.

Keywords: Acid Black 82, ascorbic acid, Sodium Lauryl Sulphate (NaLS), Photogalvanic effect, fill factor, power point, conversion efficiency.

Introduction

Revolutions in science and industrialisation may have enhanced the use of machines. Really these machines help improve the quality of human life. However, it is well known that these require energy and consequently, the energy requirement of the world is rising at an alarming rate. The amount of energy available to us determines not only our standard of living, but also how long we live. It is well to remember that a shortage of energy is a minor inconvenience to us, but for people in poorer countries it is a matter of life and death. The world energy demand is increasing due to population growth and to increase living standards.¹ Solar energy is universal, decentralized, non-polluting, freely available energy source and essential for every kind of living organism.

Photogalvanic cell is a third type of photoelectrochemical cell which supplies desirable path for conversion of solar energy into electrical energy.² In photogalvanic cell two inert electrodes are used and the light is absorbed by the electrolyte, for instance a dye solution. A photovoltage between two inert electrodes is generated if the light is absorbed by the electrolyte. Accordingly, the photogalvanic cell is essentially a concentration cell and is based on some chemical reaction, which gives rise to high energy products on excitation by a photon. This energy product

loose energy electrochemically lead to generate the electricity called as a photogalvanic effect.

The photogalvanic effect was observed first of all by Rideal and Williams³ but this effect was systematically investigated by Rabinowitch⁴⁻⁵. Kamat et al.⁶ studied photogalvanic effect in ferrous-thionine system part (II). Photogalvanic effect in Iron (II) poly (N-acrylaminomethyl-thionine) studied by Tamilarasan and Natrajan⁷, whereas T. Yamase⁸ reported in Flavine mononucleotide-EDTA system. Murthy A.S.N. and Reddy K.S.⁹ Studies on photogalvanic effect in system containing Toluidine blue. Rohatgi-Mukherji K.K et al.¹⁰ have studied on Photovoltage

Generation of the Phenosafranine Dye-EDTA Sandwich Cell. Ameta S.C. et al.¹¹⁻¹² have also developed some interesting photogalvanic cells. Gangotri K.M. et al¹³⁻¹⁴ have increased the electrical output as well as storage capacity up to reasonable mark by using various photosensitizer with micelles in photogalvanic cell. The effect of heterocyclic dyes and photogalvanic effect in photogalvanic cells for solar energy conversion and storage was studied by Genwa K.R. and Chouhan A.¹⁵ Genwa K R and Singh K¹⁶⁻¹⁸ have reported reasonable values of electrical output with different dyes i.e. Brilliant Blue-FCF (BB-FCF), Lissamine green-B (LGB) and Bromocresol green (BCG) as photosensitizers in photogalvanic cells for solar energy conversion and storage. Genwa K R and Sagar

C P¹⁹ Invented photogalvanic behaviour of Xylidine ponceau dye in Xylidine ponceau – Tween 60 – Ascorbic acid system. The effects of electrode area, light intensity and diffusion length on cell electrical parameter are studied in various experimental conditions. Conversion efficiency and power at power point was calculated in ideal conditions. Gangotri P. and Koli P.²⁰ focused on exploiting modified cell fabrication parameters for enhancing the solar power generation and storage capacity of a photogalvanic ethylene diamine tetra acetic acid–safranin O–sodium lauryl sulphate chemical system.

The scientific society has used different photosensitizers, surfactants, reductants in photogalvanic cells for conversion of solar energy into electrical energy but no attention has been paid to the use of this system containing Acid Black 82 dye as energy material to increase the electrical output and performance of the photogalvanic cell. Therefore, the present work was undertaken to obtain better performance and commercial viability of the photogalvanic cell.

Result and discussion

Effect of variation of Acid Black 82, ascorbic acid and NaLS concentration

The effect of variation of Acid Black 82, ascorbic acid and NaLS concentration are given in Table 1. Variation of dye concentration studied by using solution of Acid Black 82 of different concentrations. It was observed that the photopotential, photocurrent and power increased with increasing in concentration of the Acid Black 82. A maxima at 1475 mV, 735 μ A and 948.15 μ W was obtained at 1.6×10^{-5} M dye concentration, above which a decrease in electrical output of the cell was observed. Low electrical output observed at the minimum concentration range of dye due to limited number of dye molecules to absorb the major part of the light in the path, while higher concentration of dye again resulted in a decrease in electrical output because intensity of light reaching the molecule near the electrode decrease due to absorption of the major portion of the light by the dye molecules present in the path. Therefore corresponding fall in the electric output. With the increase in

concentration of the ascorbic acid, the photopotential, photocurrent and power were found to increase till it reaches a maximum value at 2.5×10^{-3} M. On further increase in concentration of ascorbic acid, a decrease in the electrical output of the cell was observed. The fall in power output was also resulted with decrease in concentration of reductant due to less number of the molecules available for electron donation to the cationic form of dye. On the other hand, the movement of dye molecules hindered by the higher concentration of the reductant to reach the electrode in the desired time limit and it will also result in to a decrease in electrical output. The electrical output of the cell was increased on increasing the concentration of NaLS. A maximum result was obtained at 2.7×10^{-3} M concentration of NaLS. On further increasing the surfactant concentration it react as a barrier and major portion of the surfactant photobleach the less number of dye molecules so that a down fall in electrical output was observed.

Effect of variation of pH

Photogalvanic cell containing Acid Black 82 – Ascorbic acid –NaLS system was found to be quite sensitive to pH of the solution. It was observed that there is an increase in the photopotential, photocurrent and power of the system with the increase in pH value (In the alkaline range). At pH 11.75 a maxima was obtained (1475 mV, 750 μ A and 948.15 μ W). On further increase in pH, there was a decrease in photopotential, photocurrent and power. The optimum electrical output was obtained at particular pH value. It may be due to better availability of reductants donor form at that pH value. The results showing the effect of pH are summarized in the Table 2.

Effect of diffusion length

The effect of variation of diffusion length (it is distance between the two electrodes) on the current parameters of the cell (i_{max} , i_{eq} and initial rate of generation of photocurrent) was studied using H-shaped cells of different dimensions. It was observed that in the first few minutes of illuminations there is sharp increase in the photocurrent. As consequences, the maximum photocurrent (i_{max}) increase in diffusion length because path for

photochemical reaction was increased, but this is not observed experimentally. Whereas equilibrium photocurrent (i_{eq}) decreased linearly. Therefore, it may be concluded that the main electroactive species are the leuco or semi form of dye (photosensitizer) in the illuminated and dark chamber respectively. The reductant and its oxidation product act only as electron carriers in the path. The results are summarized in Table 3.

The effect of electrode area on the current parameters of the cell was also studied. It was observed that with the increase in the electrode area the value of maximum photocurrent (i_{max}) is found to increase. The results are summarized in Table 4.

Effect of light intensity

The effect of light intensity was studied by using intensity meter (Solarimeter model-501). It was found that photocurrent showed a linear increasing behaviour with the increase in light intensity whereas photopotential increases in a logarithmic manner. This increase in number of photons with increase in light intensity. The effect of variation of light intensity on the photopotential and photocurrent is graphically represented in Fig.1

Current-Voltage (i-V) characteristics of the cell

The short circuit current (i_{sc}) 735 μ A and open circuit voltage (V_{oc}) 1290 mV of the photogalvanic cell were measured with the help of a micro ammeter (keeping the circuit closed) and with a digital pH meter (keeping the circuit open), respectively. The current and potential values in between these two extreme values were recorded with the help of a carbon pot (log 470 K) connected in the circuit of multimeter, through which an external load was applied. The i-V characteristics of the photogalvanic cells containing Acid Black 82 – Ascorbic acid –NaLS system is graphically shown in Fig.2 and summarized in table 5. It was observed that i-V curve deviated from its regular rectangular shape. A point in the i-V curve, called power point (pp), was determined where the product of curve of current (i_{pp}) 330 μ A and potential (v_{pp}) 721 mV was maximum. With the help of i-V curve, the fill-factor was calculated as 0.2509 using the formula:

$$\text{Fill factor } (\eta) = \frac{V_{pp} \times i_{pp}}{V_{oc} \times i_{sc}} \quad (1)$$

Cell performance and conversion efficiency

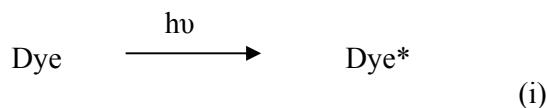
The performance of the photogalvanic cell was observed by applying an external load (necessary to have current at power point) after termination the illumination as soon as the potential reaches a constant value. The performance was determined in terms of $t_{1/2}$, i.e., the time required in fall of the output (power) to its half at power point in dark. It was observed that the cell containing Acid Black 82 - Ascorbic acid - NaLS can be used in dark for 110.0 minutes. With the help of current and potential values at power point and the incident power of radiations, the conversion efficiency of the cell was determined as 2.28% using the formula. The results are graphically represented in time-power curve (Fig. 3).

$$\text{Conversion efficiency} = \frac{V_{pp} \times i_{pp}}{A \times 10.4mWcm^{-2}} \times 100\% \quad (2)$$

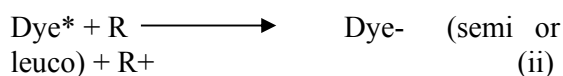
Mechanism

When certain dyes are excited by the light in the presence of electron donating substance (reductant), the dyes are rapidly changed into colorless form. The dye now acts as a powerful reducing agent and can donate electron to other substance and reconverted to its oxidized state. On the basis of earlier studies a tentative mechanism in the photogalvanic cell may be proposed as follows:

Illuminated chamber: On irradiation, dye molecules get excited.



The excited dye molecules accept an electron from reductant and converted into semi or leuco form of dye, and the reductant into its excited form.



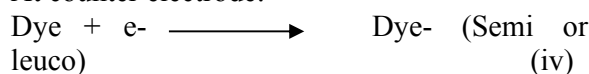
At platinum electrode:

The semi or leuco form of dye loses an electron and converted into original dye molecule.

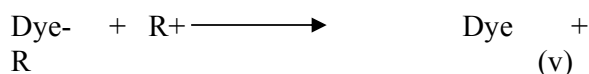


DARK CHAMBER:

At counter electrode:



FINALLY LEUCO/SEMI FORM OF DYE AND OXIDIZED FORM OF REDUCTANT COMBINE TO GIVE ORIGINAL DYE AND REDUCTANT MOLECULE. THIS CYCLE OF MECHANISM IS REPEATED AGAIN AND AGAIN LEADING PRODUCTION OF CURRENT CONTINUOUSLY.



Here Dye, Dye*, Dye-, R and R+ are the dye, its excited form, leuco form, reductant and its oxidized form, respectively. The scheme of mechanism is shown in Fig.4

Materials and methods

Acid Black 82 (Loba Chemie, Mumbai), ascorbic acid (Ases Chemical, Jodhpur), NaLS (Sisco Research Laboratories, Mumbai) and NaOH (RFCL, New Delhi) were used in the present work. Solutions of ascorbic acid, Acid Black 82, NaLS and NaOH (1N) were prepared in double distilled water (conductivity $3.5 \times 10^{-5} \text{ Sm}^{-1}$) and kept in amber coloured containers to protect them from sun light. Acid Black 82 dye (Scheme 1) is dark brown-purple crystal with metal luster, soluble in water and stable under normal temperature and pressure. Its molecular formula and molecular weight

$\text{C}_{22}\text{H}_{13}\text{ClN}_5\text{NaO}_9\text{S}$ and 581.88 gmol^{-1} respectively.

A mixture of solutions of dye, reductant, surfactant and NaOH was taken in an H-type glass tube which was blackened by black carbon paper to unaffected from sun radiation. A shiny platinum foil electrode ($1.0 \times 1.0 \text{ cm}^2$) was immersed in one limb of the H-tube and a saturated calomel electrode (SCE) was immersed in the other limb. Platinum electrode act as a working electrode and SCE as a counter electrode. The whole system was first placed in the dark till a stable potential was attained, then the limb containing the platinum electrode was exposed to a 200 W tungsten lamp (Philips). A water filter was used to cut off thermal radiation. Photochemical bleaching of the dye was studied potentiometrically.

A digital multimeter (HAOYUE DT830D Digital Multimeter) was used to measure the potential and current generated by the system respectively. The current voltage characteristics were studied by applying an external load with the help of Carbon pot (log 470 K) connected in the circuit the photogalvanic cell set-up is shown in Figure 5.

Conclusions

World is facing energy crisis in present time and to meet the energy demand is challenge to nation. There is urgent need to search a renewable device which can be used for energy conversion and storage for maximum time. Photogalvanic cells are favourable than photovoltaic cells because low cost materials are used in these cells. The conversion efficiency, storage capacity, power at power point and fill factor are recorded as 2.28%, $t_{1/2}$ 110.0 min, $237.93 \mu\text{W}$ and 0.2509 respectively in Acid Black 82 - Ascorbic acid - NaLS system.

Acknowledgement

The Authors are thankful to Head, Department of Chemistry for providing necessary facilities.

Table -1. Effect of variation of Acid Black 82, ascorbic acid and NaLS concentrations

Light Intensity = 10.4 mW cm^{-2} , Temperature = 303 K, pH = 11.75

Concentrations	Photopotential(mV)	Photocurrent(μA)	Power (μW)
----------------	--------------------	-------------------------------	-------------------------

[Acid Black 82] × 10⁻⁵ M			
1.1	1110	605	671.55
1.3	1170	671	785.07
1.6	1290	735	948.15
1.7	1190	610	725.9
1.8	1100	529	581.9
[Ascorbic acid] × 10⁻³ M			
1.9	1115	515	574.23
2.1	1230	625	768.75
2.5	1290	735	948.15
2.7	1234	622	767.55
2.9	1144	524	599.46
[NaLS] × 10⁻³ M			
2.1	1050	570	598.50
2.4	1168	622	726.50
2.7	1290	735	948.15
2.9	1215	638	775.17
3	1100	500	550.00

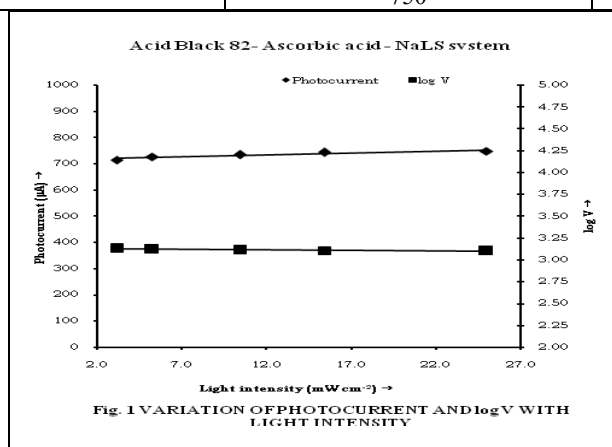
Table -2 Effect of Variation of pH			
[Acid Black 82] = 1.6 × 10 ⁻⁵ M		Light Intensity = 10.4 mW cm ⁻²	
[Ascorbic acid] = 2.5 × 10 ⁻³ M		Temperature = 303 K	
[NaLS] = 2.7 × 10 ⁻³ M			
pH	Photopotential (mV)	Photocurrent (μA)	Power (μW)
11.00	1090	500	545.00
11.50	1255	680	853.40
11.75	1290	735	948.15
11.85	1245	685	852.83
12.00	1114	500	557.00

Table- 3 Effect of Diffusion Length			
[Acid Black 82] = 1.6 × 10 ⁻⁵ M		Light Intensity = 10.4 mW cm ⁻²	
[Ascorbic acid] = 2.5 × 10 ⁻³ M		Temperature = 303 K	
[NaLS] = 2.7 × 10 ⁻³ M		pH = 11.75	
Diffusion Length DL (mm)	Maximum Photocurrent i _{max} (μA)	Equilibrium Photocurrent i _{eq} (μA)	Rate of initial Generation of Current (μA min ⁻¹)
35	800.0	748.0	21.05
40	803.0	744.0	21.13
45	808.0	735.0	21.26
50	810.0	726.0	21.32
55	818.0	722.0	21.53

Table - 4 Effect of Electrode Area		
[Acid Black 82] = 1.6 × 10 ⁻⁵ M		Light Intensity = 10.4 mW cm ⁻²
[Ascorbic acid] = 2.5 × 10 ⁻³ M		Temperature = 303 K
[NaLS] = 2.7 × 10 ⁻³ M		pH = 11.75
Electrode Area (cm ²)	Maximum photocurrent i _{max} (μA)	Equilibrium photocurrent i _{eq} (μA)
0.75	792	745
0.85	798	742
1.00	808	735
1.25	825	729
1.35	832	725

Table-5 Current-Voltage (i-V) characteristics of the cell
 [Acid Black 82] = 1.6×10^{-5} M Light Intensity = 10.4 mW cm^{-2}
 [Ascorbic acid] = 2.5×10^{-3} M Temperature = 303 K
 [NaLS] = 2.7×10^{-3} M pH = 11.75

Potential (mV)	Photocurrent (μA)	Fill Factor (η)
1475	0	
1412	10	
1395	20	
1392	15	
1331	18	
1300	25	
1271	30	
1251	40	
1210	50	
1180	60	
1151	75	
1125	95	
1100	105	
1071	115	
1050	125	
1020	135	
990	155	
950	160	
940	180	
890	200	
781	270	
761	285	
758	290	
740	320	
730	325	
721	330	0.2509
675	345	
571	375	
560	388	
450	430	
440	440	
402	465	
385	480	
339	505	
230	570	
186	610	
175	600	
70	720	
0	750	



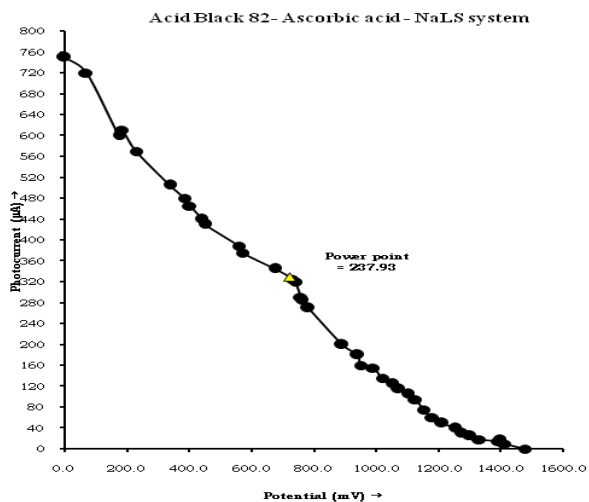


Fig. 2 CURRENT VOLTAGE (i-V) CURVE OF THE CELL

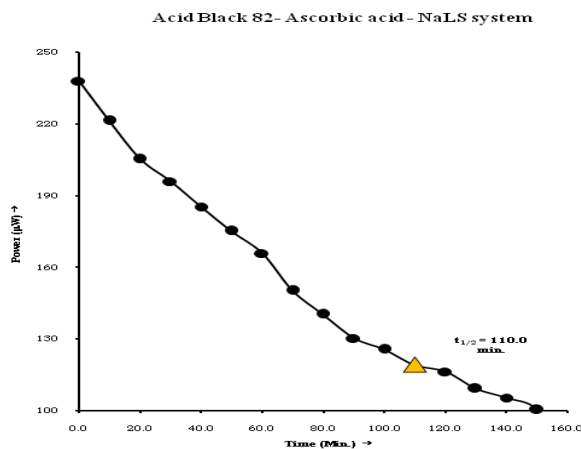


Fig. 3 TIME-POWER CURVE OF THE CELL

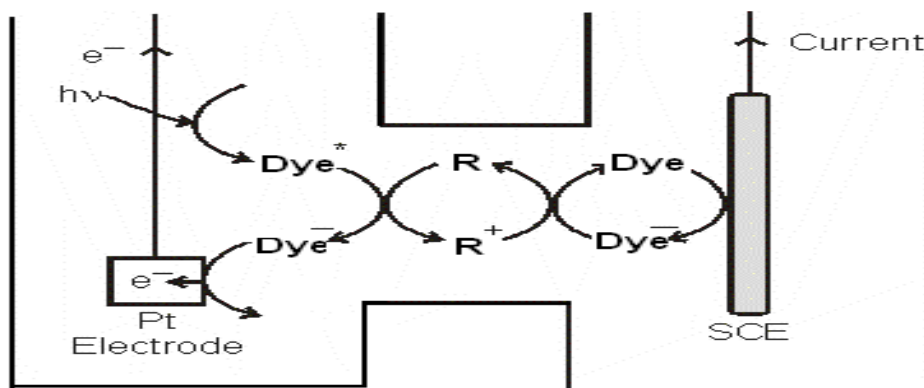
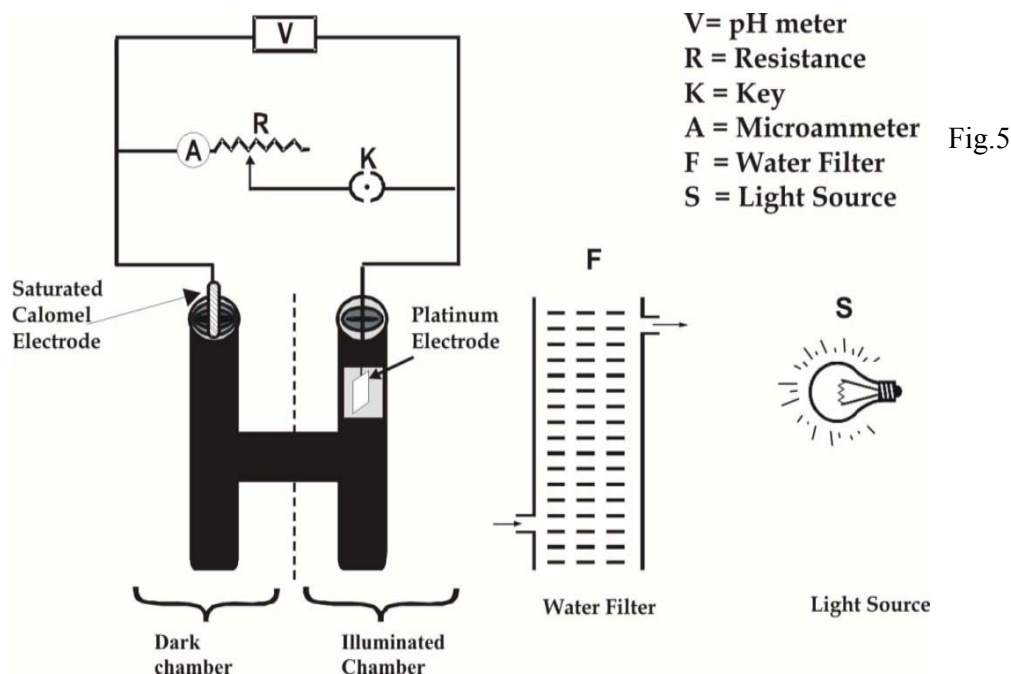
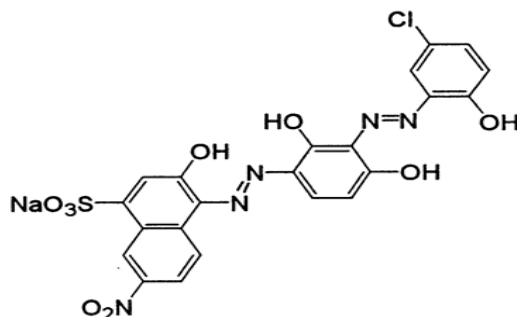


Fig. 4 Scheme of mechanism

SCE = Saturated calomel electrode
 R = Reductant

D = Dye (Photosensitizer)
 D = Semi & Leuco form

Scheme 1. Acid Black 82



Photogalvanic Cell Set-up

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A STUDY ON THE EFFECT OF WOMEN ENTREPRENEURSHIP IN SECTOR TRANSFORMATION

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ABSTRACT

Aim and background: With the ever-increasing needs of the family and the spiraling cost of living, men have realized that women must be given an equal opportunity to play productive and responsible roles. The barricades have thus been lowered to allow women to participate actively in society's welfare. There are now numerous opportunities available to women. The aim of this study is to study the effect of women entrepreneurship in sector transformation.

Materials and methods: Individuals were interviewed directly using a structured questionnaire as the primary source of data. A questionnaire was distributed to women in Bhopal City who owned enterprises directly. Further research on this study has been done using secondary sources and information (such as published books and articles from journals, newspapers, and the internet). A social survey of 124 female entrepreneurs of Bhopal City Corporation was conducted through a structured questionnaire.

Results: There are many problems facing women entrepreneurs in Bhopal, including retaining employees, procuring raw materials, handling customers, and in some cases getting negative press. Women entrepreneurs of Bhopal also find it difficult to obtain startup capital. There is a lack of acceptance of women entrepreneurs in our society. As a consequence, even their family members have changed their behavior. 74.2% of the women entrepreneurs surveyed needed to change their behavior, while 25.8% had no behavioral changes.

Conclusion: Women of the digital era have many challenges and opportunities, and they are turning into job creators as a result. Despite this, many women are still doing well as designers, interior decorators, exporters, publishers, and garment manufacturers. It is high time the government stands up to the challenge and creates more support for women entrepreneurs. This will result in sustainable development for India.

Keywords: Women, Entrepreneurship, Sector transformation.

Introduction

A woman who is empowered lives the type of life she thinks is appropriate based on her current family circumstances, her personal qualities and capabilities, which she directly decides. In fact, women only move ahead when their family, village, and nation do as well. This quote by pandit Jawaharlal Nehru is oft-repeated because it is universally acknowledged that economic development becomes meaningful when women are included in the system. Beginning in the early 20th century, women have become increasingly aware and empowered. Efforts to emancipate them have gained momentum. With the ever-increasing needs of the family and the spiraling cost of living, men have realized that women must be given an equal opportunity to play productive and responsible roles. The barricades have thus been lowered to allow women to participate actively in society's welfare. There are now numerous opportunities available to women. There are two ways in which women become entrepreneurs: by choice or by necessity. The right to work independently and freely,

allowing them to determine the rules that govern their work. Due to the loss or sickness of their husband/ Father, they must force themselves to share the family economic burden.

Literature Review

Women in India play a larger role in the creation of businesses and industries than their men counterparts. Historically, women's existence has been constrained by the wishes of their husbands and families (Engels, F. (2021)). There has been an increase of women participating in the economy as there is a shift in trends. Educated women, who need economic independence more than earlier generations, are the reason for this shift. A rise in female entrepreneurship marks a milestone in women's rights and an improvement in the quality of their lives economically and socially. Women empowerment and entrepreneurship go hand-in-hand (Dimopoulos, C. A. (2020)). The role of female entrepreneurs is similar to that of their male counterparts, particularly in terms of creating jobs, bringing innovation to the country and contributing considerably to its

GNP. Women must be able to play on an equal playing field with men. The role of entrepreneurship is to be an accelerator of innovation. Even though they face many social hurdles, Indian women remain the most successful in their respective fields despite all their hurdles. In terms of increased education and varied aspirations for a better life, a change in the social fabric of Indian society necessitated a change in the lifestyles of Indian women (Matschke, M. (2020)).

Women Entrepreneurship

A growing consciousness of society's role of economic status has gradually been transforming the hidden entrepreneurial potential of women. Dwibedi, L. (2015). The human society is designed by women. Entrepreneurial women make a significant contribution to the development of the economy, and they are crucial to national prosperity. As a woman entrepreneur, one takes all the risks while keeping calm and tactfully managing the business, overcoming the challenges boldly while facing them with determination to be successful. Entrepreneurship is a form of economic activity in which women create, organize, combine, and operate enterprises, while also taking on risks and handling economic uncertainties (Bornstein, D. (2007)). As a business phenomenon, women entrepreneurship has finally crossed the transition stage and is finally on the move; however, there is still much to do for it to become a successful business giant.

Bulsaraet. al. (2014) Opportunities and Challenges for Women Entrepreneurship under Globalization. Often, microfinance programmes for women are spread as part of a package intended to absorb the shock of structural adjustment programs and globalisation, in combination with macroeconomic and social policy prescriptions that disproportionately affect women, limit public sector services and remove existing welfare nets for the poor.

An activity that promises encouraging results is the development of entrepreneurship among women. Women can overcome many of the issues relating to gender inequality by motivating, training and assisting them in

starting and running their own businesses. The expansion of female ownership of businesses has been fueled by economic globalization, according to Gunter et al. (2004). The number of businesses owned by women has increased significantly.

Role of women entrepreneurship in sector transformation

A study revealed that 32% of women in India are either employed or own their own businesses. This could be interpreted as 32% of women are financially independent, but what about those relying on their husband and family? (Holmén (2011). According to an English saying, "might is right", and the Indian woman does not have a baton in her hand, so she cannot exercise her basic human rights.

"Women succeeding benefits more than one person," says UNCDF's Special Unit on Microfinance. Studies have repeatedly shown that women spend more of their income on household needs than men. Assisting women thus creates a multiplier effect, thereby enhancing the impact of the institutions' activities. Of the money gained, 55% goes to buying household goods, 18% goes to school, and 15% goes to clothes, the remaining money likely goes to other expenses (Cheston et. al. (2002)).

In accordance with economic theory, to break the vicious cycle of poverty, one needs to invest, and investment only entails the extension of credit mechanisms, a right guaranteed by the constitution to every Dicky and Harry, and therefore how one could prevent women from having access to these mechanisms (Hart, D. M. (2021)). Inefficient and unsustainable women are targeted as a class, however women have a better track record for execution of business than men as far as efficiency and sustainability is concerned.

Social entrepreneurs can use their skills to bring balance back to society when society is skewed and power begins to dominate. Society entrepreneurs are change agents who alleviate social problems by creating effective, equitably structured new models that are less hierarchical yet more complex and cooperative than existing ones (Hanna, N. K. (2010)). Society entrepreneurship has been defined in various

ways by researchers and practitioners, but a common measure of success is a business model that adds value to the mission of a community. Social entrepreneurs combine innovation with an appreciation for the needs of the community, and their work runs parallel to philanthropic and conservation efforts (Perrini et. al. (2006)).

Ancient Indian women were in charge of domestic duties and had a position almost on par with that of men in terms of religious duties. Women were relegated to the background, adding to the exploitation of women as the social-political situation changed (Paxton (2020)). Women's power is declining because of: 1) Poor education, 2) Lack of independence financially. The number of women graduating from IITs and IIMs in Indian universities, engineering schools, science colleges and even social work programs has increased. Women can blossom in our society as entrepreneurs if they fulfill four conditions: 1) They take an interest in charting their own course. 2) Experienced and knowledgeable teachers. 3) Financial and moral support from social organizations and institutions. 4) The help of various government agencies. Women owned businesses are increasing in practically all economies due to the presence of eminently educated and adequately informed individuals. As women have become increasingly aware of their role in society and their economic status, their hidden entrepreneurial potential has been gradually revealed. Women tend to get involved in business ventures because of their skill-set, knowledge, and ability to adapt (Oo, T. T. (2020)).

A woman entrepreneur is a person whose role requires challenges in order for her to meet her personal needs and become financially independent. Women with entrepreneurship qualities are driven to make a positive contribution to society in both the personal and professional realms. The media has created awareness of women's own characteristics, rights, and work situations. From pepped to power cables, glass ceilings have been broken and women are finding success in every field (Vessal (2021)). Women of the digital era are facing more challenges and gaining more opportunities than ever before. In fact, they are

creating jobs as they go. The Indian design, interior decoration, export, publishing, garment and garment manufacturing industries continue to thrive under their leadership. However, even though women make up most of the population in India, the entrepreneurial world still has a strong male dominance.

Women in advanced nations are more visible in business and recognized for their contributions. As a result of Independence, Indian women gained an equal opportunity to participate in political process, and in terms of education and employment, laws were enacted ensuring equal rights and opportunities for them (Terjesen et. al. (2009)). Only a small minority of women have benefited from government-sponsored development programs. Women from urban middle classes are disproportionately affected by change, and only a tiny proportion of them have benefited from development activities.

Objectives

- To know the various enterprises run by women in India.
- To know the role of women run entrepreneurship in bringing sector transformation.
- To know the impact of women run entrepreneurship in bringing sector transformation.

Methodology

The study collected data from both primary and secondary sources. Individuals were interviewed directly using a structured questionnaire as the primary source of data. A questionnaire was distributed to women in Bhopal City who owned enterprises directly. Further research on this study has been done using secondary sources and information (such as published books and articles from journals, newspapers, and the internet). A social survey of 124 female entrepreneurs of Bhopal City Corporation was conducted through a structured questionnaire. A questionnaire survey was conducted in order to select respondents since there was no comprehensive guide for women entrepreneurs in Bhopal.

Statistical Analysis

The Table 1 shows most Bhopali women entrepreneurs operate traditional female businesses (including tailoring, beauty parlors, boutiques, handicrafts, etc.). The majority (35.5%) are engaged in tailoring and the rest (24.2%) operate beauty parlors. Furthermore,

Table 1: Investment sectors

Investment sector	Respondents	%
Tailoring	44	35.4
Clothes business	8	6.6
Boutique house	20	16.2
Parlor	30	24.1
Handicrafts	20	16.2
Others	2	1.5
Total	124	100.0

16.1 % of women in Bhopal work in handicraft as ethnic groups such as the Manipuri are known for their crafts. 6.5 % of all respondents are female entrepreneurs in the clothing industry. Women invest in various sectors in Bhopal city, according to these data.

A business cannot exist without profit. Women entrepreneurs, in particular, are more likely to gain revenue if they are self-sufficient. Among entrepreneurs in Table 2, 24.2% make monthly profits between 5,001-10,000. On the other hand, 22.6% of companies made more than

35,000 a month. The 14 respondents who earn more than 35,000 per month include several who earn over 200,000. These results mean that women entrepreneurs earn very uneven monthly incomes.

Table 2: Monthly Profit from Business

Monthly Profit	Respondents	%
1,000 – 5,000	18	14.4
5,000 – 10,000	30	24.3
10,000 – 15,000	20	16.2
15,000 – 20,000	16	12.8
20,000 – 25,000	4	3.3
25,000 – 30,000	2	1.7
30,000 – 35,000	6	4.9
> 35,000	28	22.7
Total	124	100.0

Many ways are used to use the income of women entrepreneurs. In a survey of women entrepreneurs, 51.6% spend their income on

family expenses, which indicates that their contributions to the family are significant. As per table 3 Women entrepreneurs, however,

spend only 3.2 % of their income on their own goals.

Among women entrepreneurs, a large percentage (45.2 %) reinvests their income, indicating their willingness to expand.

Table 3: How do you spend your income?

Use of Income	Respondents	%
Spending on family needs	64	51.5
Spend for one's own benefit	4	3.1
Invest in the business	56	45.3
Total	124	100.0

Almost every step of a woman's life must be approved by her counterparts in India's largely patriarchal society. The study found that women entrepreneurs have a different experience. In Table 4, nearly 80 % of the women entrepreneurs did not need any permission from their male counterparts to use

their own income. On the other hand, 21 % of couples relied on their husbands' opinion for determining how they could use their income. As a result, it can be concluded that women entrepreneurs are generally able to pursue their goals in the finance sector.

Table 4: How Women Entrepreneurs Support Their Husbands' Business?

Help in Husband's Occupation	Respondents	%
Yes	40	32.2
No	84	67.8
Total	124	100.0

There is a lack of acceptance of women entrepreneurs in our society. As a consequence, even their family members have changed their behavior. 74.2% of the women entrepreneurs surveyed needed to change their behavior, while 25.8% had no behavioral changes (table 5). The attitudes of family members and relatives toward women entrepreneurs of Bhopal city are different than when they participated in similar activities.

Table 5: Changes in the behavior of families towards women entrepreneurs

Changes in Behavior of Family	Respondents	%
Yes	92	74.3
No	32	25.7
Total	124	100.0

Especially in women's lives, society is of utmost importance in the way they live. Table 6 provides an overview of the change in behavior

of the women entrepreneurs interviewed, in contrast to 4.8 % of those who faced a normal response. Accordingly, women in Bhopal

started to see a change in social behavior when they became entrepreneurs.

Table 6: Changes in Behavior of Society towards Women Entrepreneurs

Changes in Behavior of Society	Respondents	%
Yes	118	95.3
No	6	4.7
Total	124	100.0

Results

Business does not seem to play a major role in how respondents fulfill their roles as husbands, wives, parents, or homemakers. They reported very little work-family conflict in their parental or spouse roles. They are usually encouraged to start and grow a business by their husbands or family members. As far as their husbands and family members are concerned, if they face any problem in doing business, they get help from them. According to the survey, the status of the women has increased in their families and in the society after starting their own business. In the future they will be able to make their own decisions, and also participate in the decision-making process within the family. They can also help financially support the family in the future. Due to a lack of opportunity to join a suitable job in Bhopal, women enter into business with an aim to help their families as well as to be financially free.

There are many problems facing women entrepreneurs in Bhopal, including retaining employees, procuring raw materials, handling customers, and in some cases getting negative press. Women entrepreneurs of Bhopal also find it difficult to obtain startup capital. However, once the business is successfully launched, this problem has been eliminated since lenders willing to lend to successful entrepreneurs have also emerged. The fact that so many women are involved in traditional business in Bhopal city is a cause for concern. It also found that the female-owned businesses generated employment for both men and women at about equal rates, while the male-owned businesses mainly employed men.

Discussion

The following are four key sectors in which women entrepreneurship can have a transformative effect:

1. **Economic Impact:** IMF report says that India could gain up to 6.8% growth in GDP if our efforts towards closing the gender gap were to accelerate, while building a level playing field for both men and women.
2. **Social Impact:** Moreover, the rise of female entrepreneurship has led more women to explore STEM-related areas of study, leading to an informed and knowledgeable society that boosts the nation's economy.
3. **Individual impact:** Entrepreneurs are the ones to make decisions about investments, loans, taxes, and long-term financial planning. Additionally, they are also providing a strong financial base for the family on top of contributing to the economy.
4. **Environmental Impact:** Getting women involved in product and service development has environmental benefits. Inclusion, sustainability, empathy, and innovation are some of the important themes they can address.

Increasing equal work opportunities by 18% could increase India's GDP by 2025, according to a McKinsey study. The number of women contributing to India's GDP has fallen from 45% to 22%. A compelling factor for growth is women's entrepreneurial activity. In spite of the challenges that come with entrepreneurship, a favorable environment makes this niche highly profitable and crucial to the nation's growth. Below are some recommendations that can improve the sustainability of the Indian

economy from a women's entrepreneurship perspective:

- Achieving sustainable development goals requires empowering women entrepreneurs.
- Growth must be halted by eliminating bottlenecks.
- In all suitable types of businesses, women should be encouraged to be fully involved as entrepreneurs.
- Efforts should be made to initiate appropriate training programmes.
- Entrepreneurship can be developed via mentoring, news letters, and trade fairs / exhibitions.
- Women-Entrepreneurship is undoubtedly the key to rapid economic growth and development.

Conclusion

After reviewing and analyzing different datasets, we have achieved our study objectives. Female propriety ownership is not significantly different in the rural and urban setups of India, according to our study. Women have already begun to acquire equal rights in

many parts of India. It is now evident that women who weren't able to think past family welfare have woken up to action. Having carved the majority of their own habitat and field (alaBordeau), they now live in a new environment. Their new ventures will be successful if societal values are not perceived negatively. In India, women entrepreneurs are gaining ground and contributing to the national economy in significant numbers. From papad to power cables, women are all over every line of business and breaking glass ceilings. Women of the digital era have many challenges and opportunities, and they are turning into job creators as a result. Despite this, many women are still doing well as designers, interior decorators, exporters, publishers, and garment manufacturers. It is high time the government stands up to the challenge and creates more support for women entrepreneurs. This will result in sustainable development for India. However, the Indian government has taken some commendable steps for the development of women yet there is still much to be done.

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