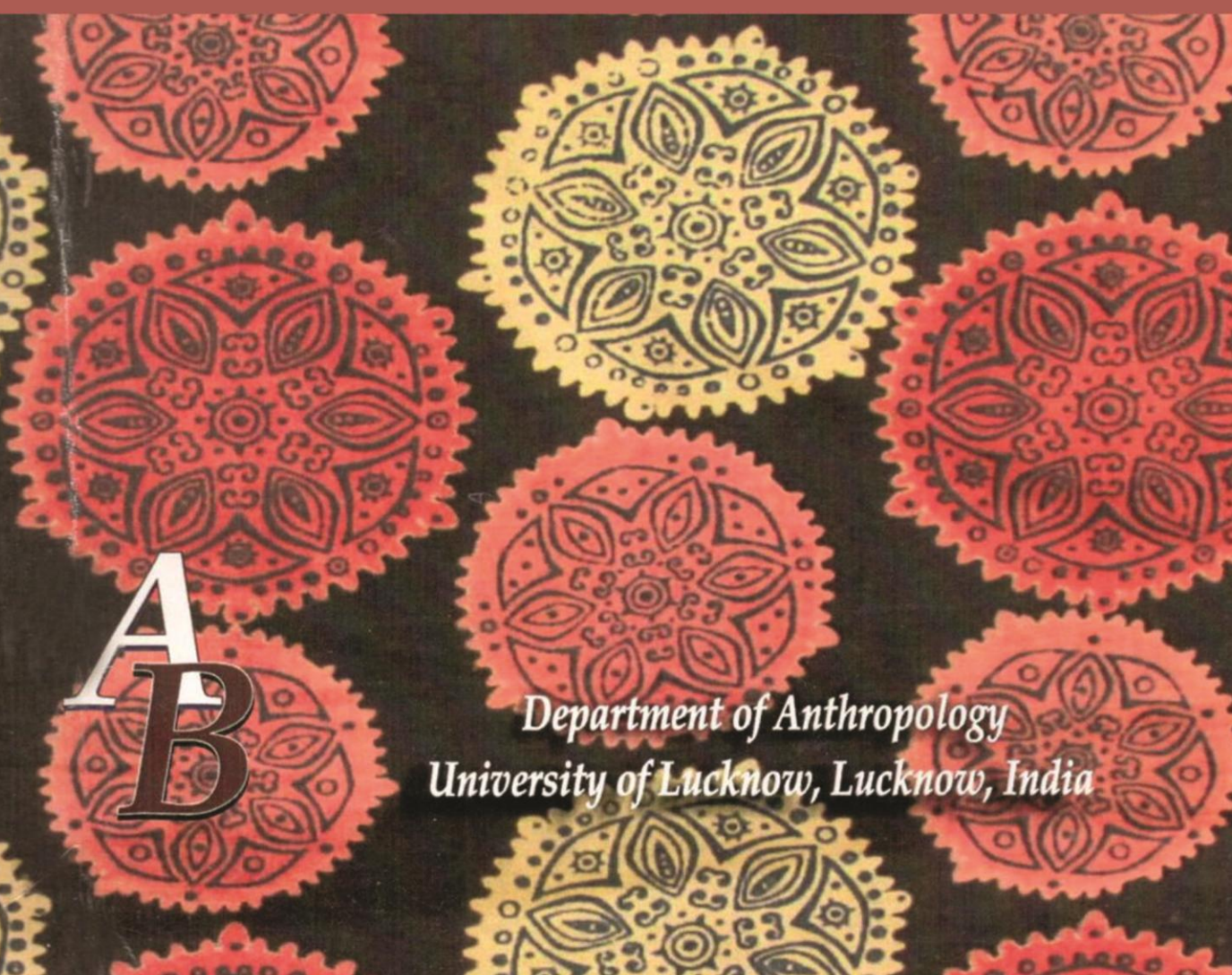


Volume 11, Issue 2
July 2018

ISSN No.:2348-4667

Anthropological *Bulletin*

a peer reviewed international journal



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ANTHROPOLOGICAL BULLETIN

A peer-reviewed International Journal

Volume 11, Issue 2, July 2018.

Published by
Department of Anthropology,
University of Lucknow, Lucknow,
India – 226 007

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Vol. 11, Issue 2, July, 2018

CONTENTS

1.	Adaptation and Change: An Anthropological Study on Inter-Caste Relationships in a Tribe-Caste Village of North India <i>POONAM TRIPATHI & KEYA PANDEY</i>	5
2.	Rural Digital Governance-Comparative Study of Rajasthan & Uttar Pradesh <i>VAISHALI SAXENA</i>	14
3.	Theoretical Framework for the Role of Emotional Intelligence, Resilience and Coping Skills in Managers for Adaptability in Crisis <i>SAHER MASOOD & P. C. MISHRA</i>	39
4.	Survivability, development, growth and reproductive biology of common cut worm, <i>Spodoptera litura</i> [(Fabricius), Lepidoptera: Noctuidae] on different economically important plants. <i>KHOWAJA JAMAL</i>	45
5.	Rehabilitation of Acid Attack Survivors: An Analysis <i>MOHD. ASHRAF & ABDUL MUNIM CHOUDHURY</i>	56



ISSN: 2348-4667
Anthropological Bulletin
11(2), 5-13, 2018

Adaptation and Change: An Anthropological Study on Inter-Caste Relationships in a Tribe-Caste Village of North India

Poonam Tripathi¹ and Keya Pandey²

ABSTRACT

This article is a microcosmic study of tribes and castes living in a village with mixed population of tribal and non-tribal groups. It focuses on the gradual change of attitude and tradition of the tribals towards the unending race of competing with the non-tribals which has led to the partial adaptation of the traditions of non-tribals. The present paper is also an attempt to functionally analyse the solidarity and interdependence between tribals and non tribals and the ways in which they live together harmoniously in one village.

Keywords: Acculturation, De-Tribalization, Commensalism, Hierarchy, Sanskritization.

INTRODUCTION

The Indian village is characterized by caste relations which makes it an important aspect of study. In fact the villages in India demonstrate many elements of structural unity, such as the sentiment of territorial 'political' kinship and economic solidarity. The sense of village identity on many occasions cuts across caste loyalties which usually divide a village. The village as a micro-structure has not only been recognized but has gradually become a vital aspect of National Developmental Planning and politico-cultural consciousness.

Social Anthropology, as a discipline focuses on intense emic data gained inductively from long term association with small communities. It, therefore, has always attached particular importance to village studies. One of the major trends in Social Anthropology during the last two decades or so has been a substantial shift from the study of the more or less isolated tribal people-who are now for many reasons, altering their way of life radically, especially in those aspects, which were once anthropologists' most prized raw material- to the study of peasants, who from the view point of structural relationship rather than occupational, are part society

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and part culture. Such a change in the academic trend of Social Anthropology had been brought about by American anthropologists, among whom the name of Robert Redfield deserves to be mentioned, as he was the first anthropologist, who carried out a systematic village study in Tepoztalan- a Mexican village. Oscar Lewis and McKim Marriott further applied the scientific methodology developed by Redfield and others, in their own studies. Village studies in India historically go back to the year 1861 when Sir Henry James Sumner Maine published his Ancient Law.

Dhanaura village, the subject of our study, is home to people of various castes and a tribe, sharing a similar pattern of life. They feel a consciousness of homogeneity, interdependence and a sense of security borne of living together in a mixed village and sharing opportunities and crises.

OBJECTIVES OF THE STUDY

1. To find out the tribe caste relationship in their multiple aspects which regarded as of great importance in village studies.
2. To assess the process of acculturation and mutual influences over to each other, whether it is one sided or both sided.
3. To examine the retention of tribal identity during the course of Acculturation.

RESEARCH METHODOLOGY

This is a theoretical research paper, where both primary and secondary data have been used for the analysis. The primary data are collected by interview, participant observation, schedules. In the selection of Respondents, the simple stratified random sampling has been applied. As Dhanaura is a tribe-caste village, various tribes and different caste group are living together therefore each caste and tribes are distributed in different strata. Then from each strata respondents have been selected on the basis of simple random sampling technique. Besides this, secondary data was collected from research reports, district website and regional tribal office. The secondary data was ratified during field data collections.

STUDY AREA

U.P. is a state situated in North India. It coordinates 26.850N 80.910E latitudinally and longitudinally. It is the most populous state in India as well as the most populous country subdivision in the world. Sonbhadra District is the 2nd largest district in India which borders four states namely M.P, Chhattisgarh, Jharkhand and Bihar. Sonbhadra District is also famous for an Industrial Zone and it is also called as Energy Capital of India. A tribe-caste village has been taken which is situated geographically and ethnically on the fringe of district and state.

As per our census done the total population of Dhanaura is 4703 out of which there are 2493 males and 2210 females and the total number of households were 673.

The proposed study is done in Dhanaura village of Duddhi block in Dudhi Tehsil of district Sonbhadra, U.P. The Village is situated at the fringe of five states namely U.P., M.P, Chattisgarh and Bihar and Jharkhand.

FINDINGS

Dhanaura village is the main village of study in Duddhi block. Dhanaura sets an example of how tribes and castes live together without deteriorating their identity and culture. Though both have adopted each others cultures, tribes being more comfortable in adopting Hinduism but have still maintained their ethnic identity.

The people of Dhanaura are simple and believe in peace. There is poverty in Dhanaura therefore everyone is busy in running their livelihood. Males and females work with each other specially as labourers and cultivators. They speak Hindi and Bhojpuri. It was seen that despite being poverty stricken they were actively involved in educating their children.

Dhanaura, a symbol of unity and filled with ethnic spirit of oneness is divided into groups Tribal and non tribal. There are 16 castes in Non tribal group and 5 in tribal group. There were various tribes and castes living together in harmony. They have been divided as tribal and non tribal groups.

TRIBES- Gond (Maajhi), Chero, Panika, Bhuiya, Kharwar.

CASTES- Brahmin, Kshatriya, Srivastava, Agrahari, Kalwar, Teli, Naai, Kewat, Lohar, Kumhar, Biyar, Koiri, Chamar, Paasi, and Muslim.

Tribals are the original inhabitants and non tribals are the one who are either migrated from other states or the one who have forcefully detained the lands of tribals and settled on their lands. Maximum population of Dhanaura is Hindu. The tribal population is one fourth of the total population. They had their unique Culture. All their feast and festivals, the rituals related to magic and religion is not performed by a Brahmin but by a *Baiga* (man of Chero Tribe). This tradition is followed till now.

By seeing the present condition of Dhanaura it would be true to say that the tribes have undergone the process of Acculturation due to which the tribals have left their own custom and traditions and have fully adopted the rituals and traditions of Hindus.

Thus the gap between tribals and non tribals was filled. Among the tribals the population *Gonds* is highest. Their population is 826 out of 4703, almost 18% of the total population and among the non tribal population *chamars* have highest population i.e. 800 out of 4703, 17% of total population. Dhanaura is situated differently from the other villages which are situated on plain. The houses here are scattered due to which there is lack of communication between the castes. Dhanaura has been divided into 5 Tola- Dhanaura I, Dhanaura II, Japla, Bagbiyani and Piprahi. In Dhanaura I, there are smaller hamlets which are named after castes such as *Brahmin Tola*, *Thakur Tola*, *Ahir Tola*.

The population is almost equal though *Brahmins* are a little more in number, however their social status is almost equal. Economically they are more strong than rest. It is found that both the castes are not so friendly with each other as always there is a fight for headship. In present time also the Gram Pradhan is *Brahmin* since 10 years.

Mythologically the *Kshatriyas* consider themselves lower than Hindus

because Brahmins are priests, few Brahmins are still doing their traditional *Panditai*, rests are involved in agriculture, govt. Job, Business etc.

Table No. 1.1

S.No	Brahmin Occupation	No. of Households	Percentage
------	--------------------	-------------------	------------

1.	Priest	15	23.07%
3.	Govt. Job	11	16.92%
4.	Business	10	15.38%
5.	Maha Brahman	7	10.76%
	Total	65	100%

Kshatriya are the land holders and are economically sound and hold strong position in Dhanaura. They hold important posts in Duddhi Tehsil and also in the Gram Panchayat.

PARTICIPATION OF PANDITS IN CEREMONIES AND FESTIVALS

Brahmins have always been perceived as the connecting link between God and humans. *Pandits* (Priests) are the highest officials among the Brahmins therefore they do not enter the house of a lower caste person, neither they take food nor drink water from the members of that house. They behave differently with different caste people. They give respect to respectable person (higher caste people) and neglects or abandons the lower caste people.

They give least time to *Chamar* however the *Pandits* are present in the

marriage of any caste but they do not eat in every caste. *Pandit* also performs *Mundan*, *Chatthi*, *Barahi*, *Yagyopaveet* ceremonies of upper castes. He also performs *Katha* when called from any upper castes. Thus it is clear that the *Pandits* performs the *pooja* in the lower castes also but in temples or any other place but not their home. In some intermediate castes he does not eat food therefore *seedha* is given to him so that he can prepare the food himself with all the raw items.

ACCEPTANCE AND DENIAL OF FOOD AND WATER

There are two types food told by Dhanaura men- *Kaccha* and *Pakka*. *Kaccha Khana* includes *Dal Chawal*, *Roti Sabzi* and *Pakka khana* includes *Poori* made of oil and ghee. It is seen that generally two castes does not have *kaccha khana* with each other. If any lower caste people accepts food only from Brahmin and Thakur then they can only have *poori* made from oil or ghee from any other caste as it is believed that anything made from oil and put on fire is pure. This is seen still in *Gonds* of Dhanaura. Also it is seen that even if any caste eats with other caste, then also the castes generally do not eat *bhaat* (Rice) in any caste, specially a higher caste person. The rule of not eating *bhaat* is so strict that when *Gonds* were asked about this tradition, they told

that do not eat rice even in some of their own subcastes. The Hindu caste accepts rice only from *chamar* in lower caste and no scheduled tribe. Similarly *Gond* and *Kharwar* do not accept rice as food from any tribal group and from any caste also not even from Brahmin.

The Brahmin do not accept the *kaccha* food from any caste not even from Kshatriya. The Kshatriya do not accept *Kaccha Khana* from Brahmin in Brahmin home but if served somewhere else can have the food. Brahmins can accept the sweets or any dairy products from Kshatriya. The food pattern or the food intake relation between the Brahmins and the other castes is same as the relation between Kshatriya and the other castes. All the other upper castes follow the food pattern of Kshatriya. The Kalwars, Agrahari, Srivastava, Lohars, Ahir, Kewat and do not have any taboo for *Pakka Khana* but generally it found that they do not accept *Pakka Khana* from Kumhar, Teli, Chero, Panika, Paasi, Chamar and Bhuiya but few exceptions were also seen like Kshatriya do not have *Pakka Khana* with Chero but few castes such as Lohar, Ahir, Kewat, Kumhar, and Teli have *Pakka Khana* with Chero. The tribal groups *Gond*, *Chero Kharwar* enjoy some hierarchical status but *Gonds* are more respectable firstly they more in members, secondly they are the original inhabitants, though the exchange of food is done among them without any taboo. *Panika* and *Bhuiya* on the other hand are the lower tribal group that can have the *kaccha* and *Pakka Khana* with the other tribal group but the tribe did not accept food in their houses. The lower caste can accept the water from upper castes but the upper castes only accept from the touchables. It is a general notion that those castes from whom water can be taken are suitable for *Pakka Khana*.

The exchange of food between Thakur and other castes.

DISCRIMINATION IN SEATING ARRANGEMENT

The lower caste people cannot sit together with the upper caste people. It is mandatory to sit above the lower caste people for the upper caste however while attending the Panchayat an exception was seen. At the Panchayat Bhawan, Dhanaurait was seen that among the *panches* of the members of the Gram Panchayat, certain low caste people were sitting next to Pradhan and other upper caste people. But it was also seen that whenever a low caste person sees an upper class person, he stands in due respect. It is also evident to say the discrimination is not only decided through the castes but also through education, post, business etc. In the Panchayat Bhawan, there was no such discrimination. In primary school of Dhanaura there were teachers and attendants of lower caste, they sat along with other upper caste teacher and enjoyed equal status of a teacher.

INTERMINGLING DURING FESTIVALS

There is no discrimination among the castes in any festival except *Holi*. The lower caste cannot put colours to the high caste people although they can put *abir gulalon* them. The main reason behind it is that the untouchability lies in water.

INTERRELATIONS BETWEEN CASTES

In spite of strong racism or the casteism seen in the village, the villagers are bonded through strong social relations which fills the gap between the higher caste and lower caste. In this the *Jajmani* system and traditional occupation of the castes plays an important role. Every caste plays an important part in maintaining the integrity of the village. As seen earlier, the Brahmins (Pandits) are in contact with every caste. Lohar and Gonds also do the work of carpentry (*Badhaigiri*). Thus give service to villagers, he repairs the plough & makes the wooden blocks to be used in

marriage. The kumhar on the other hand makes pottery with clay, *dona* and *pattal* made from *Palash* whole year thus serves the people. Irrespective of higher and lower caste, the chamar give their services whenever a child is born, similarly *Naai* (Barber) are also called during birth, mundane, marriage, death etc. *Dhobi* (washerman) are not in Dhanaura, therefore when they are needed, are called from other village. *Cheros* are also an indispensable part of the village they are the *Baiga* of the village, the post of *Baiga* is ancestral and paternal who are generally *Cheros*. The *Baiga* are the traditional healers and practitioners to whom everyone goes either for treatment of any disease, any ghost and witchcraft etc. *Chero* call themselves the owner of the land therefore their presence is mandatory in all the festivals related to land such as sowing, reaping, harvesting in agriculture, while digging out clay for *matkothwa* (a marriage ritual). In the marriage ceremonies he has a vital role irrespective of any caste. In every house when the seeds are sown and harvesting of crops done, *Baiga* is called for sacred performances for high yield. He also performs certain *pooja* for the welfare of village called as *Gaon Banana* and *Gaon Gothna*. All the upper castes who are the landowners are heavily dependent upon the lower castes for their help in harvesting, sowing, irrigation, and for the collection of the agriculture yield. Similarly the lower caste and the tribals are dependent on the higher caste for work or part time occupation for their livelihood. Thus due to this interdependency of castes and tribes on each other in day to day life leads to closeness and solidarity in spite of strict rules of caste. The tribe and caste live together in Dhanaura building a strong bond due to such interdependency. The following diagram shows the interdependency of various castes and tribes.

Marriage of an upper caste Hindu

TRANSITION PHASE

With these above mentioned reasons it is also seen the effect of interaction with other villagers and migrated population people going out to different cities or even countries for work which has turned their strict caste rules into a flexible one. People have become liberal now. The factors included are social interaction, communication sources- Media, television, phones, abolition of *zamindari*, various development schemes launched by the govt., awareness among the lower caste and tribes. All those privileges and power which higher caste people are getting are equally demanded by the lower castes and tribes. They are keeping their opinions strongly, they are no more slaves now. We see that even the rules of acceptance and denial of food are prevalent

but we also come across with one such Brahmin *Mahabir Pandit* who eats in every marriage might be of *Chamar* also. When he was asked that in spite of such rules of purity why he eats in Chamar and Bhuiya family, he smartly said, "hotel me Jo Khate hain vokaun sa Brahmin Thakur banate hain". The upper castes now have become more tolerant towards the lower caste. Thus these old practices are no doubt getting followed but gradually they are losing grip and the weapon being used is awareness, education, job security. The tribes which are educated they are by no means less than the upper castes. At first sight it became difficult to identify between a tribe.

CONCLUSION

The castes and the tribes were interdependent and the effect of acculturation was seen, the tribes adapted Hinduism and followed all the rituals and festivals of

Hindu. Dhanaura witnessed acculturation i.e. the tribes were adopting the cultures and rituals of castes, but presently transculturalism is also seen evident from the fact that all the castes worship *Nanku Baba*, who was the *Gond* and is worshipped by tribes, even the Muslims have profound faith in him. The castes also did not keep the idols of God and Goddess and there was only two temples in Dhanaura which was of Lord Shiva, in which the tribals had faith and worshipped him. Not only the tribes follow the rituals of Hindu marriages but the castes also follow these rituals in every Hindu marriage, the *Baiga (Chero)* is called for *Matkodwa*, *Mandap chana*, for *Mehadhar Pooja* which is a tribal ritual and on many occasions the tribes and castes complement each other. The agricultural fields were beside the houses in the villages respectively which is a characteristic tribal feature. Thus the castes also imitate the way of living of tribes.

The commensal relations were mainly evident from the acceptance of food from each other. Earlier the rules were strict and people followed them. The upper castes and intermediate castes did not accept the food and water from lower castes. The *Pandits* did not perform the ceremonies in the lower castes and tribal families but now the *Pandits* join the marriage of lower castes but do not eat food and generally they do not go to their houses. The *pooja* or any ceremony is kept in temple or anywhere except house. In *Gond* marriage *Dharmacharya* performs the rituals in marriage. The *Gonds* also now eat food and water in other castes unlike their ancestors but they do not eat rice *bhaat* in anyone's house specially in upper and lower castes. The practice of untouchability is diminishing which is gradually strengthening the commensality between the castes and tribes. Beside these the tribe-caste interaction can be seen in marriages, birth, worshippings done for the welfare of the village. Kshatriya marriage is a classic example of intercaste relation in present Dhanaura-Brahmin (*Pandit*) for ceremonial rituals, *Baiga* for *matkodwa* & *Mandap Chana*, *Lohar* brings wooden table and flags for pillars of *Mandap*, *Naai* invites the villagers, *Chamars* for cleaning purposes, they bring *dona*, *Dhobi* does the *sindoor daan*, *Gonds* are among the invitees, *Kumhar* brings the earthen pots and many castes help each other in this way. Thus they have strong intercaste interaction due to which these heterogeneous population are able to live in harmony with each other.

This tribe-caste village was different in a way that regardless of the culture contact with Hindus and going through the process of Acculturation and partial detribalization, the tribal groups have maintained their identity and thus transculturalism was more evident than acculturation. However in the world of globalisation and in the society of competitions, the tribals compete with the upper castes and in the process of continuously comparing themselves to them (Hindu), they have undergone partial

detribalization. Their continuous exposure with castes has led to this but it is beneficial to them in many ways. This adoption of Hindu culture has brought them in the stream of progressive development which is good for their multifaceted development. The tribals of other states are lagging behind as they are living in a homogenous population, so they do not have to face competition with the outer world.

The socio-economic status of the Dhanaura people has been upgraded due to the castes residing in it. However every time when two cultures come in contact there are some pros and cons. Earlier they were exploited by the castes but now the tribals have passed that transition phase when they were struggling for their identity. The tribals here are the indispensable part of the village. Poverty exists which is

the important reason behind their backwardness. They are no more deprived class of the village. Also they are no more exploited by the migrant castes. The migrated castes have adopted themselves according to the atmosphere of the village.

This tribe caste culture of Dhanaura is a partial example of the theory of Assimilation postulated by Anthropologist and sociologist G.S. Ghurye. According to him the tribals are the backward Hindus therefore they should be completely merged with or assimilated into the Hindu and their own ethnicity and cultural identity, complete assimilation will destroy their identity. In response to this Majumdar advocated that it is impossible to completely ignore the entire tribal population, complete assimilation will lead to a chaos. Therefore gradual transformation is the best policy for any tribal population. The tribals should be helped in assimilating in their own way. This fact is evident in Dhanaura, the tribes and castes are living in their own way and have their own choices of what to select and reject from the other culture which is the prime factor in maintaining relationship between tribal and non-tribal group of this village.

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Rural Digital Governance-Comparative Study of Rajasthan & Uttar Pradesh

Vaishali Saxena¹

ABSTRACT

E-governance is considered as tool for good governance. In any country outreach of government services is essential imperative for development. Although, in Indian context, rural sociology is significant. At this backdrop a study has been conducted by the aothop to compare status of e-governance at Panchayat levels of Rajasthan and Uttar Pradesh. The study was funded by ICSSR NewDelhi.

Key words:E-governance, Panchayats, Rajasthan, Uttar Pradesh.

India is a vast country, known for its diversity. Its each state has distinct features in terms of culture, demography, geography development etc.

Although, to adjust and adopt these diversities, politically, India has opted for federal political system.(Maheshawari,1970) So, the dynamics of state politics directly impact various development related efforts. Comparing Rajasthan state with the Uttar Pradesh with context to e-Governance at rural level would be an interesting analysis.

To, begin with, vision and roadmap of e-Governance of both states can be compared. The vision statement of Rajasthan links e-Governance with overall development agenda of the Rajasthan, contributing to employment generation, improving quality of life of citizens, flattening the digital divide etc.(Pradeep Ninan Thomas,2012), so that e-Governance can obtain strategic fit with the development model of the Rajasthan. Where as vision of e-Governance in Uttar Pradesh is to expedite the economic development of the state, empower citizens through easy access on information. The roadmap of Rajasthan e-Governance is much more comprehensive, elaborate objective and precise in comparison to Uttar Pradesh. It also appears that Rajasthan has prepared its roadmap after adequate research work and study. Various processes and services are well defined and suitably classified. Roadmap of Rajasthan has clearly identified citizens employee's and business expectations and corresponding e-Governance opportunities.

Key customer expectations and opportunities were based and identified through a discussion with various departments, PWC's internal research and finding of secondary researches. The working methodology of planning and implementation of e-Governance, Rajasthan opted various processes like participation of stakeholders, survey compilations and listing of services etc. which are quite close to organizational Development (OD) interventions. (David A Decenzo & Robbins,2000) Where as roadmap of state of Uttar Pradesh appears to be

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prepared in a unsystematic manner, without adequate research work. Hence, e-Governance initiatives in Rajasthan are very operational, precise and specific in comparison to Uttar Pradesh.

Rajasthan has developed the framework for analysis of various services of the government department for e-governance purpose. The state has prepared a strategy accordingly. This systematic approach of implementation is a lesson for other states like Uttar Pradesh and must be envisaged in its road map.

Research Methodology

The research (U Flick, 2011) compares the e-governance in the PRIs of the Rajasthan and UP. Innovations and initiative of one government may be transplanted in another with few local changes. They can learn from each other's experiences. The digital divide exists between rural and urban area. ICT with the governmental intervention may enable to reduce this. The work also helps to make our democracy inclusive. (Mark Bevir, 2013)

This is completely based on the primary data collected through primary sources of districts of Uttar Pradesh and Rajasthan. (Britha Mikkelsen, 1995) This study considers PRIs of the two states- Rajasthan and UP. Although study focuses more on Uttar Pradesh. Multistage sampling was used to select different Panchayat levels. Two Zila (district) Panchayat of the UP state have been selected initially and from Rajasthan- Bikaner. (As UP is a bigger state than Rajasthan in terms of population and area.) A deliberate attempt has been made to select district away from state capital as nearby districts implement change readily and speedily due to multifarious reasons. Later on one more district had included additionally i.e. Sitapur as state government had applauded for its e-governance efforts. Purposive sampling was used to select Districts while random sampling was used to select PRIs within it. Following Panchayats were included in the study of both the states:

	Uttar Pradesh		Rajasthan
District	Banda	Allahabad	Bikaner
Block	Naraini	Koraon	Bikaner
	Kamasin	Meja	Khajuwala

A random sample was drawn consists of 750 respondents from above PRIs. Qualitative and quantitative data have been collected through interviews and schedules.

The main components of analysis are as follows:

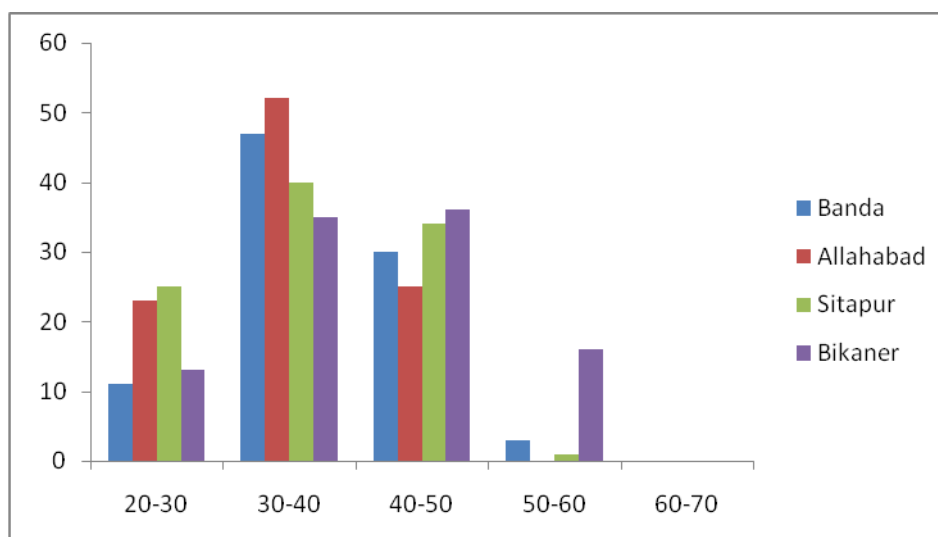
- Profile of the respondents
- Infrastructure development and ICT
- E-environment and E-readiness
- PRI and citizens

Profile of the Respondents

Many profile factors influence e-governance and its implementation, for. Example, E-readiness is supposed to be more among literate group than illiterate group or among youth than the older ones.

In this respect following factors of profile are included for analysis.

- Age
- Gender
- Education



- Designation
- Experience

(a) Age:

Following table depicts the Age Profile of the Respondents

Age Group	Banda	Allahabad	Sitapur	Bikaner
20-30	11	23	25	13
30-40	47	52	40	35
40-50	30	25	34	36
50-60	3	-	1	16
60-70	-	-	-	-

Table1.1: Age of the Respondents (in per cent)

Perusal of Table 1.1 reveals that the maximum number of respondents have belonged to the age category of 30 to 40, 52 percent of Allahabad districts, 40 per cent of Sitapur district, 47 per cent of Banda district and 35 per cent of Bikaner district. Although more aged ones are reported at Bikaner. It is presumed that age is inversely proportional to the adoption of new technology.

Fig11: Age of Respondents (in per cent)

(b) Gender

Gender	Banda	Allahabad	Sitapur	Bikaner
Male	80	77	85	60
Female	20	23	15	40

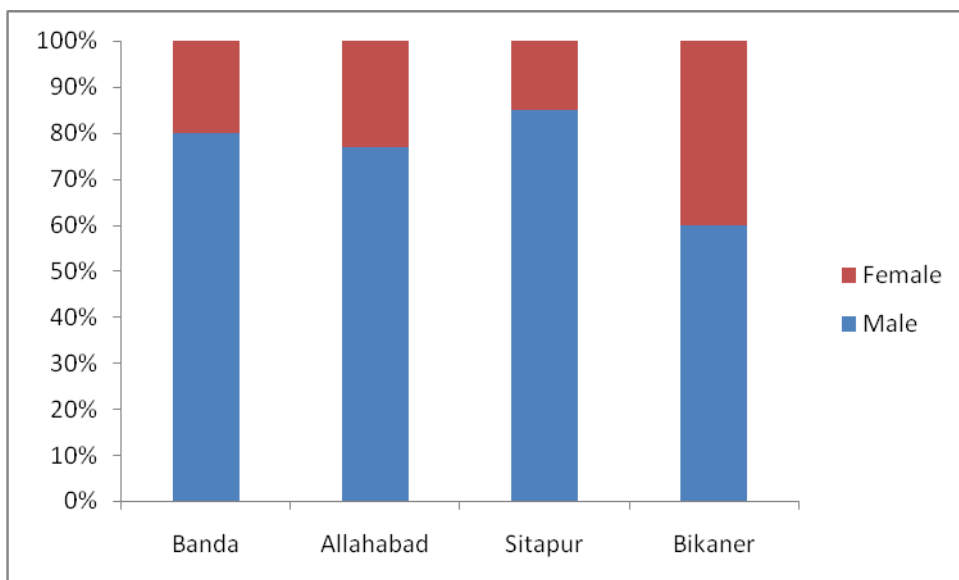


Table 1.2: Gender of the Respondents (in per cent)

The perusal of Table 1.2 points out that maximum respondents were male. Although more female respondents were reported in Rajasthan than the Uttar Pradesh, although Sitapur district of Lucknow is near to state capital but still it has maximum male respondents. Sitapur is also supposed to be more advanced district of U.P. than Banda and Allahabad.

(c) Education

Following table depicts the educational status of various respondents of various districts.

Education Level	Banda	Allahabad	Sitapur	Bikaner
Primary	56	60	50	44
Secondary	32	31	32	48
Intermediate	8	9	10	4
Graduate	4	-	8	4
Post-Graduate	-	-	-	-
Above	-	-	-	-

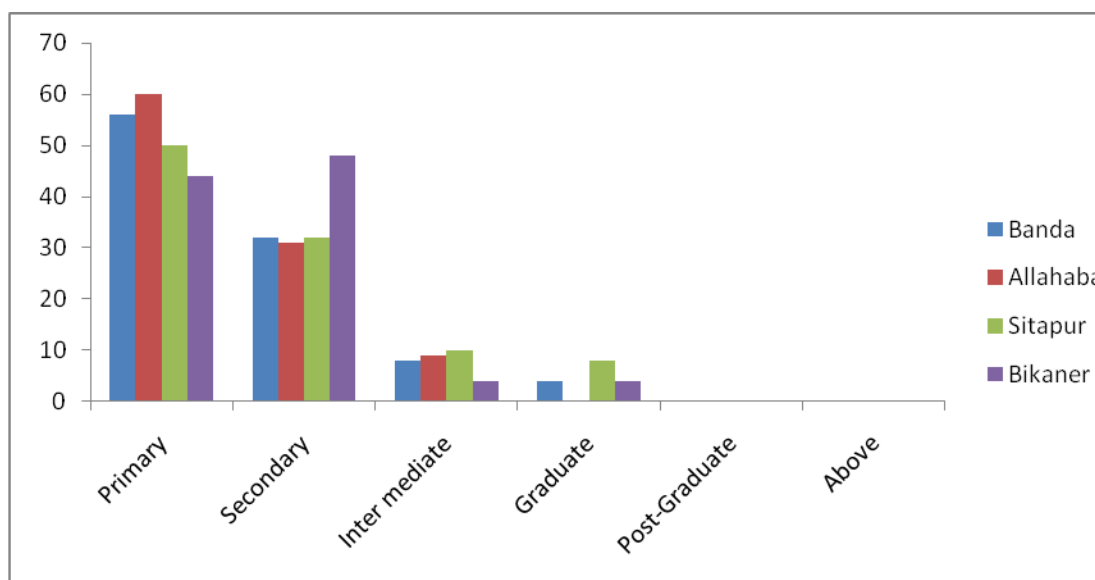


Table 5.3: Education of the Respondents (in per cent)

From the above table it can be concluded safely that most of the respondents (56% Banda, 60% Allahabad, 50% Sitapur and 44% of Bikaner) had primary level of education. It is only Bikaner district where maximum percentage i.e. 48% fall under Secondary Educational level. no respondents were reported to have post graduate and above qualification and only Sitapur and Bikaner district graduate respondents were reported. So on the educational scale Rajasthan seems better than the Uttar Pradesh.

(d) Designation

Designation	Banda	Allahabad	Sitapur	Bikaner
Pradhan	6	6	1	5
BDC	9	9	11	2
Member	83	80	87	83
Officer	2	5	1	10
Others	-	-	-	-

Table 1.4: Designation of the Respondents (in per cent)

(e) Experience

Experience	Banda	Allahabad	Sitapur	Bikaner

1 to 3	97	98	-	-
3 to 7	3	2	100	95
7 to 10	-	-	-	4
10 and above	-	-	-	1

Table 1.4: Experience of the Respondents (in per cent)

Table 1.4 is about the experience of the respondents. Experiences directly influence work maturity, understanding the objectives and goals, and understanding of people's aspirations and needs. In Uttar Pradesh respondents have less experience than the respondents of Rajasthan. At Banda and Allahabad district most of them have experience of 1-3 years while at Sitapur district, all of them have experience ranging from 3-7 years. Although, at Bikaner Rajasthan, 95 percent have experience ranging 3-7, 4 percent 7-10 and 1 per cent more than 10 years.

Following table depicts the total as well as women representatives in each gram panchayat as women representation is essential for inclusive democracy.

Allahabad					
Meja			Kuraon		
	Women Rep.	Total		Women Rep.	Total
Kanchanpur	5	13	Kheri	3	15
Itwah	5	15	Khapteha	5	11
Derhan	2	11	Tanga	2	11
Ghoreha	5	15	Jokhat	3	11
Hardiha	6	15	Kandi	6	11
Raninara	9	11	Chhapar	8	15
Maiya	3	11	Busgarhi	5	11
			Gobra	3	1

					1
Banda					
Kamarin			Narainee		
	Women Rep.	Total		Women Rep.	Total
Persauli	7	15	Mahotara	5	15
Koribujurg	5	15	Aau	6	15
Ghugai Bear			Dikhitwara	5	11
Jamu	3	15	Thannail	6	15
Taraya	5	13	Simariya Kushan	4	11
Chololar	8	15	Barihada	5	11
Berarv	6	13	Kada	6	13
			Panah	5	11
Sitapur					
Sidhauili					
		Women Rep.		Total	
Kunwarpur		4		11	
Lahurwan					
Rivonkala		5		13	
Jaipalpur		7		13	
Atariya		7		15	
Bikaner					
Bikaner			Khajuwala		

	Wo me n Re p.	T o t a l		Wo me n Re p.	T o t a l
Khara	5	11	Dantaur	5	15
Udasa r	5	13	Ramza nwala	3	11
Jaansa r	5	15	Ballar	7	11
Napas ar	17	35	Aladin ka Bera	3	11
Ghaar wala	4	11			

Table 1.5: Total number of women representatives in each gram panchayat.

Perusal of table 1.6 reveals the 100 per cent literacy of the representatives in Uttar Pradesh. Although it was found that many were only able to write their names and literacy was missing in real sense of the term i.e. reading and writing so the work can be done effectively. Many of them confided this informally to the investigator. Moreover they consider that this help them to earn respect among villagers. Such fake literacy is more common among women representatives. Rajasthan is insignificantly different on literacy percentage (99%).

District	Literacy Percentage
Allahabad	100
Banda	100
Sitapur	100
Bikaner Rajasthan	99

Table 1.6: Literacy of the GP Representatives

Infrastructure Development and ICT Component

Basic facilities are essential for development and usage of ICT at PRIs be it electric supply, broadband network and connectivity ,provisions for Panchayat Bhavan, computers and storage material etc.. It is significant to note that infrastructure is at its best at district level, better at block levels but very poor at Village levels. The dream of digital India is incomplete without digital villages.

Allahabad

Meja		Kuraon	
	No. of computers		No. of Computer
Kanchanpur	0	Kheri	0
Itwah	0	Khapteeha	0
Derhan	0	Tanga	0
Ghoreha	0	Jokhat	0
Hardiha	0	Kandi	0
Raninar	0	Chhapar	0
Maiya	0	Busgarhi	0
		Gobra	0
Banda			
Kamarin		Narainee	
	No. of computer		No. of computers
Persauli	0	Mahotara	0
Koribujurg	0	Aau	0
Ghugai Bear	0	Dikhitwara	0
Jamu	0	Thannail	0
Taraya	0	Simariya Kushan	0
Chololar	0	Barihada	0
Berarv	0	Kada	0
		Panah	0
Sitapur			
Sidhauli			
		No. of Computers	
Kunwarpur		0	
Lahurwan		0	
Rivonkala		0	
Jaipalpur		0	

Atariya		0	
Bikaner			
Bikaner		Khajuwala	
	No. of Computers		No. of Computers
Khara	1	Dantaur	2
Udasar	2	Ramzanwala	1
Jaansar	1	Ballar	1
Napasar	1	Aladin ka Bera	1
Ghaarwala	2		1

Table 5.7: No. of computer system at Gram Panchayat

To implement e-governance successfully, computer system should be provided in each office of the PRIs. In Uttar Pradesh ,no computer system was available at the Gram Panchayat level. Where as in Rajasthan every Panchayat has average of one computer system at least.

It is also interesting to know that in Rajasthan, most of the Gram Panchayats have their own Panchayat Bhavan (consequential to Adarsh Gram Panchayat Yojana). As a result regular meetings and regular timings are observed by them. There was no Gram Panchayat Bhavan in Uttar Pradesh. Sar Panchs are operating from their houses. Hence it effects negatively their meetings and regular timings in absence of any definite place of work.

	U.P. (in per cent)	Rajasthan (in per cent)
a. Weekly	-	20
b. Fortnightly	-	80
c. Monthly	45	-
d. Bi-Annual	65	-
e. Annual	-	-
f. Irregular	-	-

Table 1.8: Regular Meetings

In Rajasthan, 80 per cent reports to have meetings fortnightly and only Udasar reported to have meetings weekly. Whereas in Uttar Pradesh meetings are held Bi-annually at Allahabad and Sitapur districts. Only Jorkhat of Koraoon, Allahabad reported to have monthly meetings. Whereas monthly meetings are held in the selected GPs.

Allahabad			
Meja		Kuraon	
	Regular Meetings		Regular Meetings
Kanchanpur	Bi-annual	Kheri	Bi-annual
Itwah	Bi-annual	Khapteeha	Bi-annual
Derhan	Bi-annual	Tanga	Bi-annual
Ghoreha	Bi-annual	Jokhat	Monthly
Hardiha	Bi-annual	Kandi	Bi-annual
Raninar	Bi-annual	Chhapar	Bi-annual
Maiya	Bi-annual	Busgarhi	Bi-annual
		Gobra	Bi-annual
Banda			
Kamarin		Narainee	
	Regular Meetings		Regular Meetings
Persauli	Monthly	Mahotara	Monthly
Koribujurg	Monthly	Aau	Monthly
Ghugai Bear	Monthly	Dikhitwara	Monthly
Jamu	Monthly	Thannail	Monthly
Taraya	Monthly	Simariya Kushan	Monthly
Chololar	Monthly	Barihada	Monthly
Berarv	Monthly	Kada	Monthly
		Panah	Monthly
Sitapur			
Sidhauli			
	Regular Meetings		
Kunwarpur	Bi-annual		
Lahurwan	Bi-annual		
Rivonkala	Bi-annual		

Jaipalpur		Bi-annual	
Atariya		Bi-annual	
Bikaner			
Bikaner		Khajuwala	
	Regular Meetings		Regular Meetings
Khara	Fortnightly	Dantaur	Fortnightly
Udasar	Weekly	Ramzanwala	Fortnightly
Jaansar	Fortnightly	Ballar	Fortnightly
Napasar	Fortnightly	Aladin ka Bera	Fortnightly
Ghaarwala	Fortnightly		

Table 1.9: Regular Meetings of Gram Panchayat

Timings	U.P. (in percentage)	Rajasthan (in percentage)
9.00 a.m. To 6.00 p.m.	23	40
10.00 a.m. to 5.00 p.m. or 6.00 p.m.	26	60
Irregular	51	-

Table: 1.10: Timings of the Work (in per cent)

Likewise regular meetings regular timings also vary. In UP many reported to have even indefinite timings (51 per cent) where as 23% reported to have 9 a.m.-5 p.m. and 26% 10 a.m. to 5/6 p.m. Whereas in Rajasthan most of them reported to have regular timings of 10 a.m.-6 p.m. (60%) and 40% 9 a.m.-5/6 p.m.

Allahabad			
Meja		Kuraon	
	Regular Timings		Regular Timings
Kanchanpur	indefinite	Kheri	indefinite
Itwah	indefinite	Khapteeha	indefinite
Derhan	indefinite	Tanga	10a.m.-5 p.m.

Ghoreha	indefinite	Jokhat	indefinite
Hardiha	indefinite	Kandi	indefinite
Raninar	indefinite	Chhapar	indefinite
Maiya	indefinite	Busgarhi	indefinite
		Gobra	10a.m.-5 p.m
Banda			
Kamarin		Narainee	
	Regular Timings		Regular Timings
Persauli	9 a.m.-4 p.m.	Mahotara	indefinite
Koribujurg	10a.m.-5 p.m.	Aau	indefinite
Ghugai Bear	10a.m.-5 p.m.	Dikhitwara	indefinite
Jamu	10a.m.-5 p.m.	Thannail	10a.m.-5 p.m.
Taraya	10a.m.-5 p.m.	Simariya Kushan	indefinite
Chololar	10a.m.-5 p.m.	Barihada	indefinite
Berarv	10a.m.-5 p.m.	Kada	indefinite
		Panah	indefinite
Sitapur			
Sidhauli			
	Regular Timings		
Kunwarpur	10a.m.-5 p.m.		
Lahurwan	indefinite		
Rivonkala	indefinite		
Jaipalpur	10a.m.-5 p.m.		
Atariya	10a.m.-4 p.m.		
Bikaner			

Bikaner		Khajuwala	
	Regular Timings		Regular Timings
Khara	10a.m.-6 p.m	Dantaur	10a.m.-6 p.m
Udasar	9 a.m.-5 p.m	Ramzanwala	9 a.m.-5 p.m
Jaansar	10a.m.-5 p.m	Ballar	10a.m.-5 p.m
Napasar	10a.m.-6 p.m	Aladin ka Bera	10a.m.-5 p.m
Ghaarwala	10a.m.-6 p.m		

Table: 1.11: Timings of the Work At GP

E-governance is making continuous effort to make offices paperless and so reduce carbon footprints of the offices and organization. Various nations are surging ahead for paperless economy. It is also an

	U.P. (in Per cent)	Rajasthan (in Per cent)
a. Paper Register	100	-
b. Computer/ Hard Disk	-	-
c. A & B	-	2
d. CD/ Floppy Disk	-	-
e. All	-	98

Table: 1.12: File and Storage of Records

Indicator of modernization and cost economic. But unfortunately bureaucracy is infamous for its paper work. Indian government offices have elaborate manual system to keep record mainly in the form of Paper Registers. And so, Indian government office visual appears outdated more of a store of records. Piles and Piles of paper register records is characteristic of Indian Government Offices. Such a record storage system is in vogue dating back to British India. Although a completely different system is needed for e-governance. UP is still totally on manual record keeping while Rajasthan prepares manual as well as e-records either on system or hard disk etc.

	U.P.	Rajasthan
Yes	100	100
No	-	-

Table 1.13: Storage of Records in NIC

Despite the fact e-storage of records is not possible in UP due to lack of availability of adequate infrastructure of ICT but records are sent via higher levels to be stored at National Information Centre.

	Rank	
	U.P.	Rajasthan
a. Lack of Basic Infrastructure	3	2
b. Inadequate Power Supply	2	1
c. Lack of Quality of Stationery and Storage Material	5	-
d. Lack of I & CT	4	-
e. All of the above	1	-

Table 1.14: Problems in keeping the records

As a result Uttar Pradesh reported to face more problems with present record keeping system than the Rajasthan (refer table 1.14). Most of the PRI's of Rajasthan have reported to face shortage of adequate power supply.

Options	U.P.	Rajasthan
Inverter	20	100
Battery	30	100
Solar Energy (Solar Panel and or Solar Lantern)	-	100
Lantern	100	-
Others	-	-

Table 1.15: Available Alternative options for Electricity

It has been identified that electricity supply is a major issue in rural India, Thinking e-governance without it is like thinking sanitation without water. An effective governance component must consider alternative supply measures. Table 1.15 depicts that at Rajasthan solar power is 100 per cent available while at Uttar Pradesh no GP has solar supply. Even, rate of having invertors and batteries are also quite low. Details of alternative are given in the table no.1.16.

Allahabad			
Meja		Kuraon	
	Options		Options
Kanchanpur	Lantern	Kheri	Lantern
Itwah	Lantern	Khapteea	Inverter, Lantern and

			Battery
Derhan	Lantern	Tanga	Lantern
Ghoreha	Lantern	Jokhat	Lantern
Hardiha	Lantern	Kandi	Lantern
Raninar	Lantern	Chhapar	Lantern
Maiya	Inverter & Lantern	Busgarhi	Lantern
		Gobra	Lantern
Banda			
Kamarin		Narainee	
	Options		Options
Persauli	Lantern	Mahotara	Lantern, Inverter, Battery
Koribujurg	Lantern	Aau	Lantern
Ghugai Bear	Lantern	Dikhitwara	Lantern, Inverter, Battery
Jamu	Lantern	Thannail	Lantern
Taraya	Lantern	Simariya Kushan	Lantern
Chololar	Lantern	Barihada	Lantern
Berarv	Lantern & Battery	Kada	Inverter & Lantern
		Panah	Lantern
Sitapur			
Sidhauli			
	Options		
Kunwarpur	Battery & Lantern		
Lahurwan	Battery & Lantern		
Rivonkala	Battery & Lantern		
Jaipalpur	Battery & Lantern		
Atariya	Battery, Inverter & Lantern		

Bikaner			
Bikaner		Khajuwala	
	Options		Options
Khara	Battery, Inverter, Lantern & Solar	Dantaur	Battery, Inverter, Lantern & Solar
Udasar	Battery, Inverter, Lantern & Solar	Ramzanwala	Battery, Inverter, Lantern & Solar
Jaansar	Battery, Inverter, Lantern & Solar	Ballar	Battery, Inverter, Lantern & Solar
Napasar	Battery, Inverter, Lantern & Solar	Aladin ka Bera	Battery, Inverter, Lantern & Solar
Ghaarwala	Battery, Inverter, Lantern & Solar		

Table: 1.16: Available Alternative options for Electricity at Gram Panchayat

Over all on infrastructure and ICT component Rajasthan scores significantly better in all respect than the Uttar Pradesh. There is stark difference between these two states. It is also not out of place to mention that Sitapur District of UP was additionally added as it was declared under e-district by the State government. Although some basic infrastructure of e-governance is available at block levels in all the districts of UP but neither it is sufficient nor fulfills the expectations of people and PRIs. E-governance centre such as Lokvani, e-suvidha Kendra or Kiosks are located at different levels but unable to cope up the work load as these are very few in numbers and sparsely located. The efforts of state government seem random and casual as is evident from its roadmap. It lacks proper field work and research analysis. The state government fails to take up this exercise as an OD process. (refer last chapter of suggestions)

Rajasthan is doing fairly better in developing Ict infrastructure and supporting structures.. The credit goes to the team who carried out initial diagnosis and prepared the roadmap of the state as well as of the state government for providing over all support and coordination but above all willingness to carry out and implementation and making it a sustainable e-governance system

E-environment and e-readiness component:

E-environment component demonstrate the willingness to tap the facilities offered by the ICT while e-readiness shows its preparedness to adopt it. Awareness, attitude, usages of digital gadget sand techniques construct these components

	U.P.		Rajasthan	
	Manu al	Comput er	Manu al	Comput er
Diffic ult	100	Do not Know	90	10
Simpl e	-	Do not Know	10	90

Table 1.17: Attitude of Members towards record Keeping

As no Gram panchayat of reported to use ICT for storage, they face serious problem in keeping manual records and shown willingness to opt computer storages. In Rajasthan both the systems are simultaneously used they found maintain computer records are quite easy.(refer table no5.17)

State	Yes	No	Indefinite
U.P.	22	88	-
Rajasthan	49	51	-

Table: 1.18: Awareness of ICT Act Among Members

In Uttar Pradesh awareness of ICT Act is quite low. Only 22% of respondents were aware of the ICT Act. Although Meja block of Allahabad was high on awareness of the Act. (refer table no. 5.18)In Rajasthan this ratio is 49% aware and 51% were not aware.

Allahabad			
Meja		Kuraon	
	ICT		ICT
Kanchanpur	Mobile	Kheri	Mobile
Itwah	Mobile	Khapteeha	Mobile
Derhan	Mobile	Tanga	Mobile
Ghoreha	Mobile	Jokhat	Mobile
Hardiha	Mobile	Kandi	Mobile
Raninar	Mobile	Chhapar	Mobile
Maiya	Mobile	Busgarhi	Mobile
		Gobra	Mobile
Banda			
Kamarin		Narainee	
	ICT		ICT
Persauli	Mobile	Mahotara	Mobile

Koribujurg	Mobile	Aau	Mobile
Ghugai Bear	Mobile	Dikhitwara	Mobile
Jamu	Mobile	Thannail	Mobile
Taraya	Mobile	Simariya Kushan	Mobile
Chololar	Mobile	Barihada	Mobile
Berarv	Mobile	Kada	Mobile
		Panah	Mobile
Sitapur			
Sidhauili			
	ICT		
Kunwarpur	Mobile		
Lahurwan	Mobile		
Rivonkala	Mobile		
Jaipalpur	Mobile		
Atariya	Mobile		
Bikaner			
Bikaner		Khajuwala	
	ICT		ICT
Khara	Mobile & Computer	Dantaur	Mobile, Computer & Internet
Udasar	Mobile & Computer	Ramzanwala	Mobile, Computer & Internet
Jaansar	Mobile, Computer & Internet	Ballar	Mobile, Computer & Internet
Napasar	Mobile, Computer & Internet	Aladin ka Bera	Mobile, Computer & Internet
Ghaarwala	Mobile, Computer & Internet		

Table 1.19: Usage of ICT at Gram Panchayat

It is evident from the above table that Rajasthan has all the facilities of computer system, internet connectivity and mobile usages. In many advance country's citizens interface have been carried out very conveniently through mobile compatible downloads, Apps and messages .whereas UP cuts out very sorry state of affairs. Even though those who are using mobile tablets, they are also not using internet facilities and unaware of its various functions.

Allahabad			
Meja		Kuraon	
	Number of Person		Number of Person
Kanchanpur	0	Kheri	0
Itwah	2	Khapteeha	0
Derhan	1	Tanga	0
Ghoreha	1	Jokhat	0
Hardiha	0	Kandi	0
Raninar	0	Chhapar	1
Maiya	0	Busgarhi	0
0		Gobra	Mobile
Banda			
Kamarin		Narainee	
	Number of Person		Number of Person
Persauli	1	Mahotara	0
Koribujurg	0	Aau	0
Ghugai Bear	0	Dikhitwara	0
Jamu	2	Thannail	1
Taraya	0	Simariya Kushan	0
Chololar	0	Barihada	0
Berarv	0	Kada	0
		Panah	0
Sitapur			
Sidhauli			

		Number of Person	
Kunwarpur		0	
Lahurwan		0	
Rivonkala		0	
Jaipalpur		0	
Atariya		0	
Bikaner			
Bikaner		Khajuwala	
	Number of Person		Number of Person
Khara	1	Dantaur	3
Udasar	1	Ramzanwala	1
Jaansar	2	Ballar	1
Napasar	2	Aladin ka Bera	1
Ghaarwala	2		

Table 1.20: Knowledge of computers among Personnel

Once again Rajasthan scores better as in the office 1-2 people are computer literate. As a result they are transferring their knowledge to others as well in the office (refer table no. 5.20) Uttar Pradesh PRIs seems quite backward and behind as in most of the PRIs there was no body with computer literacy.

	Band a	Allahaba d	Sitapu r	Bikane r
Positive	100	100	100	100
Negativ e	0	0	0	0

Table 1.21: Attitude of the Respondents towards Development of ICT(in per cent)

Although it is quite satisfying that all of them want to develop ICT enabled government, reflecting their willingness to adoption of ICT despite their age, education, gender and other relevant differences.

	Banda	Allahabad	Sitapur	Bikaner
Yes	100	100	100	-100
No	0	0	0	0

Table 1.22: Need for Education, Training and Grants(in per cent)

There seems no hesitation among them to take computer training and education if provided to them. They have also realized that lack of proper training makes them behind in comparison to others, especially while communicating to high officials at higher levels. They have also recognized that it seriously hampering their effectiveness as Panchayat representatives. (refer table no.5.22 and 5.23 also).

	Band a	Allahaba d	Sitap ur	Bikan er
Smooth	59	59	15	82
Partially Smooth	0	-0	25	18
Almost unsmooth h	41	30	52	0
Never Smooth	0	11	8	0

Table 1.23: Communication and Exchange of Information with higher officials

Most of them in Rajasthan have reported (82%) that due to e-governance, their communication is not only smooth but also speedy with the head offices. Now, many personal inhibitions like language, rural background etc have minimized to influence their communication. Communication becomes impersonal in positive terms. Since UP has no system of e-governance in their offices also reported in unsmooth categories significantly.

	Ban da	Allahab ad	Sitap ur	Bikan er
Lack of education	38	41	23	100
Lack of Cooperatio n & coordinati on	-	-	-	-
Lack of ICT	-	-	-	-
Lack of clarity in prog.& policies	-	-	-	-
All Of the above	62	59	67	-

Table 1.24: Problems & Issues in Exchanging information and Communication (in per cent)

Perusal of table no. 1.24 reveals that in Rajasthan they consider that due to their less education they face some problems of communication while In UP they reported all

factors are contributing to this state of affairs. It seems that in Rajasthan due to usage of ICT, enhanced clarity, cooperation & coordination with back offices, front offices and with officials, which have made communication and exchange of information smooth. Unlike to this prevails in UP.

	Band a	Allahaba d	Sitapu r	Bikane r
Positive	100	100	100	100
Negative	0	0	0	0

Table 1.25: ICT and Work Effectiveness (in per cent)

But it appears quite satisfying that all of them considers that ICT is essential to deliver work effectively, as it is evident from the table no. 1.25.

	Band a	Allahaba d	Sitapu r	Bikane r
Positive	100	100	100	100
Negative	0	0	0	0

Table 1.26: Need For Separate Panchayat Web site (in per cent)

It is also interesting to know that all of them of UP as well as of Rajasthan desire to have separate web site of their panchayats, even when Departments web site provide all relevant information. It enhances their esteem and instill sense of identity. Separate web site may be used to motivate them further in this direction.

	Band a	Allahaba d	Sitapu r	Bikan er
Yes		21	0	73
No	98	75	82	2
Indefinite	2	4	18	25

Table 1.26: Awareness about MMPs (in per cent)

Implementations of e-governance are part of various MMPs. It is knowledge among Panchayat members and representatives is essential for its successful implementation. Its awareness in UP district is low in comparison to Rajasthan.

Perusal of various tables pertaining to e-environment and e-readiness component concludes that all the selected districts, blocks and GPs have shown positive attitude towards use of ICT and its development. 100 per cent respondents have felt the need for training, education, separate web sites, where they can upload information themselves, instead of sending it manually. It is noteworthy to point out that Gram Panchayats of Rajasthan have to send the monthly information of the village on the given format to panchayat Samiti. At the district level all the collected information

get compiled and web site information modified subsequently. Although, now information key in at the Panchayat Samiti level but modification done at the district level only. If the facility of key in the inputs is available at the GP level, it becomes more expedite than now as it will reduce the number of channels. But anyway Rajasthan is continuously decentralizing its e-governance functions. Unfortunately it is not taking place in UP.

It appears that PRIs of both the states are quite high on e-environment component but Rajasthan definitely takes the lead as far as the e-readiness component of the state has been concerned. E-readiness of Uttar Pradesh is negatively affected by lack of integrated approach, apathy of administration, lack of education, training and capacity of staff and offices, lack of infrastructures and funds and incoherent approach of the government etc. Despite district wise gaps e-readiness is almost similar in various districts of UP reflecting on administrative and political culture and willingness in this context. Rajasthan is definitely successful relatively to generate u-ethos of work culture.

PRIs and Citizens

The most important component in e-governance context is citizen interaction. It may take place either on Individual basis or under some schemes. Time to time much information is either asked by the citizens or many information needs to provided to them as well. It becomes so essential to make them aware about various schemes and programme like. MNEREGA, widow pensions etc.

ICT and e-governance can play a significant role. The various methods employed by them to provide information to citizens are described in the table no. 1.26.

	Ban da	Allaha bad	Sitapu r	Bikane r
Citizen's initiative	mo stly	Mostly	Mostl y	Alway s
Advertise ment	No	No	No	No
Advt through Loudspea ker	mo stly	Mostly	Mostl y	Mostly
SMS	No	No	No	Someti mes
Website	No	No	Somet ime	Mostly
other	No	No	No	No

Table 1.27: Methods used to provide Information on schemes (in per cent)

Most of time citizens approach Panchayat and get the information directly. In Uttar Pradesh as well as in Rajasthan its most popular way to exchange information between the two. In Rajasthan they have reported that maximum information have been given on the web sites. But whenever they fail to understand, citizen approach the Panchayat directly. They also make them available various downloads and forms.

Although in Uttar Pradesh, information is mostly given through loudspeakers on Rickshaws. They have also reported many problems but finds this very effective.

Given below is the list of Programmes/schemes:

1. MNERGA
2. Indira Avas Yojana
3. BPL
4. Annapurna Vridha Pension
5. Samajwadi Pension Scheme (in UP)
6. Antyodaya
7. Job Card
8. Ration card
9. Nishakt Yojana (in RAJ.)

According to the annual report of the department of Panchayati Raj Rajasthan 2013-14, the department has implemented IWMA software through which various administrative and technical acceptances have been issued for various departmental schemes. The software also provides opportunity to obtain utilization certificate of the expenditure also. In Rajasthan apart from MNERGA e-registrations, under Indira Avas Yojana acceptance is through online Avas Soft. Moreover, GIS based system has been also followed.

GIS is a computer system capable of capturing, storing, analyzing, and displaying geographically referenced information i.e. data identified according to the location that can be used for other purposes, resource management and development planning. It can be used purposefully for rural development planning and monitoring. A GIS is a power tool to relate different pieces of information in a spatial context and to reach a conclusion about this relationship. For example to know about the possible changes in the weather of our village at a given point in time, one may collect general information about the rainfall around that time and then use the location reference of that village to forecast what may be expected in the immediate future. Further by comparing the other information with it like crops. So GIS, leads to better insight that should lead to better decision making in the rural areas.

In short, citizen and PRI interaction is more systematic, fast and effective in Rajasthan than Uttar Pradesh. It is interesting to note that during field work at Rajasthan, it was observed that every house was marked and electricity meters were outside their houses. It was also observed that mostly villages have community health centre which is functional as well as government primary schools. These small observations yet very significant convey the success story of Rajasthan. Many lessons can be drawn from this state.

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Theoretical Framework for the Role of Emotional Intelligence, Resilience and Coping Skills in Managers for Adaptability in Crisis

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ABSTRACT

A succession of abrupt, impromptu and surprising occasions prompting shakiness in the organization and significant turmoil among the people is called as crisis. Crisis by and large emerges without prior warning causes significant unsettling influences at the workplace. Managers assume a critical part during crisis, show certainty and relentlessness. Take total charge of the circumstance. Managers have full control on the employees, realize what's going on around. They don't disregard any issue in the underlying stage as it may be a significant concern later. They don't overlook even minor issues or hang tight for another person to step up to the plate.

The Managers play a pivotal role in crisis management and adaptability in organizations. A manager who is capable of such an endeavor needs to have certain abilities which makes him an efficient manager to handle and adapt to crisis for the benefit of organization. Coping skills are efforts initiated by an individual to try to master, tolerate, reduce or endure stressful events (Lazarus, Folkman 1984). Resilience is the capacity of a dynamic system to adapt successfully to disturbances that threaten the viability, the function, or the development of that system. (Masten, 2014). On the other hand Emotional intelligence facilitates resilience, coping skills, as well as a psychological resilience that are critical to the regulation of individual moods when faced with a crisis situation (Lloyd et al., 2016).

Therefore It is important to know the role of Emotional Intelligence, Resilience and Coping skills of the Manager. In this theoretical paper an attempt has been made to discuss the abilities like coping strategies, resilience and emotional intelligence to handle crisis situation in the organization

Keywords: emotional intelligence, coping skills, resilience, crisis, adaptability

INTRODUCTION

All organizations go through a phase of crisis and according to literature it is the manager's duty to prepare the organization to cope with the crisis. Mintzberg writes that "managerial effectiveness must be assessed in terms of its broader impact, beyond the individual, and even beyond the organization"

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Management of a company in a turbulent environment requires a manager of multilateral skills. Effective management is to be able to anticipate and calculate risk, combine material and non-material resources to create new or old things in a new way and activate employees to work in new, even unknown areas of activity. The new role of a manager requires more entrepreneurship, and the components of this role are: improviser, organizer, pragmatic visionary, politician, entrepreneur, integrator and strategist. In addition, it requires a creative manager, and the components of this role are: initiative creator, relativist, fantasy, sponsor, selector, advisor. Penc writes that contemporary managers should play roles.

There are certain abilities which if possessed by a manager would contribute heavily on his role in managing and adapting to a crisis. Therefore emotional intelligence, coping skills and resilience of the manager play a significant role in his ability to adapt to the crisis situation.

Emotional Intelligence

Emotional intelligence or EQ is turning out to be progressively essential to human accomplishment in the undeniably advanced eventual fate of work. Emotional intelligence is the capacity to deal with one's own and others' emotions, to discriminate between various emotions, name them properly and to utilize emotional information to direct reasoning and conduct.

Basic triggers can stir various emotions in various individuals. This load of emotions and traits are what make us one of a kind, yet they are additionally what make being a leader or a decent manager a difficult undertaking. In this paper we will talk about the job of emotional intelligence for managers.

Emotional Intelligence at Work

With globalization, teams have become multi-social and worldwide and with that associations have gotten mind boggling. It is difficult to communicate emotions in certain societies though, hardly any others are more expressive. Thus, emotional intelligence has gotten basic as a behavioral ability in organizations today.

Basically, emotional intelligence at workplace alludes to comprehension, communicating and overseeing, great connections and tackling issues under tension. Emotional Intelligence has a huge job to carry out at workplace, explicitly for managers, upgrading performance, yet in addition efficiency of the unit. As per Goleman's model, those with a higher EQ have a more prominent capacity to self-regulate, and more significant levels of motivations – which can thus diminish their propensity to stall, lead to enhance on self-confidence, and empower them to achieving long haul goals.

World Economic Forum positions Emotional intelligence 6th in the rundown of the main 10 skills expected to flourish in the workplace of things to come. EQ influences ordinary workplace decisions, for example, promoting, hiring and firing employees, decisions on significant activities, performance appraisals, and so forth Almost 71% of hiring managers surveyed via Career Builder in 2011 said they esteemed a representative's EQ over their IQ. A further 75% said they would be bound to advance a representative with high emotional intelligence and 59% said they wouldn't enlist an up-and-comer with a high IQ and low EQ. Plainly emotional intelligence is accordingly a significant asset for employees to prevail at workplace and upgrade performance.

Large numbers of us accept extraordinary managers are born, explicitly, we connect certain qualities to our rendition of what we accept is effective. The key traits a large portion of us accept a manager ought to have are passion, vision, boldness, infallibility and so on Extraordinary managers know about their own managerial style. For them, having

awareness of what their style means for their group, makes these generally incredible managers, uncommon. Effective managers not just distinguish, comprehend and deal with their own emotions, yet can do that with others in a very engaging manner, alluded to as having emotional intelligence.

Christina Boedker conducted a study on the correlation among leadership and organizational performance. Subsequent to totaling data from in excess of 5600 individuals across 77 organizations, she finished up the ability of a leader to be sympathetic and compassionate greatly affected organizational profitability and productivity. In case you're a manager, you frequently need to feel sure and in charge in testing circumstances with associates and clients. Managers with a higher EQ assists group with teaming up more effectively and recognize the particular drivers that rouse individual employees.

The following are a few instruments of emotional intelligence for managers that can end up being exceptionally helpful at workplace:

Self-awareness – Self-awareness is portrayed as "the ability to perceive and comprehend individual mind-sets and emotions and drives, just as their impact on others." Keeping a diary in which one can catch their own considerations and the emotions one is going through is a decent practice for upgrading self-awareness. It additionally assists with easing back down when one is encountering outrage or other compelling emotions. Keep in mind, regardless the circumstance, one can generally pick how to respond to it in case one is self-aware

Self-regulation – Self-regulation is about your obligation to individual accountability. Managers who control themselves effectively infrequently assault others loudly or settle on hurried or enthusiastic decisions, generalization individuals, or undermine their qualities. Self-regulation is tied in with remaining in charge. Make a promise to control your emotions, confess to your missteps and outrage when required, and practice profound breathing activities to quiet yourself.

Internal Motivation – Self-spurred managers are headed to accomplish their goals and they have very exclusive requirements for the nature of their work. Reconsider why you accepted this position and ensure that your objective assertions are SMART. Savvy goals when upheld with internal motivation can help managers lead effectively.

Empathy – For managers, having empathy is basic for dealing with an effective group. Managers with high empathy can place themselves in another person's circumstance. They assist with fostering individuals in their group, challenge other people who are acting unreasonably, give constructive feedback, and pay attention to the individuals who need it. Put yourself in another person's circumstance and set aside the effort to take a gander at circumstances according to others' viewpoints. Likewise, react to other's sentiments and address other's emotions to build up effective correspondence and relationships.

Social skills – Managers high on social skills are incredible communicators. They are acceptable moderators of conflicts and can oversee pressures in the group effectively without influencing interpersonal relationships. Managers high on social skills can build the camaraderie and assist them with delivering results.

Dealing with a group isn't simple, however some make it simpler for themselves by applying a couple basic principles of emotional intelligence. The level of emotional intelligence you're ready to develop promptly affects individuals around you, and much of the time, on the direction of your career.

Hereafter, emotional intelligence for managers is a fundamental segment of one's work and character.

RESILIENCE

Resiliency is viewed "as the capacity to rebound or bounce back from adversity, conflict, failure or even positive events, progress and increased responsibility." Organizational resilience is the ability and capacity of a workplace to withstand expected significant economic times, foundational risk, or fundamental disruptions by adjusting, recuperating, or opposing being influenced and continuing center tasks or proceeding to give an adequate degree of working and structure.

Resilience isn't an attribute that individuals either have or don't have. It includes practices, thoughts, and actions that can be learned and created in anybody. It is enormously affected by an individual's current circumstance

Factors Promoting Resilience: A Theoretical Model Kumpfer (1999) describes a model for identifying and managing the factors influencing resilience. Her model has six main components: stressors, environmental contexts, person environment transactional process, internal resiliency factors, resilience process, and adaptation and re-integration.

These components are outlined below:

Stressors: stress arises not from the situations people encounter, but from people's perceptions that they are not able to deal with the situation they encounter in a way they deem satisfactory. When people encounter a demanding situation, they evaluate the nature and intensity of the demand, the resources available for dealing with the demand (i.e., their own skills and other people they can draw on for help), and the likely consequences that will result, especially if the demand is not dealt with satisfactorily. Stress results from a person's appraisal that the demands outweigh their available coping resources and negative consequences are likely to result.

Environmental contexts: some situations are more demanding than others, and are hence more likely to overtax one's resources for dealing with the situation satisfactorily. Wolpe (1969) identified three categories of situations in which people predictably feel overtaxed: intensely unpleasant events, situations where there is ambiguity about what is expected, and situations where the consequences are uncertain¹⁶. Typically, people do not develop extensive coping repertoires for dealing with these types of situations, and therefore often experience stress when engaged in these three types of environments.

Person-Environment Transactional Process: Two people can be in the same situation, and experience differing degrees of stress because they have differing skills and resources for dealing with those particular demands. In cases where there is a good match between a person's knowledge and skills, and the demands of the workplace they are in, stress levels likely will be low and vice-versa. A resilience outcome will be more likely when people have the resource base for dealing with the demands they face, and when there is time between periods of intense demand for people to recover.

Internal Resiliency Factors: Personal agency is related to many constructs in the literature, some of which include: self directedness, self-confidence, self-efficacy, internal locus of control, hopefulness, and optimism. Kumpfer (1999) notes that people who possess these qualities tend to be more persistent and have greater determination, both of which influence resiliency.

Resilience Process: People who believe that they can influence their world, and that their own actions are largely responsible for the experiences they encounter, tend to have greater ability to bounce back from unexpected adversity.

Adaptation and Reintegration: People who have adequate repertoires for dealing with the demands they face, and an ability to bounce back from the challenges they encounter, tend to be more flexible and adaptable, qualities which most career theorists and career practitioners see as essential for success.

Key qualities of a resilient manager

They are realistic – a resilient manager will rehearse good faith that is situated in reality. Notwithstanding misfortunes and impediments, they will continue looking for objectives. Maybe than dread of disappointment, they hope for progress.

They say it how it is – when things are troublesome, a resilient manager will not simply say they are fine. They show enthusiastic mindfulness and can name their sentiments and, when essential, control those sentiments. They will tell others how they are feeling which can make a culture of respectability and regard inside their team.

They are compassionate – not exclusively can a resilient manager recognize and comprehend their own feelings, they are likewise mindful of those of others and ready to see things according to another's point of view. They perceive individuals' qualities and commitments, giving imperative feedback while additionally distinguishing team members' requirements for growth.

They manage issues effectively – a resilient manager will not respond quickly when an issue emerges as they probably are aware this can expand pressure, they will pause for a minute to think and will know about their responses, continually being clear about what can and can't be changed.

They are not hesitant to say 'no' – a resilient manager shows certain relational abilities, they neither restrain things nor over-respond yet communicate obviously in a way which is aware to both themselves as well as other people.

They have a growth mindset – a resilient manager will attempt new things and perspectives a periodic disappointment as a chance to develop and a fundamental piece of the cycle to make extreme progress.

Coping skills

Coping strategies, therefore, are those efforts initiated by an individual to try to master, tolerate, reduce, or endure stressful events (Lazarus & Folkman, 1984). Such efforts may be purely behavioral, purely psychological, or a combination of behavioral and psychological responses.

Researchers have identified two major categories of coping skills: problem-focused coping skills, responses that directly alter or resolve the stressful situation; and emotion-focused coping skills, efforts to manage and regulate one's emotional reactions to the stressor. Individuals engage in both problem-solving and emotion-focused coping simultaneously in an effort to deal with perceived stressors.

Role of managers in Crisis

The rise of a crisis in an undertaking can be dominated in an assortment of ways by managers. Both inward rearrangement in the endeavor and the quest for specific arrangements in the climate can be done. The main thing is to pinpoint the reasons for the crisis. Legitimate analysis is the establishment of all killing the crisis. According to literature the quality of management by the manager is a key factor in the fight against the crisis.

The role of the manager is to use the crisis as an opportunity to change the key competencies of the company and to properly adjust its development. Note the impact of the manager on forming the organizational culture in the organization. The writing calls attention to that organizational culture applies an impact on the working of the undertaking, and is probably going to influence the rise or crisis circumstance. Shaping an organizational culture has axiological, moral and good viewpoints, and building an organization's character around explicit qualities is a ramification for every one of its partners.

Crisis conditions make learning associations adaptable to adjust to change, which is an essential for accomplishing an upper hand in the competitive market. Ąukaszynski composes that "in order to ensure the organization's ability to succeed, its capacity for internal creativity and innovation needs to be developed, the characteristics necessary in organizational processes, the development of which promotes the optimization of working conditions and the creation of organizational culture. The efficiency and effectiveness of these activities is largely responsible for the leader who should be charismatic and gifted with imagination (visionary), which will allow the organization to change according to its own projections".

Conclusion

This paper has attempted to draw a theoretical framework to understand that emotional intelligence, resilience and coping skills are abilities which makes a manager effective in dealing and adapting with crisis. An emotionally intelligent manager is more efficient to manage the employee and make the organization adapt to the crisis. A resilient manager is one who bounces back and uses effective coping strategies to deal with crisis. This paper also illustrates what role a manager needs to undertake in times of crisis

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Survivability, development, growth and reproductive biology of common cut worm, *Spodoptera litura* [(Fabricius), Lepidoptera: Noctuidae] on different economically important plants.

Khowaja Jamal*

ABSTRACT

The survivability, developmental pattern, growth and reproductive biology of *Spodoptera litura* was studied in laboratory on 4 locally grown economically important plants viz., *Colocasia antiquorum* (Arvi), *Luffa cylindrical* (Torai), *Abelmoschus esculentus* (okra) and *Ricinus communis* (Castor). The larval survival ranged from 42 to 96%, however, the pupal survivability and adult emergence ranged from 79 to 100%. Among the 4 different host plants, *Ricinus communis* (Castor) was the most preferred host plants, with maximum survivability (96%), maximum oviposition (2426 eggs/female), highest egg hatching (94.97%) and the shortest developmental duration (25.3 days), whereas, *Colocasia antiquorum* (Arvi) was the most disliked host plant with minimum larval survivability (42%), minimum adult emergence (27%), minimum fecundity (1186 eggs/female), lowest egg hatching (37.1%) and the longest survival period (44.8 days). On the basis of development, growth and reproductive potential the order of preference of host plants could be arranged as *Ricinus communis* (Castor) > *Luffa cylindrical* (Torai) > *Abelmoschus esculentus* (Okra) > *Colocasia antiquorum* (Arvi).

Keywords: *Colocasia antiquorum*, *Luffa cylindrical*, *Abelmoschus esculentus*, *Ricinus communis*, *Spodoptera litura*, economically important plants.

Introduction

Insect pests are the main threat to the world's vegetation as well as the crop's yield. Many pests multiply many times in a short period consuming large number of leaves, stem and fruits to complete their development (Carasi et al., 2014). India is an agro-based country where more than 80% of population depends on agriculture and its economy is largely determined by agricultural productivity. The advancement and augmentation of agriculture to fulfill food demand has increased the number of insect pest species on one hand and resulted annual production losses of the standing crops on the other hand (Jeyasankar and Chinnamani, 2014).

Phytophagous insects often feed on a wide range of plant species with different nutritional compositions, chemical defenses, and textures (Egan and Ott, 2007). Common cutworm *Spodoptera litura* (Fab.) is an economically important polyphagous pest of many

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agricultural crops and is distributed in many parts of the world including Asia, North Africa, Japan, Australia and New Zealand (Sharma et al 2003) that has wide range of host attacking more than 112 species of cultivated plants belonging to 44 families throughout the world of which 40 species are reported from India (Chari and Patel, 1983; Singh et al., 1998; Paulraj 2001). It has been reported on various host plant causing damage under different environmental conditions in India (Christou et al., 2006; Xue et al., 2010), China (Kaur 2012, Zhu et al., 2000, 2005; Qin et al., 2004), Pakistan (Ahmad et al., 2007; Chaudhary et al., 2017) including other Asian countries. This pest has a dynamic migratory capability (Fu et al., 2015). It infests corn, *Zea mays* L., alfalfa, *Medicago sativa* L., barseem, *Trifolium alexandrinum* L. among the common cultivated fodder crops (Khan et al., 2011; Ahmad et al., 2013) among which alfalfa, being a perennial crop is mainly preferred as alternate host (Kaur 2012; Agrell et al., 2003). The severe infestation not only affect the quality of various crops but also reduced the quantity (Naz et al., 2003). Such pattern is also observed in cabbage flower where fungus develops and stunting in growth take place (Bhatia and Gupta 2003). It causes damage by consuming almost all parts of the host plants (Yinghua et al., 2017) which appears in the form of monstrous patches from one to another host plant, causing inconsiderable economic losses (Tuan et al., 2014; Zhang et al., 2006). The pest cause damage to newly emerging leaves of banana during monsoon season, when they are planted into the field. Due to its attack newly, emerged leaves shows holes and sick appearance (Shukla and Patel, 2011).

In regard to insect-host plant interactions, it is very useful to determine the influence of different host plants/cultivars on the performance of herbivores (Azidah and Sofian-Azirun, 2006; Saeed et al., 2010). The amount, rate as well as quality of food consumed by the insect influences its performance i.e., growth rate, developmental time, final body weight and probability of survivability. Such influence can also carry over to affect adult performance i.e., reproductive potential. The study of the host plants on the biology of insects is important in understanding host suitability of plant infesting insect species. The published information by above-mentioned researchers has been variable and none of them have studied the effects of the same host plants on all biological parameters like survival, growth, development, larval & pupal weight, fecundity, and oviposition of *S. litura* under the same environmental conditions (Shahout et al., 2011). Therefore, the objectives of the present study were to investigate the life parameters of *Spodoptera litura* (Fab.) reared on different host plants such as *Ricinus communis* (Castor), *Luffa cylindrical* (Torai), *Abelmoschus esculentus* (okra) and *Colocasia antiquorum* (Arvi) under laboratory conditions.

Materials and Methods

A laboratory colony of *Spodoptera litura* was established from the adults collected in night near the lamp posts in the Aligarh Muslim University campus during August to October. Several pairs of adults were kept in separate circular rearing jars made of glass measuring 8"x4". The tops of the jars were covered with muslin cloth, tightly fixed by means of rubber bands. The moths were fed with 10% sucrose solution soaked in cotton wool, wrapped around a micro slide, placed obliquely against the wall of the jar. For oviposition, white rough surface paper was placed inside each jar. All the rearing jars were kept at $27 \pm 2^\circ\text{C}$ temperature, 70-80% relative humidity and 12 h L/D photoperiod. The eggs on the paper were sterilized by immersion for 10 minutes in 0.2% sodium hypochlorite solution, rinsed in 0.2% sodium thiosulphate to neutralize the hypochlorite and then washed with distilled water. The eggs were kept in a high humidity environment for three days similar to those described by Ahmad et al. (1979). The experiment was initiated with newly hatched first instar larvae (0-12 h old), obtained from the nucleus culture. In each experiment, 100 neonates were placed in separate glass jar (8"x4") having different host plants viz., *Ricinus communis* (Castor), *Luffa cylindrical* (Torai), *Abelmoschus esculentus* (okra) and *Colocasia antiquorum* (Arvi). Fresh leaves of all the selected host plants were thoroughly washed with

running water and provided to larvae and uneaten food along with faeces was removed daily. When larvae reached the 4th instar, they were transferred to 12 x 8 inches glass jar containing fresh mature leaves with density of 25 larvae. The fully grown larvae were provided with fine sterilized moist sandy soil for pupation. The experiment was repeated four times to avoid error, if any. Larval survival, larval period, larval weight, pupal survival, pupal period, pupal weight, adult emergence, number of eggs laid, number of eggs hatched, per cent survival and total developmental period were recorded. The data was analyzed by the analysis of variance and the mean values were separated by Duncan's Multiple Range Test (DMRT).

Results and Discussion

There was differential response of *S. litura* to different host plants with respect to its all-biological attributes like survivability, development, larval weight, per cent pupation, pupal weight, fecundity, fertility.

Among the four different host plants, the survival per cent of the larvae of test insect was maximum (96%) on *Ricinus communis*, where 100% larvae transformed into pupae, followed by 72% on *Luffa cylindrical* out of which 90.28% could transform into pupae and 61% on *Abelmoschus esculentus* out of which 88.52% transformed into pupae, whereas, least survival was recorded on *Colocasia antiquorum* (42%) where 80.95% enter into pupal stage. The pupal survival in case *Ricinus communis* was 100%, whereas, pupal survival or adult emergence in case of *Luffa cylindrical*, *Abelmoschus esculentus* and *Colocasia antiquorum* was 95.38, 90.74 and 79.41% respectively. Such varied pattern of survival was also reported by Greenberg et al. (2001) where the highest larval survival of *S. exigua* was observed on pigweed (94.4%) and lowest on cabbage (67.1%). Zhang Bin et al. (2011) studied the effect of six host plants on larval survival of *Spodoptera exigua* (Hubner) and reported highest larval survival on asparagus lettuce ($42.8 \pm 4.0\%$) followed by Chinese cabbage ($33.1 \pm 3.0\%$), cabbage ($31.5 \pm 2.0\%$), shallot ($26.3 \pm 3.0\%$), maize seedling ($19.5 \pm 4.0\%$) whereas lowest larval survival was recorded on sweet pepper ($17.0 \pm 3.0\%$).

The development of the larva and pupa was also affected when the larvae of *S. litura* were reared on these four different hosts plant and it was fastest on *Ricinus communis* leaves (25.3 days) followed by *Luffa cylindrical* (29.65 days) and *Abelmoschus esculentus* (39.4 days), whereas, the longest developmental period was recorded on *Colocasia antiquorum* (44.8 days). The present results are in agreement with the earlier workers (Seema et al., 2002; Kumar and Ray 2007; Shahout et al., 2011; Vashisth et al., 2012; Singh et al., 2015; Kawre et al., 2017) who reported that food quality influenced the development of *Spodoptera litura*. Seth and Sharma (2001) observed shorter larval duration on castor leaves as compared to chickpea seeds. However, Sintim et al. (2009) reported longer larval duration of *Spodoptera litura* on sesame leaves as compared to artificial diet. On the contrary, when the last instar larvae of *Spodoptera litura* were reared on soybean leaves (SL) the development of the larvae was faster. The adults were smaller in sizes with lower levels of triacylglycerol (TG) than those developed from the artificial diet (AD) or artificial diet supplemented with soybean oil (Sakamoto et al., 2004). Such varied pattern of larval development of *Spodoptera litura* on different cotton varieties was also reported by Tithi et al. (2010). Greenberg et al. (2001) studied the effect of five host plants on beat army worm *Spodoptera exigua* (Hubner) and reported shortest larval duration on pigweed (12.4 days) and longest on bell pepper (18.0 days). Similarly, Zhang et al. (2011) also observed longest larval duration (21.2 ± 0.2 days) of *S. exigua* (Hubner) on sweet pepper and shortest (12.0 ± 0.2 days) on asparagus lettuce. Pandey & Srivastava (1967) also found varied pattern of larval and pupal development of *Prodenia litura* on different host plants. Xue et al. (2010) reported that the larvae of *S. litura* developed differently on the four host plants, from shortest to longest in the following order: Chinese cabbage, cowpea, sweet potato and tobacco. Bayu and Krisnawati (2016) studied the effect of five different host plant

on the growth and development of armyworm *Spodoptera litura* and recorded faster developmental time on *Ipomoea aquatica* (22.2 days) and *Ricinus communis* (22.4 days) and slowest on *Jatropha curcas* (37.9 days). Roy and Barik (2013) studied the effects of four host-plants viz., sunflower, castor, jute and sesame on feeding, growth and reproduction of *Diacrisia casignetum* Kollar (Lepidoptera: Arctiidae) under laboratory conditions ($27 \pm 0.5^\circ\text{C}$, 12:12 h LD, $65 \pm 5\%$ RH) and observed that the total larval and pupal developmental time was highest on sesame than the other three host-plants, however, male and female longevity was higher in sunflower than sesame. Fecundity was highest in sunflower followed by castor, jute and sesame. The growth and development of *D. casignetum* were related to nutrient and phenol contents of these four host-plants.

So far, the growth of the insect is concerned, the weight gained by larvae showed significant variation due to feeding on different host plants. The maximum gain in weight of the 6th instar larva was recorded on *Ricinus communis* (871.2 ± 5.3 mg) and *Luffa cylindrical* (766.3 ± 2.4 mg) as compared to *Abelmoschus esculentus* (723.3 ± 2.1 mg), whereas *Colocasia antiquorum* was the least preferred host plant for the test insect resulting in minimum larval weight (423.3 ± 2.2 mg) was noticed. Findings of Thobbi (1961), Lal and Mukharji (1978), Garad et al. (1984), Hemati et al., (2012) supports the results of the present investigation where in the type of food plants had a direct bearing on the weight of the larvae.

Similar effect could also be seen in pupal period and pupal weight. The pupal period was recorded between 6.2 ± 0.6 to 7.9 ± 1.1 days among all host plants except *Colocasia antiquorum* (8.1 ± 0.7 days). The pupae gained significantly higher weight (357.6 ± 2.54 mg) on *Ricinus communis* followed by *Luffa cylindrical* (265.5 ± 3.6 mg), *Abelmoschus esculentus* (213.3 ± 2.6 mg) while low pupal weight was recorded on *Colocasia antiquorum* (133.0 ± 1.4 mg). Data on pupal survival exhibited that all the pupae that were formed on *Ricinus communis* produced 100 per cent adults whereas the pupae that were formed on other food plants such as *Luffa cylindrical* and *Abelmoschus esculentus* could produce 95.38% and 90.74% adults respectively; however, only 79.41% adult emergence was recorded from the pupae that were formed from the *Colocasia antiquorum* fed larvae. This shows that food plants also influenced pupal survival, pupal growth and adult emergence. Xue et al. (2010) also observed varied pupal weights when the larvae were fed on different host plants. Saeed et al (2010) reported higher pupal weight on cauliflower as compared to peas and wheat and suggest that cauliflower provides better food quality to *S. exigua* compared with peas and wheat. Zhang et al. (2011) also studied the effect of six host plants on the biology of *S. exigua* and recorded the highest pupal weight (71.7 ± 2.9 mg) on asparagus lettuce host plant and lowest on sweet pepper host plant (52.8 ± 1.7 mg). Greenberg et al. (2001) noticed a significant relationship between the host plants and resulting pupal weight. Bayu and Krisnawati (2016) studied the effect of five different host plant on the growth and development of armyworm *Spodoptera litura* and reported that feeds significantly affected the body size, survival rate, developmental time, reproduction, and longevity. The longest and heaviest larvae as well as pupae were found on *Ipomoea aquatica*, 28.5 mm, 0.42 g and 19.3 mm, 0.36 g respectively. Shobana et al., (2010) studied the feeding, growth and reproductive behaviour of *Papilio polytes* (common mormon butterfly) on five different host plants viz., *Murraya koenigii*, *Toddalia asiatica*, *Glycosmis pentaphylla*, *Aegle marmelos* and *Citrus medica* and reported that the growth rate of *P. polytes* was fastest on *M. koenigii* followed by *T. asiatica*, *C. medica*, *G. pentaphylla* and *A. marmelos*.

A single female of the test insect laid eggs in different clusters which were covered with short, yellowish-brown hairs. On different food plants the fecundity of single female also varied and it was maximum on *Ricinus communis* (2426 ± 59.7 eggs), followed by *Luffa cylindrical* (2016 ± 43.7 eggs), *Abelmoschus esculentus* (1654 ± 42.2 eggs) and *Colocasia antiquorum* (1186 ± 54.3 eggs). Host plant quality is a very crucial factor and affect the fecundity of

herbivorous insects. Host plant quality also affects insect reproductive tactics: egg size, quality, the distribution of resources to eggs, choice of oviposition sites (Caroline and Simon 2002). The differences in the fecundity of the female could be attributed to nutritional inferiority or non-acceptability of the non-preferred plant. The results also brought to the light that immense influence of the host on the fecundity of moth was set through the larval stage. The present findings are in agreement with that of Painter (1958) who was of the view that the foods consumed during the immature stage of the insects determined the fecundity of adult stage. Maximum number of hatchings was obtained on Castor (2304 ± 74.6 eggs/female) and the lowest was on Arvi (440 ± 19.2 eggs/female).

Thobbi (1961) observed that the larvae of *Prodenia litura* preferred castor leaves over okra, pigeon-pea and cotton as its leaves are more nutritious. Mandal and Mandal (2000) reared *Spodoptera litura* on different weed and cultivated plant leaves in laboratory for several generations and reported that the larval food preference was castor (*Ricinus communis*) $\geq$ *Solanum nigrum* $>$ *Ipomoea aquatic* $>$ *Amaranthus viridis* $\geq$ tomato $>$ tobacco $>$ mulberry $>$ brinjal [aubergine] $>$ cabbage. Yadav et al 2014 studied the biology of tobacco caterpillar (*Spodoptera litura* Fab.) on ten different hosts and on the basis of larval period, larval weight, pupal period, pupal weight, survival per cent, sex ratio, oviposition period, incubation period, fecundity, growth and development index values, observed cauliflower host was the most preferred host (growth index 8.79, development index 3.22, per cent survival 74.66, larval period 11.00 day, pupal period 10.25 and pupal weight 377.00 Mg) followed by cabbage growth index 5.84, development index 2.6 and survival per cent 71.33. Pea, spinach, tobacco was found least preferred hosts and had retarding effects on the growth and development of tobacco caterpillar (*Spodoptera litura* Fab.) resulting in a prolonged larval period, least survival per cent, minimum larval and pupa! weight and growth and development indices. Similarly in the present investigation, on the basis of the above results, the larval food preference of *Spodoptera litura* could be arranged as *Ricinus communis* (Castor) $>$ *Luffa cylindrical* (Torai) $>$ *Abelmoschus esculentus* (Okra) $>$ *Colocasia antiquorum* (Arvi).

Table1: Larval, pupal survival, adult emergence, fecundity and fertility of adult females (numbers) of *Spodoptera litura* (mean value) on four different host plants

Host Food Plants	Survivability		% Adult emergence (Mean $\pm$ SE)	Reproduction	
	Larval (Mean $\pm$ SE)	Pupal (Mean $\pm$ SE)		Fecundity (Mean $\pm$ SE)	Fertility (Mean $\pm$ SE)
<i>Ricinus communis</i>	96 ^d $\pm$ 1.47	96 ^d $\pm$ 1.47	96 ^d $\pm$ 1.47	2426 ^d $\pm$ 59.7	2304 ^d $\pm$ 74.6
<i>Luffa cylindrical</i>	72 ^c $\pm$ 1.58	65 ^c $\pm$ 2.38	62 ^c $\pm$ 2.34	2016 ^c $\pm$ 43.7	1237 ^c $\pm$ 33.4
<i>Abelmoschus esculentus</i>	61 ^b $\pm$ 1.68	54 ^b $\pm$ 1.77	49 ^b $\pm$ 2.08	1654 ^b $\pm$ 42.2	0827 ^b $\pm$ 23.6
<i>Colocasia antiquorum</i>	42 ^a $\pm$ 2.19	34 ^a $\pm$ 3.18	27 ^a $\pm$ 3.34	1186 ^a $\pm$ 54.3	0440 ^a $\pm$ 19.2

Means in the same column followed by the same letters do not differ significantly at $P \leq 0.05$ (Duncan Test)

Table 2: Larval, pupal and adult weight (mg) of *Spodoptera litura* (mean value) on four different host plants

Host Food Plants	Larval (Mean $\pm$ SE)	Pupal (Mean $\pm$ SE)	Adult Female (Mean $\pm$ SE)	Adult Male (Mean $\pm$ SE)
<i>Ricinus communis</i>	871.2 $\pm$ 5.30 ^d	357.6 $\pm$ 2.54 ^d	152.50 $\pm$ 1.54 ^d	103.70 $\pm$ 1.58 ^d
<i>Luffa cylindrical</i>	766.3 $\pm$ 2.40 ^c	265.5 $\pm$ 3.60 ^c	112.20 $\pm$ 2.38 ^c	099.50 $\pm$ 3.10 ^c
<i>Abelmoschus esculentus</i>	723.3 $\pm$ 2.11 ^b	213.3 $\pm$ 2.64 ^b	091.25 $\pm$ 1.26 ^b	087.25 $\pm$ 2.21 ^b
<i>Colocasia antiquorum</i>	423.3 $\pm$ 2.22 ^a	133.0 $\pm$ 1.42 ^a	067.53 $\pm$ 2.35 ^a	078.25 $\pm$ 2.62 ^a

Means in the same column followed by the same letters do not differ significantly at $P \leq 0.05$ (Duncan Test)

Table 3: Larval, pupal and adult longevity (Days) of *Spodoptera litura* (mean value) on four different host plants

Host Food Plants	Larval (Mean±SE)	Pupal (Mean±SE)	Adult Female (Mean±SE)	Adult Male (Mean±SE)
<i>Ricinus communis</i>	17.40±0.75 ^a	07.90±1.12 ^a	06.30±0.43 ^a	08.10±0.40 ^a
<i>Luffa cylindrical</i>	23.45±0.83 ^b	06.20±0.58 ^b	07.20±0.47 ^b	10.30±0.40 ^b
<i>Abelmoschus esculentus</i>	31.80±1.08 ^c	07.60±0.62 ^c	09.90±0.56 ^c	12.50±0.73 ^c
<i>Colocasia antiquorum</i>	36.70±1.43 ^d	08.10±0.71 ^d	10.40±0.63 ^d	14.80±0.66 ^d

Means in the same column followed by the same letters do not differ significantly at $P \leq 0.05$ (Duncan Test).

Figure 01: Larval Survivability of *Spodoptera litura* on four different host plants

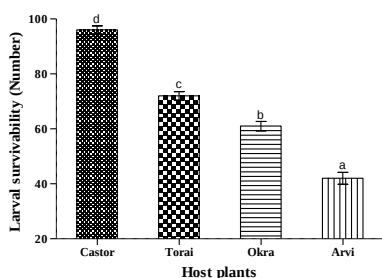


Figure 02: Pupal survivability of *Spodoptera litura* on four different host plants

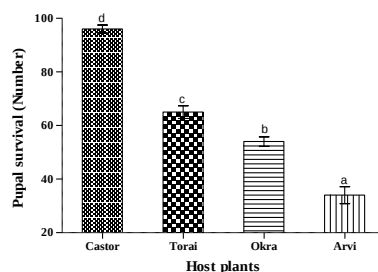


Figure 03: Adult emergence of *Spodoptera litura* on four different host plants

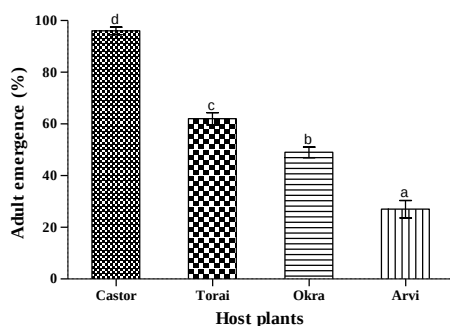


Figure 04: Fecundity of adult females of *Spodoptera litura* on four different host plants

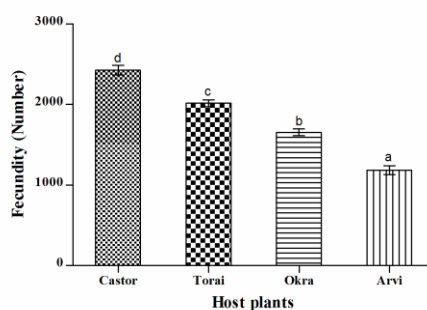
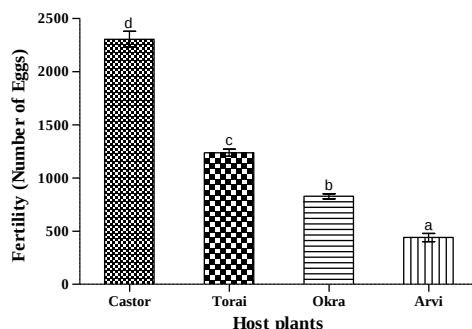
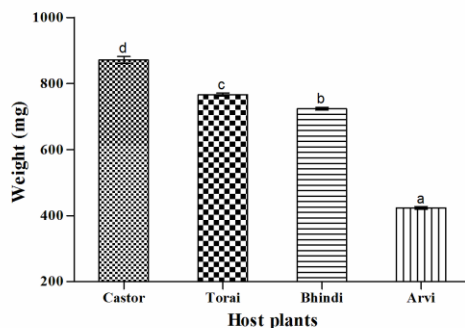
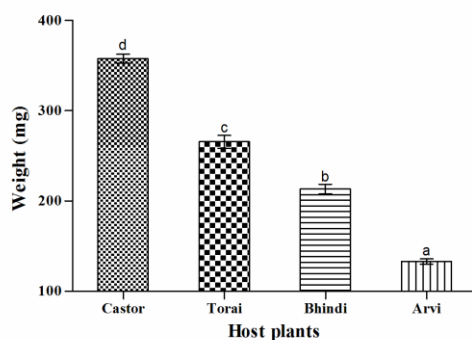
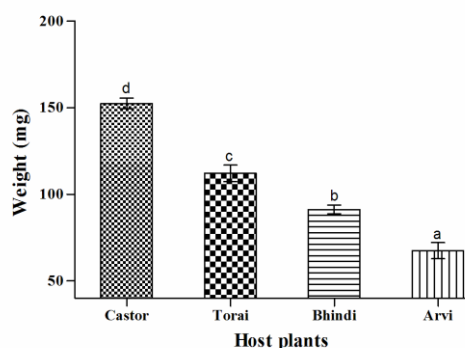
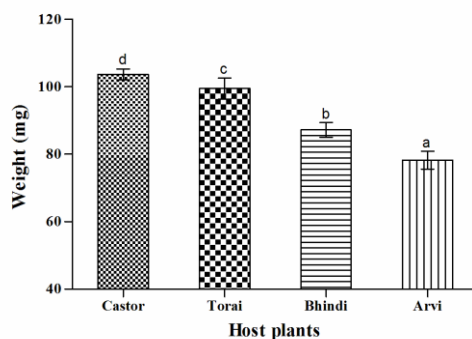
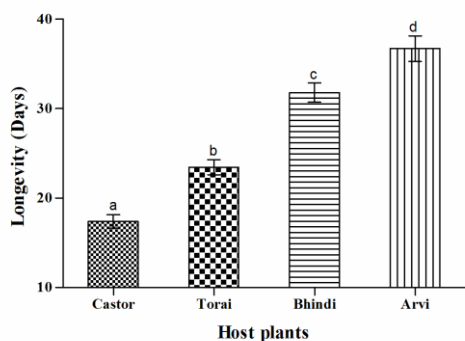


Figure 05: Fertility of adult females of *Spodoptera litura* on four different host plants**Figure 06:** Larval weight (mg) of *Spodoptera litura* on four different host plants**Figure 07:** Pupal weight (mg) of *Spodoptera litura* on four different host plants**Figure 08:** Weight (mg) of adult female of *Spodoptera litura* on four different host plants**Figure 09:** Weight (mg) of adult male of *Spodoptera litura* on four different host plants**Figure 10:** Longevity (Days) of larva *Spodoptera litura* on four different host plants

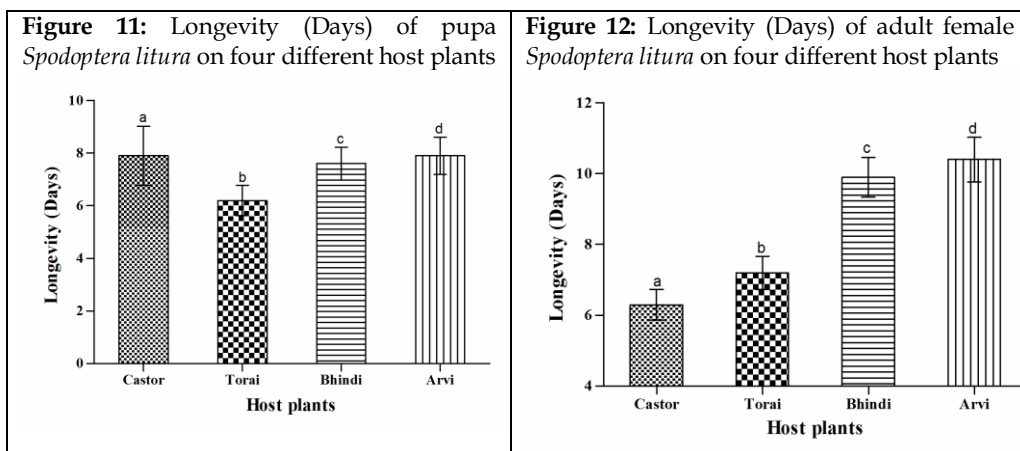
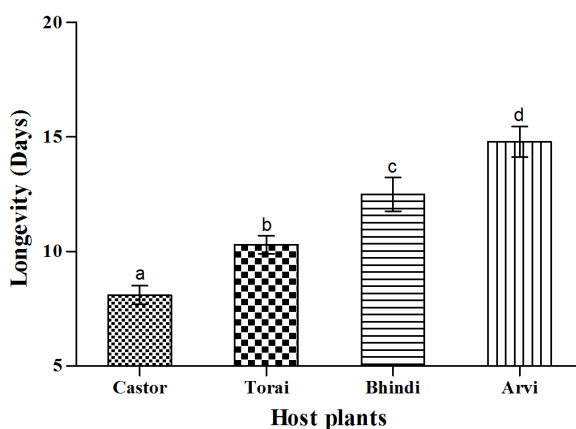


Figure 13: Longevity (Days) of adult male *Spodoptera litura* on four different host plants



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Rehabilitation of Acid Attack Survivors: An Analysis

Mohd. Ashraf¹ and Abdul Munim Choudhury²

ABSTRACT

Crimes are common in every society and it is committed in different ways by the use of different means. Mostly the nature of crime is so inhuman that shakes society from the root. Among the inhuman crimes, an acid attack is considered as such violent crime in which acid is used as a weapon to commit a crime and most of the victims of acid attacks are women. It is one of the most barbarous and heinous crimes which involves the premeditated throwing of acid on a victim, usually on the face or upper body. The survivors are physically, psychologically, socially, and economically traumatized. Victim normally feels worthless, and afraid, which leads to self-blaming, and they face seclusion from society. They are being outcast by society for their horrendous appearance. They may not be able to work or find a job and thus continuously struggle to earn a livelihood. Although the criminal justice system provides compensation as a remedy it appears to be insufficient to redress the loss. There is a need for an effective and adequate remedy for the survivors. The authors in this present paper have posited restorative measures to provide remedies to eliminate the evil effects of the acid attack survivors, in addition to the existing provision of damages, survivors must be rehabilitated and integrated into society. It further focuses on the problems faced by the survivors in society for survival. The authors make suggestions for improving the current provisions to readdress issues concerning remedies to be provided in cases of acid attack.

Keywords: Acid Attack, Survivors, Rehabilitation, Compensation, Remedy etc.

I. INTRODUCTION

"I learned to live with the physical pain, but it was the way society reacted that hurt the most. My own relatives and friends have stopped seeing me. I spent eight years indoors, only venturing out in a ghunghat." ~LAXMI AGARWAL

Criminals commit offences in numerous ways. However, certain crimes are committed in ways that are extremely harmful to society. Humanity faces the danger of its existence due to the frequent heinous and deplorable crimes. As a society, we need to think to make an inclusive and sustainable society. The number of crimes against women is higher in our very

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own society and a female victim is always considered fragile and conducive to offences. Acid attacks are among the most terrible crimes committed by criminals and it poses danger to humanity. Acid is used as a weapon by the offenders; attacks have long-term physical, psychological, emotional, economic, and societal implications. The Supreme Court and numerous High Courts in India have recently accepted it and have instructed the states to provide relief and rehabilitation for acid attack survivors. However, the person who has been the victim of such a horrible crime (in India, it is primarily women) is only in the position to say about the recourse of the remedies and treatment given to them. The question arises out of this rehabilitation and assuagement touch given to them is ample or not. The model that the compensation and rehabilitation schemes are built on needs to be tested for efficiency.

The researcher has attempted to look at the rehabilitation of acid attack victims and alleviate them through a restorative justice method rather than simply offering compensation and punishment. It is insufficient to provide compensation and prosecute the perpetrators; a sufficient amount of recourse and remedies should be made available for the victims. Justice must be served not only for the material or bodily losses experienced by acid attack survivors but the remedies for their mental, psychological, and social losses are not given to them and neither the work is done towards it and this is to be noted that after suffering that trauma, victims face more ostracization in the society and struggles to earn a livelihood. To give victims a full and effective remedy including restorative justice, in this study authors have posited many ways in which victims can get inclusive justice and the survivors can be assuaged.

II. ACID ATTACK: ANALYSED

Crime against women is common phenomenon of every society facing this in today's world. There are various forms of violent crime is being committed against women in which acid attack is one of the most inhuman and unimaginable crime in the society. Since, most of the victims of acid attacks are women and frequently committed against them as retaliation for violating gender-based expectations such as norms, roles and maintain the inferior positions in a house-hold or society, so acid attacks can be termed as gender-based violence.³ According to an examination of Indian newspapers and a recent report from the National Crime Bureau, around 75% of the attacks in India were committed against women. It would be irrational to assert that acid assaults are not gender-related in view of the available evidence.⁴ The Law Commission of India also noted that traditionally acid attacks are committed towards a specific gender, as women and girls constitute majority of the victims of the acid attacks.⁵

In many Countries, women are victims of acid attacks as because of inequality and discrimination in terms of social, cultural, personal and religious.⁶ Inequalities in culture can be based on gender, economic status, or social class, or they can be caused by a culture of revenge or misogyny. Societal means patriarchal or a society where men are in charge. Situational means family conflict, easy availability and low cost of acid. Personal includes insulations, uncontrollable anger management skills, lack of control of power of perpetrator, mental and emotional capacity of perpetrators. Generally, perpetrator intention is not to kill but to disfigure her face permanently. Even after the new guidelines of the Supreme Court's rules and regulation of sale of acid, it is easily available in the market. In fact, it is the duty of the local administration to monitor the sale or purchase of acids, any illegal activity is a non-

³United Nations Treaty Collection Databases, <http://treaties.un.org>

⁴Law Commission of India, available at: <http://lawcommissionofindia.nic>

⁵Law Commission of India, "226th Report on Proposal for inclusion of acid attacks as specific offences in the Indian Penal Code and a law for compensation for victims of crime" (July, 2008)

⁶www.com/filmcatalog/study/savface_guide.pdf

bailable offence. Acid attacks are frequently targeted at the face of the victim because everyone especially women value their faces as one of their most prized possessions. Given that it leaves women permanently dead, it is a horrifying and brutal crime against them. Some victims believe that those who pass away from the attack are actually lucky because those who survive must live with 'half a face and half a life'. Supreme Court said that acid attacks are worse than murder.⁷

III. CAUSES AND CONSEQUENCES OF ACID ATTACK:

Acid attack is defined as the act of delivering acid with the aim or knowledge of causing permanent or partial injury, deformity, or disfigurement to any portion of the victim's body.⁸ Acid is commonly used in these types of attacks. It is used maliciously to exact vengeance, disfigure and damage men and women, generally on their faces. Despite the Supreme Court's decision in *Laxmi v. Union of India*⁹ forbidding the sale of acid over the counter, it is concerning that such potentially hazardous commodities are so easily accessible.

The number of acid attacks has risen dramatically. From 2014 to 2017, there were 203, 222, 283, 252, acid attack cases reported.¹⁰ However, the Acid Survivors Foundation India (ASFI) estimates that thousands of cases have occurred, with many of them going unreported.¹¹ In a case, the husband of a 23-year-old married woman and her two young girls from a slum neighbourhood of Agra, outraged at the lack of a male offspring, poured acid on all three while they slept. After initially reporting the incident, the victim dropped the charges to avoid her husband's wrath.¹²

These assaults are intended to subjugate and control women. According to a special report by an Indian Non-Governmental Organisations (NGOs), 80 per-cents of victims are women, with 40 per-cents of these being girls under the age of eighteen.¹³ In certain ways, the aggressor is aware that a woman's self-worth and self-esteem are typically expressed through her face, which is an aspect of her personality.¹⁴ Following are the reasons of acid attack cases, such as:

- i. Retaliation for a man or woman's refusal of a love marriage proposal¹⁵ or other romantic or sexual approaches,¹⁶
- ii. Failure to pay dowry,¹⁷
- iii. Land or money disputes,¹⁸
- iv. Perceived dishonour and jealousy,¹⁹

⁷Acid Test on Humanity: Deccan Herald (Karnataka), July 11, 2013,

⁸Prevention of Offences (by Acids) Act 2008 (National Commission for Women - Draft Bill), available at http://ncw.nic.in/pdf/files/offences_by_acids.pdf

⁹AIR (2014) 4 SCC 427.

¹⁰National Crime Record Bureau, volume-II, Available at: www.ncrb.gov.in

¹¹Sujoy Dhar, "Acid attacks against women in India on the rise; survivors fight back", USA Today, July 27, 2017, available at: <https://www.usatoday.com/story/news/world/2017/07/27/acid-attacks-women-indiasurvivors-fight-back/486007001>

¹²Zacharie Rabehi, "The Stories of India's Acid Attack Survivors", The Citizen, May 22, 2016, available at: <http://www.thecitizen.in/index.php/en/NewsDetail/index/7/7761/The-Stories-Of-Indias-Acid-Attack-Survivors>

¹³Tom de Castella, "How many Acid Attacks are there?" Available at: <http://www.bbc.co.uk/news/magazine-23631395>

¹⁴Justice Verma Committee Report (2012) on amendments to criminal law.

¹⁵Ramesh Dey and Ors. V. State of West Bengal (LNIND2007CAL335)

¹⁶Nazeem Khan v. State (2011Cr.LJ1786)

¹⁷Harindersingh V. State of Punjab, AIR 2009 SC 913

¹⁸Madya Pradesh V. Jhaddu and Others, 1991 Supp. (1) 545

- v. Other animosities with the victim or victim's family on a personal level..

CONSEQUENCES:

An acid assault seldom kills, but it always wrecks lives, and it has long-term effects on the victim's life and causes them to suffer for the rest of their lives. The offenders in most of these acid attacks employ larger doses of hydrochloric,²⁰ nitric²¹ and sulphuric acid.²² These acids produce severe facial burning, if the burn is severe enough, the face becomes unsightly, the skin sags, and even the bones dissolve. If the acid gets into the victim's eyes, they lose their vision, and if it gets into the wind or food pipe, it causes severe diseases like Ulcer. In many acid assaults, the victim dies slowly and painfully. However, the effects of acid attack such as:

PHYSICAL: Victims have considerable physical challenges. They may become too traumatized and embarrassed to leave the house and perform basic activities. They may be unable to work or obtain jobs, forcing them to constantly fight for existence. However, Physiological impact and medical treatment of acid attack on the body such as;

a) Physical impacts:

- i. Immediate consequences
- ii. Targeted areas
- iii. Scarring
- iv. Infections and complications
- v. Further injuries resulting from poor treatment.

b) Medical treatment:

- i. Emergency treatment
- ii. Medicines and supplies
- iii. Physio-therapy
- iv. Surgery.

PSYCHOLOGICAL: Attack victims experience not only significant physical pain but also devastating alterations in their feelings and thoughts. Psychological symptoms suffered by victims include sadness, insomnia, nightmares, anxiety of future attacks, and fear of social interaction. They are depressed, humiliated, worried, and lonely all of the time. They live in constant terror of being attacked once more.²³ However, psychological consequences and treatment can be;

a) Psychological consequences:

¹⁹Population Services Internationals, <http://www.psi.org>

²⁰ "High quantities of hydrochloric acid (HCl), an aqueous solution of hydrogen chloride gas, produce acidic mists. Both the mist and the solution have a corrosive impact on human tissue and may harm the eyes, skin, intestines, and respiratory system."

²¹ "Nitric acid, also known as nitric oxide or HNO₃, is a colourless, fuming, and extremely corrosive liquid. Concentrated nitric acid can inflict serious burns and lasting eye damage, as well as damage to the skin, mucous membranes, and eyes. Acid inhalation can cause deadly pulmonary edoema and other delayed effects, including severe respiratory irritation."

²² "All biological tissues are corrosive to sulphuric acid (H₂SO₄), which is a clear, colourless, greasy liquid. The concentrated acid works by severely dehydrating the surrounding air. Acid vapour inhalation can be seriously damaging to the lungs and cause severe upper respiratory tract irritation. Skin contact with acids can result in severe necrosis, while skin contact with diluted solutions on a regular basis can result in dermatitis. Sulfuric acid in concentrated form can seriously harm the eyes, resulting in glaucoma and cataracts."

²³ Supra Note 3

- i. psychological impact of living with disfigurement
 - ii. psychological impact of assault
 - iii. psychological impact of domestic
- b) Psychological treatment:
 - i. Agreement on the importance of on-going psychiatric counseling.
 - ii. Therapy helps lessen the psychological effects of having a deformity.

FINANCIAL: Medical bills are also an added financial strain for the victim's family, as they are beyond the means of many victims' families. The victim also reduced earning potentials after recovery because they might not be able to pursue ordinary course of work like before.

SOCIAL: The victim also experiences societal discrimination throughout their lives and they grow isolated. Even if they want to live a regular life, given their appearance and limitations after an attack, there is no guarantee that society will consider them as normal human beings. The victim faces familial and marital disruption also stigmatization and withdrawal from society.²⁴

IV. JUDICIAL RESPONSE

In Tekan Alias Tekram V. State of Madhya Pradesh. This is a landmark case of rape victim that was instrumental for the Apex Court to direct all the State along with the UTs to frame a Uniform Compensation Policy on the model of Goa to the handicapped rape victims throughout the country, citing differential treatment in different states.²⁵ It will aid the survivor in getting better. As the state will work to abide by the laws completely in order to prevent acid attacks in the future, this will also push the state to enforce the laws more strictly. In an order dated 18th July 2013, Laxmi v. Union of India declared that at least Rs 3 lakhs must be granted to the victims of acid assaults by the Government concerned. Taking into account the victims' concerns, this Court raised the compensation. As a result, the government ought to give each acid attack survivor at least Rs 3 lakh. The sisters must receive at least Rs. 6 lakhs in compensation in this case. Based on the specific facts of the case, we are of the opinion that the victim deserves to be compensated more than the sum awarded by this Court in the Laxmi case. It is crucial to keep in mind that the younger sister was also damaged by the said attack, even if we are not issuing any directions that are distinct from those provided in the Laxmi case in this instance. Even though she doesn't have very severe pain, the older person nevertheless needs treatment and rehabilitation. It's important to note that the court in the Laxmi case did not completely rule out the prospect of a compensation judgement from the government of up to Rs 3 lakhs. The state has the option to offer an acid attack victim additional compensation, as per the Laxmi case regulations. It should be recalled that this Court did not place any limitations on the severity of the damage the victim of an acid assault experienced in the Laxmi case. In this instance, the victim's father has already invested more than Rs 5 lakhs in the victim's care. Given the severity of the victim's injuries, the cost of grafting and reconstructive surgery, the victim's physical and mental suffering, and other factors, we think the victim (Chanchal) should receive at least Rs 10 lakhs in damages. In the end, the victim should be compensated not only for her physical injuries but also for her emotional pain from not being able to enjoy the luxuries she used to have because of the acid attack. In light of the decision in the Laxmi case, the Court decides that it is fair to give compensation in the amount of Rs. 10 lakhs. We further order the relevant government to give Chanchal, the victim, Rs. 30 of 45 lakhs in compensation, as well as Rs. 3 lakhs to Sonam, the victim, Chanchal's sister. The victim and her family shall receive

²⁴Acid Survivor Trust International (ASTI): <http://www.acidviolence.org>

²⁵(2016) 4 SCC 461

a payment of Rs. 5 lakh within one month of the date of this judgement, and the victims shall receive the remaining sum of Rs. 8 lakh within three months of the date of this decision. Additionally, in accordance with the Laxmi case advice and ruling dated 10-4-2015, the State shall be fully responsible for the care and rehabilitation of acid attack victims.²⁶

In RavadaSasikala V. State of Andhra Pradesh and Others,²⁷The Honourable Supreme Court ruled that the acid assault case is an illustration of brutal and immoral behaviour. This type of felony does not call for clemency. Because the 34-year-old girl's injuries show that she was attacked with acid, the circumstances have been made clear by strong evidence, and the conviction has been upheld, there was no reason to only give her the time she had already served. Lordships of the Supreme Court told the accused to pay a monetary settlement of 50,000 rupees and the State to pay a monetary settlement of 3 lakhs.

Acid burning/throwing events are physically, mentally, and psychologically torturous. Every person must keep in mind that whatever happened to the acid attack victim's family members might happen to them as well. Every person has the right to life, which includes the freedom from all types of physical, psychological, and mental abuse, such as burning, stalking, and sexual assault. Acid burn patients experience stigma and trauma. Therefore, we offer the following specifications in order to stop and count the increasing incidence of acid attacks: According to the Hon'ble Supreme Court's decision in Laxmi v. Union of India, all private hospitals in the states of Haryana and Punjab, as well as the Union Territory of Chandigarh, are required to provide medical care to victims of acid attacks.²⁸

In Parivartan Kendra V. Union of India and others²⁹. The Supreme Court ruled that victims of acid attacks should receive compensation that takes into account not only their bodily injuries but also their loss of the capacity to live life to the fullest and the comforts that the attack has robbed them of. According to the rules established by the Court in Laxmi case, the State shall be responsible for the care and rehabilitation of acid attack victims. In this case, the court granted 10 lakh rupees compensation. However, the Court is aware that raising the compensation amount will result in more work for the State. So, it is the State's duty to prevent such a crime, and it will be held liable for paying the increased compensation.

It will have two effects for the Compensation to increase:

1. The victim's rehabilitation will be aided for one.
2. It will also encourage the State to properly apply the rules as it tries to abide by them in their true spirit in order to stop acid attacks from happening again in the future.

V. LEGAL PERSPECTIVE OF ACID ATTACK IN INDIA: CONSTITUTION OF INDIA, 1950

Article 15(3) provides that the State shall have power to make special provisions for women.³⁰

Article 21: According to this Article, which was decided in Consumer Education and Research Centre V. Union of India, the right to life, personal liability, which includes the right to health, and medical assistance to defend the right to health are fundamental rights.³¹

²⁶ Raja V. State of Haryana, CRA-D-484-DB of 2017

²⁷ (2017) 4 SCC 546

²⁸ (2016) 3 SCC 669

²⁹ (2016) 3 SSC 571

³⁰ The Constitution of India, p.11

³¹ AIR 1992 SC 922

Article 38(1): "The State shall work to further the welfare of the people by establishing and maintaining an asocial order in which social, economic, and political fairness shall govern all spheres of national life."³²

INDIAN PENAL CODE 1860

Section 100: "The seventh clause of this section dealing with the right of private defence against body to cause death of a person against an act of throwing or administering acid or an attempt throw or administer acid which may reasonably cause the apprehension that grievous hurt will otherwise be the consequences of such act."³³

Section 326A: "An accused shall be punished with imprisonment of not less than 10 years extendable to life imprisonment and shall also be liable to fine which shall be a minimum of Rs.2 lakhs extendable to 5 Lakhs. The offence shall be cognizable, non-bailable and non-compoundable."³⁴

Section 326B: "Attempt to throw or use acid in any form on the other person. Whoever does any act shall be punished with imprisonment of not less than 7 years and shall also be liable to fine to a minimum of Rs. 1 lakh."³⁵

CRIMINAL PROCEDURE CODE 1973

Section 154: First Information Report (FIR): As per this provision, in cases of violence against women, the victim's statement must be taken down by a female police officer or other female officer. If the person reporting the incident is temporarily or permanently disabled, the information must be taken down at the person's home or another convenient location of their choosing, in the presence of an interpreter or special officer. Failure on the part of a public employee to file a FIR in cases of acid attacks is now punished under Clause (c) of Section 166A of the IPC with harsh imprisonment for a term that must not be less than six months but may extend to two years, as well as a fine.

Section 357A of this code states that in order to cover costs, the court may order the payment of compensation for any losses or expenses incurred as a result of the offence when finding the defendant guilty of violating Section 326A or 326B of IPC.³⁶

Section 357B states that the State Government must compensate the victim in accordance with Section 357A in addition to paying a fine in accordance with Section 326A of IPC.³⁷

Section 357C states that victims of crimes under Section 326A of IPC must be provided with immediate medical treatment at no cost and shall promptly notify the police of such incidence.³⁸

"All hospitals, public or private, whether run by the Central Government, the State Government, local bodies or any other person, shall immediately, provide the first-aid or medical treatment, free of cost, to the victims of any offence covered under section 326A, 376, 376A, 376B, 376C, 376D or section 376E of the Indian Penal Code and shall immediately inform the police of such incident."³⁹

³²Supra note 28, p.22

³³Criminal Law Amendment Act, 2013, (Act 13 of 2013)

³⁴Id. S.326A, P.2

³⁵Id S. 326B, p.2

³⁶The Code of Criminal Procedure (Amendment) Act, 2008 (Act 5 of 2009)

³⁷Id.

³⁸Id.

³⁹Kelkars R.V, Criminal Procedure Code, Eastern Book Company Lucknow, Sixth Edition 2016P. 639,

The Prevention of Acid Attack and Rehabilitation of Acid Attack Victims Bill, 2017:

This bill's aim is to provide for the prevention of acid attacks by regulating the selling, supply, and use of acid or other interventions, as well as the recovery of women who have been victims of acid attacks, and matters connected with or incidental thereto. The Bill's **first chapter** establishes the bill's scope and meanings. The acid attack victims are described in Section 2 (b) of the Bill, "Woman on whom acid has been poured or sprinkled with the intent of causing bodily injury or disfigurement and who as a result of such act, has sustained any bodily injury or disfigurement affected by the chemical action of the acid."

The selling, supply and use of acid are all regulated in **Chapter II of the Bill**. Section 3 regulates the manufacture, selling, and distribution of acid. A licence is required to manufacture, sell, import, or distribute acid, according to the section. If an individual runs a business that involves acids, proper record keeping is needed.

The rehabilitation of acid attack victims is addressed in **Chapter III of the Bill**. "Where an acid attack has caused such serious bodily harm or disfigurement to the victim as may be prescribed, such victim shall be considered to be an individual with an impairment for the purposes of availing benefits under various schemes," according to Section 5 of the bill, including jobs with the federal government, state governments, municipal governments, independent government agencies and public sector undertakings." Section 6 notes, "Where an acid attack victim has suffered such bodily harm or disfigurement in an acid attack that it is likely to hinder her chances of finding gainful employment or carrying on any gainful occupation, the responsible Government shall pay a monthly payment to such victim in a sum not less than four times the amount of old-age pension payable at the place where the victim ordinarily resides."

The Chapter IV of the Bill lists the offences and associated penalties. If the accused violates Sections 3 and 4, they could receive up to 6 months of simple imprisonment, a fine of Rs. 5 Lakh, or both. Section 326 A of the IPC, 1860 is now punishable by a punishment of Rs. 10 Lakh. The punishment is now 10 years in prison and a fine of at least Rs. 3 Lakh under Section 326 B.⁴⁰

VI. NEED FOR EFFECTIVE REMEDY:

There is a chronological list of significant legal developments pertaining to acid attack survivors' compensation that spans from 2006, when attorney Aparna Bhat filed the Public Interest Litigation in *Laxmi V. Union of India & Others* in the Supreme Court,⁴¹ pleading for the regulation of the sale of acid, to the most recent compensation scheme of 2008. By introducing Section 357-A to the Criminal Procedure Code, which requires states to create victim compensation plans for crime survivors 'who require rehabilitation,' the Code of Criminal Procedure (Amendment) Act of 2008 implements some of the recommendations made in the NCW and LCI report. The Criminal Law Amendment goes into effect, overhauling the I.P.C. and Cr.P.C. to address gender-based violence issues. This includes provisions that harsher criminal penalties for acid violence perpetrators and mandate free 'first-aid or medical treatment' for survivors at public and private hospitals.

⁴⁰"ANATOMY OF ACID ATTACKS IN INDIA RECOMENDATONS FOR DETERENCE"
<https://www.researchgate.net/publication/323996324>

⁴¹*LNINDORD 2015 SC 4879*

Acid attack survivors were recognised as physically disabled by a 2016 amendment to the Rights of Persons with Disabilities Act. As a result, 4% of government jobs are set aside for acid attack victims, giving them access to education and employment.⁴²

The Bombay High Court recently stated that compensation for acid attack survivors must go beyond monetary payments made to victims of violent crimes. To live a meaningful life, the person is entitled to additional payments, free medical treatment such as reconstructive procedures and rehabilitation facilities.

The ASFI pointed out that there has been an alarming rise in acid attacks in the country. This is a very serious problem that needs to be fixed as soon as possible, and victims of acid attacks need to be compensated and helped. In 2015, the Supreme Court criticised the central government for not doing enough and wrong things to help people.

Survivors can be helped in both physical and emotional ways. In a real way, this could mean giving survivors social services, job opportunities, and free medical care for any reconstructive or related surgery.

However, following are the ways rehabilitation of acid attack survivors:

- i. **Medical:** By raising funds for surgeries, post-operative care and medicines. They face life long complications of attack. Inclusion of reconstructive cosmetic surgeries and psychological counselling to victims as part of medical treatment in case of acid attack.
- ii. **Legal:** By hiring best legal practitioners according to the survivors' choice at Government's expense although there is a provision of free legal aid.
- iii. **Financial:** By connecting survivors with social entrepreneurs as well as teaching arts and crafts for survivors to run their own independent business. Also, government provide them loan for the business without any interest. Housing assistance should be provided under the governmental schemes.
- IV. **Psychological:** By connecting survivors with various forms of therapists, psychiatrists, meditation and yoga classes. They mentally traumatised and also suicidal tendency develops.
- V. **Social:** By connecting them with social institutions and social workers. Survivors reportedly find it difficult to participate in public and social life after an attack. NGO's are playing an important role for the welfare of the acid attack survivors. They became the voice of victims of acid attack. Government should give sufficient funds for the rehabilitation of survivors and restoration of social structure.
- VI. **Educational:** By connecting those with educational institutions and government should provide education expenses. Special educator and trainer should be provided for them.

CONCLUSION

*"IT IS NOT JUST DISFIGURING THE FACE OR BODY OF THE VICTIM
RATHER IT IS DISFIGURING THE FACE OF THE SOCIETY"*

The crime of an acid attack is not on a small scale; it is growing every day. As a result, the government should take necessary measures in addition to passing laws that will help victims deal with social issues. Even if the Supreme Court had given instructions for the sale of acid, it can still be noticed that there are retail sales of the substance in the market. One of the best ways to prevent acid assaults is to outlaw the retail selling of acid. A crime of retaliation is acid violence. Only when the law is effectively executed will it take effect.

⁴²The Right of persons with Disabilities Act, 2016 (Act 49 of 2016) S.34

Additionally, those that sell acid need to be made more aware. Making legislation is useless unless and until individuals decide to change their minds. It would be better to influence people's minds first than to enact new laws. India is attempting to address the issue of acid attacks, but its efforts will fail unless there is a lack of awareness among the population. An acid attack happens as a result of shoddy implementation methods and a slow trial process. Additionally, there is no efficient system in place to monitor or control the sale of acid on the market, and victims do not receive enough compensation to pay their medical expenses. The new Criminal Amendment Act of 2013 has made significant progress in reducing crimes like rape, acid attacks, and other similar offences, but it still falls short of solving the issue at its root. The effects of an acid assault linger a long time since the victim will always be tortured, will always have damage, and will always have other issues. Their daily existence becomes like a gutter; they are too scared and ashamed to leave their home and perform basic tasks, much less get married, have kids, find a job, enroll in school, or engage in other life activities. Even if they want to live a regular life, there is no guarantee that society will accept them as normal people given their post-attack looks and impairments. They might not be able to work or have trouble finding a job, leaving them in a constant state of difficulty. To stop attacks on women, heavy punishment should be administered to the offender so that they experience the same emotions as the victim. Government-issued medical cards should be used for free medical care, and employers should hire people based on their skills. For the victims' education and survival, some responses suggested creating a specific pension plan and victimised house.

List of Abbreviations

- A.I.R –All India Reporter
- A.S.F –Acid Survivor Foundation
- ASF –Acid Survivors Foundation Bangladesh
- ASTI –Acid Survivors Trust International
- CEDAW –Convention on the Elimination of All Forms of Discrimination against Women
- CERD -International Convention on the Elimination of All forms of Racial Discrimination
- Cri.L.J –Criminal Law Journal
- Cr.P.C -Code of Criminal Procedure
- CVCF –Central Victim Compensation Fund Scheme
- DLSA –District Legal Services Authorities
- DM –District Magistrate
- DACC –District Acid Control Committee
- DEVAW –Declaration on the Elimination of Violence Against Women
- FATA –Federally Administered Tribal Areas
- GOs –Governmental Organisation
- GBV –Gender Based Violence
- IPC –Indian Penal Code
- NCW –National Commission for Women
- N.H.R.C- National Human Rights Commission
- N.C.R.B –National Crime Record Bureau
- NGO –Non-Governmental organization
- PWA –Progressive Women's Association
- SLSA –State Legal Services Authorities
- SDM –Sub-divisional Magistrate
- UDHR –Universal Declaration of Human Rights
- UN –United Nation
- WP(C) –Writ Petition (civil)
- WP(CR) –Writ Petition (criminal)

- WHO –World Health Organisation

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