Stigma of tiger attack: Study of tiger-widows from Sundarban Delta, India*

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ABSTRACT

Aims: Human-tiger conflict (HTC) is a serious public health issue in Sundarban Reserve Forest, India. HTC is a continued concern for significant mortality and morbidity of both human and tiger population. This study examined 49 widows, whose husbands were killed by tigers, in order to explore the cultural stigma related with tiger-killing and consequent discrimination and social rejection. Different psychosocial aspects of community stigma associated with tiger-killings is discussed in the context of local culture.

Methods: A mix of both quantitative and qualitative methods was used in this ethnographic study in two mouzas of Sundarban adjacent to Reserve Forest, involving (1) Village Survey for Tiger-widows, (2) In-depth interview of the widows, (3) Focus Group discussions, (4) Participatory mapping and (5) Stigma assessment by using a 28 item stigma scale especially devised for this research. For comparison of stigma-burden snake-bite widows and normal widows were taken from the same community.

Results: Tiger-widows showed significantly higher stigma scores on all the clusters (fear, negative feelings, disclosure, discrimination, community attitudes, and spiritual dimension) than from both normal and snake-bite widows. They also showed higher total stigma score (65.9 ± 9.8) than normal widows (35.8 ± 8.0) and snake-bite widows (40.1 ± 7.1) and this difference was highly significant (P < 0.001). IDIs and FGDs helped to unfold the cultural construct of stigma related to tiger-killing. This can be seen in how the tiger-widows’ quality of life has been negatively impacted with a multitude of post-trauma psychological scars, deprivation, abuse and exploitation.

Conclusions: The study proposes that administrative strategy for sustainable alternative income generation and conservation policy with integrated participatory forest management may save both human and tiger. A community ecocultural mental health programme addressing to eradicate the cultural stigma related with tiger attack, with environmental awareness may help to reduce the social miseries of the tiger-widows.

Key words: Conservation, ecopsychiatry, ethnography, gender and human-animal conflict, human-tiger conflict, stigma of tiger attack, Sundarban, tiger-widows

INTRODUCTION

Human-wildlife conflict (HWC) is a serious global problem which is causing severe damage, loss of human life,
property, and threatens the survival of many endangered species.\[^{[1]}\] In India, HWC is also posing a serious challenge. The incidence of human-tiger conflicts (HTCs) is alarming in India. A total of 822 cases of human casualties have been reported during the period of 1990–2009 from six states of India as follows: Rajasthan - 7; Orissa - 25; Uttarakhand - 51; Madhya Pradesh - 133; Uttar Pradesh - 161, and West Bengal - 445 in which male casualties were far higher (79.8%) than female casualties (20.2%).\[^{[2]}\] In the Gangetic delta of India, Sundarban mangrove forest (sharing both by India and Bangladesh) is well-known for HTC over the years.\[^{[3]}\] The nature of HTC in Sundarban is mainly due to overlapping of tiger and human space over the use of forest and river resources, which is a very common issue of HWC around reserve parks.\[^{[4]}\] This paper attempts to highlight some of the damaging impact of HTC in the Indian Sundarban, in the context of local cultural landscape, viz., the cultural stigma related with tiger-killings and its impact on the surviving widows.

Tiger and Sundarban are almost synonymous\[^{[5]}\] and this landscape has a long sociopolitical history of HTCs.\[^{[6]}\] Tiger attack in the communities around Sundarban Reserve Forest (SRF) and also during forest exploration is a constant threat.\[^{[7]}\] A significant proportion of the population from the fringe villages of Sundarban depends on the forest resources and during their livelihood activities inside the forest they become the victim of tiger attacks. Human-animal conflicts, especially tiger-human encounter are a regular event in Sundarban, and every year about 40 people are attacked by tigers.\[^{[8]}\] Most of the forest intruders are landless poor people. Husbands is the only bread-earner of the family and after his untimely death, the widow is thrown into deep poverty and hardship. In a society where widows are already stigmatized and have low-social security and status, the tiger-killings added further suffering to the widows because of the cultural stigma about the tiger attack. There are about 3000 such widows in Sundarban.\[^{[9]}\] This is the first report on animal attack related stigma from these widows of Sundarban, locally called “Bag-Bidhoba” (tiger-widow), from two villages adjacent to Sundarban Tiger Reserve (STR), India.

**The land and the people**

**Sundarban bioreserve**

Sundarban is the world’s largest prograding delta at the basin of Bay of Bengal. It covers an area of 10,200 km\(^2\) of which 42% is in India and 58% in Bangladesh. The forest extends over 200 islands separated by 15 major rivers and 400 interconnected networks of tidal waterways that supports the largest tidal mangrove forest in the world. The Indian Sundarban [Figure 1] comprises 19 community development blocks-13 under South 24 Parganas and 6 under North 24 Parganas District of West Bengal State. UNESCO declared Sundarban National Park as World Heritage site in 1987.

**Sundarban tiger reserve**

It covers an area of 2584.89 km\(^2\) and have three zones: Core, subsidiary, and buffer zone [Figure 2]. It supports the subcontinent’s largest populations of Royal Bengal tiger (Panthera tigris). Recent camera trap count shows the number of tigers at 103 in STR.\[^{[10]}\] North-West side of STR is surrounded by numerous villages, thus making the reserve vulnerable to ever increasing biotic interference in the form of livelihood forest explorations, illegal fishing, timber smuggling, and poaching.\[^{[11]}\] The official record shows that on average about 10–15 people are annually killed by tigers.\[^{[12]}\]

**Study block**

Gosaba block is at the extreme Eastern corner of Sundarban region close to the international border with Bangladesh [Figures 1 and 2]. It is the last inhabited island before the deep Sundarban forest start. It has 14 Gram Panchayats (GPs), democratically elected local self-government unit, of which 8 GPs are facing the STR buffer zone (and partly core area). Gosaba is the most poor and underdeveloped block in Sundarban, and a significant proportion of the population is thriving on forest resources.

**People and livelihoods**

People in Sundarban live in an ecologically vulnerable environment. The area is cyclone prone, monsoonal and low-lying with many human settlements located alongside the waterways and coastline. Around 4.1 million people live in Sundarban\[^{[13]}\] (3.5 million in Bangladesh), 32% of whom depend on the resources of Sundarban mangrove forest directly or indirectly. Forty-four percentage of the population belongs to schedule caste and tribe, 65% are living on the agriculture-based economy, of which 50% are landless agricultural laborers and marginal farmers. During the agricultural lean season, more people resort to forest-based livelihood activities (fishing, wood cutting, and collection of prawn seeds and honey) by risking their lives from attacks of man-eating tigers, crocodiles, and sharks. Next to agriculture, fishing (15%) is the most important source of income, particularly for small and marginal farmers. Dependence of the fringe population on Sundarban eco-resources is high. Some 35,330 people work in the forest annually, of whom 4580 collect timber and firewood, 24,900 are fishermen, 1350 collect honey, and 4500 are involved in other activities.\[^{[14]}\] The main forest-based livelihood groups are (a) fisher folk: Micro (catching fishes in creeks and rivers) and macro (in the sea)-fishing is one of the main livelihood activity for communities living in the fringe area of the forest and along the coastline, respectively. (b) Wood cutters and firewood collectors: The yearly average timber collection from SRF is about 120,000 quintals. About 5% of the population is involved in wood collection. (c) Honey collectors (from bee-hive of Apis cerana indica): It is a seasonal activity. About 3% of the population is involved in this activity. On an average 500 quintals of honey and 30 quintals of wax
are collected annually. (d) Crab collectors: Estuarine mud crab *Scylla serrata* (locally called bada-kanckara – mangrove crab) is an edible species distributed in the mudflats of Sundarban forest and is having a good market demand, both locally and overseas.[15] (e) Tiger prawn seed (TPS) collectors: It mainly involve women, girls, and boys who collect prawn seeds from brackish water. It is a lucrative on the spot earning of about Rs. 50–100 (USD $1–2)/day/person. TPS collection near or inside the SRF always carries a high risk of a tiger attack.

**Folk cults**

**Bonobibi, tiger god, and manasa**

People of Sundarban, both Hindus and Muslims, have a strong faith on the folk cult of Bonobibi (queen of the forest), the guardian deity of the forest and Dakkhin Ray, the God of the tiger. Sundraban islanders perceive Bonobibi as the unified symbol of forest and people, and she stands beyond any caste, class, and religion.[16] Before entering the forest for heading out for fishing or harvesting honey or wood cutting, it is obligatory to offer puja and pray to the Deity to keep the team protected from tigers. Manasa, a four-armed icon ornamented with snakes, is a cult of Hindu folk Goddess of snakes and protector from snake-bite. Health burden (both mortality and morbidity) from snake-bites, both poisonous and nonpoisonous, is high in Sundarban. People of Sundarban have deep faith in these mythical cults as their protector and fate-regulator which is being reflected in their daily sociocultural discourses.[17]

**MATERIALS AND METHODS**

A mix of both quantitative and qualitative methods was used in this ethnographic study as follows.

**Village survey for tiger-widows**

A door-to-door survey was done on two villages (Satjelia and Lahiripur) of Gosaba, opposite to STR to document human-animal conflicts, the details of which is reported elsewhere.[18] A total of 73 tiger-widows were identified of which data were collected from 65 widows (3 widows were untraceable, one committed suicide, and four had natural death): Thirty-eight from Satjelia village (jalepara and Bidhoba para) and 27 from Lahiripur (Bidhan colony and Jamespur). Fifty-four widows agreed to be interviewed, and only 49 widows completed the Stigma Questionnaire. This study was done during 2005–06.

**In-depth interview**

In-depth interview with the widows at their cottage was done with a predesigned format (based on the previous pilot study), focusing on the details of tiger attack incident and its aftermath, stigma and social discrimination issues, current health, and livelihood assets.

**Focus group discussions**

Four focus group discussions (FGD) and eight sessions of participatory mapping were also conducted.
Stigma scale
There is no reference of stigma assessment related to animal attacks in the literature. The conceptual framework for devising the stigma scale in this study was taken from the model of HIV stigma scale of Berger et al.[19] and the related dimensions from recent stigma literature.[20-22] One new item “spiritual dimension” was added. After repeated discussions about the issues in each item in four FGDs, these were framed according to the local situational and cultural context. The final scale, in vernacular [Appendix 1 - English version] thus made up of 28 items distributed in six clusters, namely personal stigma (fear – 6 items); negative self-image (6 items); disclosure concerns (3 items); discrimination (7 items); community attitudes (4 items), and spiritual dimension (2 items). Respondents were asked to indicate to what extent they agreed to each statement using a 4-point Likert scale from “disagree” (0) to “strongly agree” (3). The stigma score ranges from 0 to 84 with higher scores indicating greater stigma. For stigma assessment, the tiger-widow sample was divided into two groups: Legal group (17: Whose husbands entered the forest with requisite Forest Department pass) and illegal group (32: Without that) to examine any additional stigma burden in the latter group.

Other widows
For comparison of stigma, two groups of widows were taken as follows: Thirty-two normal widows, whose husbands have died either normally or from physical diseases and were identified from Satjelia, Lahiripur, and Gosaba Panchayat area, 21 of them consented to be interviewed for the stigma issues. Twenty-four snake-bite widows, whose husband died from snake-bites, from the same villages were identified and 18 of them consented to be interviewed.

Ethical approval
The study protocol was approved by the Ethical Committee of Department of Health and Family Welfare, Government of West Bengal and Gosaba Block Panchayat Samity.

RESULTS
Stigma assessment
Independent samples t-test was conducted [Table 1] to assess the difference in stigma profile between tiger-widows-legal and illegal groups. Stigma was found to be different in tiger-widow illegal on disclosure issues and in total stigma score (P < 0.05).

One-way analysis of variance (ANOVA) was conducted to test for significant differences in stigma between different widow groups and found to be significant [Table 2]. Tukey key post-hoc comparisons indicated that tiger-widows differed from both normal and snake-bite widows on all stigma cluster scores and total score. Stigma did not differ significantly between normal widows and snake-bite widows, except for on spiritual dimension score.

DISCUSSION
There are 245 million widows in the world, of which 42.4 million are from India, i.e. 10% of the India’s female population.[23] The lives of widows are an example of gender discrimination, cultural, and religious marginalization with physical, sexual, and economic abuse and exploitation. In the patriarchal Indian society, they lost their social and cultural identity after their husband’s death and are regarded by the family and the community as a burden and liability. If the husband’s death was sudden and unnatural, it conveys social stigma and thus acts as double edged sword in ostracizing the widows as a social outcast. Because of the cultural stigma of tiger-killing in the local community, the tiger-widowhood exacerbates an already difficult situation for widowed women, serving as an amplifier of problems faced by all women who have lost their husbands. This study of the tiger-widows of Sundarban speaks about this misery and stigma. Their widowhood impacts on all aspects of their life, namely psychological well-being, mental health, physical health, economic security, and social identity, all of which are intimately related with the stigma attached to tiger-killing. The present discussion addresses the stigma issue only.

Stigma and discrimination
This study showed that the tiger-widows are more stigmatized than both normal and snake-bite widows. The illegal group differs significantly on disclosure issue from that of the widows in the legal group, and this difference is probably due to fear and threat attached with illegal forest trip. Tiger-widows as a group showed significantly higher stigma scores on all the clusters (fear, negative feelings, disclosure, discrimination, community attitudes, and spiritual dimension) than from both normal and snake-bite widows. They also showed higher total stigma score (65.9 ± 9.8) than normal widows (35.8 ± 8.0) and snake-bite widows (40.1 ± 7.1) and this difference was highly significant. Though snake-bite widows differed significantly on spiritual dimension score than the normal widows but in Sundarban community, snakes are viewed not with so much superstition like that of tigers. The following

| Table 1: Difference in stigma between tiger-widows legal and illegal |
|---------------------------------------------------------------|
| Stigma clusters         | Mean (SD) | t       |
|-------------------------|-----------|---------|
| Tiger widow-legal (n=17) |           |         |
| Self-stigma-fear        | 10.94 (3.32) |       |
| Self-stigma-negative feelings | 15.59 (2.01) |       |
| Disclosure              | 1.12 (1.11)  |       |
| Community attitudes     | 10.59 (2.50) |       |
| Total score             | 5.41 (0.93)  |       |
| Tiger widow-illegal (n=32) |     |     |
| Self-stigma-fear        | 11.28 (3.94) | -0.319 |
| Self-stigma-negative feelings | 16.69 (1.74) | -1.91 |
| Disclosure              | 8.38 (1.10)  | -21.83*|
| Community attitudes     | 10.28 (2.15) |     |
| Total score             | 4.25 (1.43)  | 3.40   |
| SD – Standard deviation |           |         |

*P<0.05.
is a brief discussion on how the two-fold stigma processes in tiger-widows are operating in the local context.

**Discrimination in home and in community**

Tiger-widows are labeled by the in-laws and community as the “unholy and evil women” and they are blamed for their husbands’ death. In 90% of the widows the in-laws family, especially the mother-in-law accused them for the death of their son (swami-khego - “husband-eater”) and viewed them as a sign of misfortune and harbingers of bad luck. This labeling and blaming leads to verbal, physical, and psychological abuse for the majority of the widows.

In general, the widows are heavily ostracized in Indian community and on the top of that tiger-killing added further momentum as a double or compounded stigma. The cultural rules directed the tiger-widows to live in isolation, not having any social discourse with other male figures, have to wear white sarees (in contrast to colored saris for married women), no ornament or bangle. They are not invited in any marriage or social festival, as they stand as a mark of “unholiness” and sign of misfortune. They should not stand or be seen by any bride or groom on their way to their wedding ceremony. They should not come into the vicinity or close to any religious performance or puja (prayer) and are strongly forbidden to touch any related materials or deity, as their touch will spoil the sanctity of the situation. They should not go out in the early morning on the roadside so that nobody will see their face first in the morning. If anybody sees it is believed that the whole day might be fruitless or would invite some danger to the viewer. All of these cultural stigma and forced rules shunned them from the mainstream community life and in some Sundarban blocks they are living in segregated hamlets, calledBidhoba Palli (widow hamlet) [Figure 3], which very frankly reflects their outcast status and social isolation.\[24\]

It was revealed in the FGD sessions that there is a traditional custom. In Sundarban communities, often seen as a “good-luck rituals,” as follows: When the husband goes on any forest exploration, the wife has to offer prayer to Bonobibi twice in a day, they do not light a fire under the stove or have a nonvegetarian meal, or wash clothes or adorn new clothes or ornaments, or groom themselves. They should not renew their vermilion on their forehead. They also do not comb their hair, do not cross the river, do not take part in any social or religious festival and avoid talking with other male members of the community. These rituals are strictly maintained with a high level of anxiety until the husband returns. Although these rules and practices are meant for the safe return of the husband, in all practicability, they are an implied trial for potential widowhood.

**Stigma of tiger attack: Spiritual dimension**

Living on the forest resources is a unique livelihood measure of Sundarban region. Sundarban communities believe that “badabon” (forest) is a sacred entity - gift of God, abode of Goddess Bonobibi, and reservoir of their food and woods which are vital for their living in these remote disconnected, poverty-stricken islands. Life, livelihood, and forest are interblended in the matrix of ecology, culture, and spirituality. They acknowledge humbly both the grace and the threat from the forest. Symbolically forest stands as eco-mother as one Moulay said in the FGD, “Forest is our mother, it provides us our food, shelter, and fire-woods – all necessary things in life, forest is our life-line, if Ma Bonobibi is pleased with us, we will prosper, there will be no danger inside (forest) as tigers’ are her pets, but if she is angry or displeased because of our arrogance and disrespect to her or to the forest, she will not pardon us. Our safety and peace be it inside the forest or outside - all depends on her blessings”. Living in the far off detached islands in the midst of poverty, uncertainty, danger

| Table 2: Difference in stigma among widow groups |
|-----------------------------------------------|
| Stigma clusters                              | Tiger widow (1) (n=49) | Normal widow (2) (n=21) | Snake-bite widow (3) (n=18) | F     | Source of significance |
|-----------------------------------------------|------------------------|-------------------------|-----------------------------|-------|------------------------|
| Self-stigma-fear                              | 11.16 (3.71)           | 7.19 (3.04)             | 8.56 (2.85)                 | 11.25** | 1:2, 1:3               |
| Self-stigma-negative feelings                 | 16.31 (1.89)           | 10.52 (1.77)            | 10.39 (2.76)                | 86.17** | 1:2, 1:3               |
| Disclosure                                    | 5.86 (3.65)            | 0.43 (0.92)             | 0.17 (0.70)                 | 42.61** | 1:2, 1:3               |
| Discrimination                                | 17.33 (2.42)           | 12.38 (3.15)            | 13.33 (2.05)                | 34.51** | 1:2, 1:3               |
| Community attitudes                           | 10.39 (2.26)           | 4.76 (2.99)             | 4.47 (1.84)                 | 62.16** | 1:2, 1:3               |
| Spiritual dimension                           | 4.65 (1.39)            | 0.57 (0.87)             | 3.39 (0.77)                 | 87.82** | 1:2, 1:3, 2:3          |
| Total score                                   | 65.90 (9.85)           | 35.86 (8.01)            | 40.06 (7.05)                | 108.38** | 1:2, 1:3               |

**P<0.001**
(climatic and animal attacks), and close to the forest or on the river bank they developed a forest religion where Bonobibi stands as a personification of the forest who offers security to them and these moral and spiritual ethos are deeply ingrained in their social and cultural life and handed down from generation to generation.[25] To fight and overcome the natural hazards of this difficult terrain, the islanders have a strong psychological defense and dependence on the religious beliefs and supernatural powers. Hindus and Muslims worship the same Bonobibi inspite of their religious differences. The folk practice of worshipping trees, snakes, tigers, crocodile (Shiber kumar - Lord Shiva’s crocodile), and other animals is also common. The enduring life struggle with different adversities including fatal tiger attack raised the status of the tiger to that of God.[26] Counteracting this potential danger, the cult of Bonobibi as a protector, has become deeply ingrained into the belief system of these islanders.[27] This religiosity is expressed in their day-to-day life pattern like in worshipping Bonobibi before entering the forest and having a Bonobibi shrine in every village or having a strong faith and conviction that Bonobibi will certainly protect them not only during their in-forest activities but also from natural calamities and other untoward incidents. So any such attacks tend to shake their religious devotion and faith because the attack itself is the sign that the Goddess is displeased with the victim (because of their any alleged transgression) and therefore refused to protect them from the tigers and the attack is regarded as the “divine curse” cast upon them. This generates two stigma layers: First, the widows suffered a sense of guilt and sinfulness which impact on their posttrauma psychology immensely (internalized stigma). Second, the community, because of this spiritual and religious overtone, branded them as “cursed family” (enacted stigma) and thus avoids and isolates (social distance) them because of the fear of magical/supernatural contamination of “divine curse” to others. Though fear of contagion (by touch, food or air) plays a crucial role in stigma for physical and mental diseases but here the alleged mode of contamination from “baghe-kaowa” (killed by a tiger) or “baghe-dhora” (caught by a tiger) family is by supernatural means. This cultural stigma is more potent in in-forest HTC rather than conflicts with straying tigers in the village territory. Negative cultural interpretation with extreme spiritual overtone acts as a magnifier for compounded stigma-burden on the top of their widowhood status. These cultural stigmas not only enforce social isolation and boycott, but also impact their life course as well. These families face difficulties in negotiating marriage for the girl child, dowry demand goes up as it is also believed that tiger attack is potential for development of mental disorders (in the bride-to-be). Many natural and usual forest or community incidents or events act as cultural reinforce to this belief of divine disgrace, which cumulatively potentiate the strength of cultural stigma about tiger-killing at the general backdrop of extreme illiteracy and poverty in the Sundarban communities.

CONCLUSION

Though India has made considerable economic progress since independence but so far as the cultural oppression and social alienation of the widows, there remains a miserable gap.[28] This study showed that the stigma of tiger-widowhood affects all aspect of their life, that prone them to lifelong sufferings. They are deprived of all human dignity of living, discriminated by their family and community, struggle to survive the profound degree of poverty, live a life with multitude of posttrauma scar and deprivation,[29] abuse, and exploitation. It is a matter of uncertain speculation whether the cry of the tiger-widows of Sundarban will reach to the national or international level, especially in the context of increasing tiger-human conflicts in recent years, both in India[30] and Bangladesh[31] and consequent rising of numbers of tiger-widows[32] in the region. Increasing HTC could underscore the conservation strategies as it has serious negative impacts on both humans and tigers.[33] From eco-psychiatric perspective, this is a very serious concern that needs checking and balancing between the two issues: Conservation of biodiversity and the well-being of forest-dependent population. HTC in Sundarban represents a complex human-ecological risky interaction, viz., confrontation of sociopolitical and biological landscapes.[34] So for both human well-being and tiger conservation, consideration of local sociocultural factors[35] by stakeholder engagement in participatory decision-making[36] and participatory planning (cost-effective design, wildlife specificity and selectivity, and sociopolitical acceptability)[37] may help to reduce HTCs. Finally, a protracted eco-cultural advocacy, as a part of community mental health activity, with active community participation would help not only to address the gender-environment issues[38] to mitigate the cultural stigma against tiger-widows, but also enhance the social acceptability[39] of eco-conservation of Sundarban’s biodiversity. All these steps need a coordinated, strong, and proactive administrative strategy and positive political will. Future research in eco-psychiatry may unfold some suitable mitigating factor to resolve this unique cultural dimension of HTC in Sundarban.

Limitations

This study sample was not a random selection; it was a purposive sample, based on the logistics and willingness to participate. The stigma scale though was constructed by observing relevant issues from validated scales and incorporated inputs from four FGDs; however, the detail psychometric assessment like validity and reliability analysis was not conducted. Future research is needed to examine these issues to explore the clinical utility of this scale in the study of such special population.
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Conflicts of interest
There are no conflicts of interest.

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## Appendix 1: Stigma scale

Because your husband’s death from the “tiger accident” and your consequent widowhood, do you think you have/had the following difficulties/problems

| Code | Item Description                                                                 | Disagree (0) | Slightly agree (1) | Moderately agree (2) | Strongly agree (3) | Total |
|------|-----------------------------------------------------------------------------------|--------------|--------------------|----------------------|-------------------|-------|
| A    | Self-stigma: Fear (0-18)                                                          |              |                    |                      |                   |       |
| 1    | You are afraid of being alone                                                     |              |                    |                      |                   |       |
| 2    | You are verbally insulted, harassed, or threatened                                |              |                    |                      |                   |       |
| 3    | You fear being physically threatened or assaulted                                 |              |                    |                      |                   |       |
| 4    | You fear being sexually harassed or abused                                        |              |                    |                      |                   |       |
| 5    | You fear being monetarily exploited, harassed, or cheated                          |              |                    |                      |                   |       |
| 6    | You fear having further misfortune or accident                                     |              |                    |                      |                   |       |
| B    | Self-stigma: Negative feelings (0-18)                                              |              |                    |                      |                   |       |
| 7    | You feel ashamed                                                                   |              |                    |                      |                   |       |
| 8    | You feel guilty                                                                    |              |                    |                      |                   |       |
| 9    | You blame the fate                                                                 |              |                    |                      |                   |       |
| 10   | You have low self-esteem (mental strength)                                        |              |                    |                      |                   |       |
| 11   | You feel you were punished for your bad deeds (Karmafal)                           |              |                    |                      |                   |       |
| 12   | You feel hopeless and helpless                                                     |              |                    |                      |                   |       |
| C    | Disclosure: (0-9)                                                                  |              |                    |                      |                   |       |
| 13   | You feel ashamed                                                                  |              |                    |                      |                   |       |
| 14   | You are worried to cry aloud because others will know                              |              |                    |                      |                   |       |
| 15   | You are worried that people who know your condition will tell others              |              |                    |                      |                   |       |
| D    | Discrimination: (0-21)                                                             |              |                    |                      |                   |       |
| 16   | You feel unsupported/rejected by in-laws and their family                          |              |                    |                      |                   |       |
| 17   | You feel unsupported by your own family, relatives, and friends                   |              |                    |                      |                   |       |
| 18   | You are facing difficulties in getting remarried                                   |              |                    |                      |                   |       |
| 19   | Your children are facing problems in school or local community                    |              |                    |                      |                   |       |
| 20   | You are no longer invited to communal festivals or pujas                           |              |                    |                      |                   |       |
| 21   | You are no longer invited to weddings                                              |              |                    |                      |                   |       |
| 22   | You feel you lack support from the panchayat/community                              |              |                    |                      |                   |       |
| E    | Community attitudes: (0-12)                                                         |              |                    |                      |                   |       |
| 23   | You feel people think you are a sinner                                              |              |                    |                      |                   |       |
| 24   | You feel people think you are a bad omen                                            |              |                    |                      |                   |       |
| 25   | Other people look down upon you                                                    |              |                    |                      |                   |       |
| 26   | You feel that the community excluded you as an outcast                             |              |                    |                      |                   |       |
| F    | Spiritual dimension: (0-6)                                                          |              |                    |                      |                   |       |
| 27   | You feel Bonobibi was displeased/angry with you                                    |              |                    |                      |                   |       |
| 28   | You feel Dolkhin Ray was displeased/angry with you                                 |              |                    |                      |                   |       |
|      | Overall Stigma: (0-84): $A + B + C + D + E + F$                                    |              |                    |                      |                   |       |

*In cases of snake bite widows this item was changed as: You feel Ma Manasa was displeased/angry with you*