

Busting the Kitchen Accident Myth: Case of burn injures in India

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ABSTRACT: The medical literature from India repeatedly reports burns deaths to be high among young married women mostly as kitchen accidents due to stove blasts or cylinder blasts leading to deaths. The interviews with survivors and their families indicate that there is a deliberate attempt by women to report all burns injuries as result of accidents in order to avoid any police investigation. This is true in cases of suicides as well as homicides. Almost all women reported experiencing domestic violence and therefore the linkages of burns injuries and domestic violence are strongly established. This studied silence hinders the development of any concerted response for prevention of burns injuries. The paper argues for development of a comprehensive health system response to domestic violence in order to address the issue of high burden on intentional burn injuries amongst young women in India.

KEYWORDS: Burns Injuries, Kitchen Accidents, Suicide, Homicide, Domestic Violence.

1 INTRODUCTION

India has a large burn related morbidity and mortality with an estimated annual burn incidence of 6-7 million, based on data from major hospitals when extrapolated to whole of the country, which is the second largest group of injuries after road accidents. Nearly 10% of these are life threatening and require hospitalization. Approximately 50% of those hospitalized succumb to their injuries. Nearly 100,000 to 150,000 people get crippled and require multiple surgeries and prolonged rehabilitation annually. Seventy percent of the burn victims are in most productive age group of 15 to 40 years and most of the patients belong to poor socioeconomic strata. [1] In 1998, India was the only country in the world, where WHO categorized fire among the 15 leading causes of death [2] In fact, with an estimate of approximately 700,000 to 800,000 admissions per year, burns has been described as an endemic health hazard in India. As India does not have a national injury surveillance system, the exact incidence of burns morbidity and mortality is not known.

Sanghavi, P et al reported an estimated 163,000 fire related deaths in India based on medically certified causes of death in urban areas and a verbal autopsy based sample survey for rural populations. This amounts to about 2% of all deaths and was found to be six times higher than police reports. Of these deaths, 65% were female deaths, 57% of which occurred among women between 15-34 years. For this age group 15% of all deaths were found to be fire related. Women were on average three times more likely to die of fire related injuries than men. [3] Burn deaths amongst women may be categorised as dowry deaths, dowry related suicides, fire accidents, suicides, homicides.

The literature on burns in India, typically based on retrospective medical records, indicates that burns deaths and injuries are higher amongst younger women in the age group of 18-35 years dying due to accidents in kitchens such as bursting of kerosene stove or kerosene spilling and clothes catching fire or suicides. This is further explained by the nature of clothing worn by women in India such as saree and dupatta. [4, 5,6,7,8] Most of medical papers raise no suspicion on why women who cooked well in their parental homes met with so many accidental burns in their marital homes. It is a known fact that girls take on household chores including cooking as early as 10-12 years. So it is surprising that their reported histories of 'accidental burns' find no questioning in medical literature. [9]

What is missing is the circumstances surrounding the incident, the pathway to care, response of the health system and police, role of the family in care and recovery. The present study aims to bridge this gap by bringing in perspectives of the women suffering burns injuries and of their families to understand the circumstances surrounding the incident of burns.

2 MATERIAL AND METHODS

2.1 RESEARCH METHODOLOGY

The Haddon's matrix is a useful way for conceptualizing causal factors and prevention strategies for unintentional and intentional injuries. Applying this framework, interviews with patients provide insights into bottlenecks in health care, such as delays in reporting, delay in treatment due to various factors such as fears of police, cost and so on. It can also provide insights into causative factors such as dowry, acceptance of domestic violence, lack of family support for women. Thus detailed interviews with survivors, and/or their families were carried out to understand the victim's environment. Twenty two such interviews were conducted with survivors/ their families.

The study was conducted in city of Mumbai in three hospitals- two public and one private hospital focusing on experiences of the patients and/or their families using a qualitative methodology. The findings therefore provide insights but may not be conclusive.

2.2 SCOPE

Women admitted in the burns wards for burns injuries were interviewed to understand the circumstances surrounding the burns injury, their experiences with health system and police. The data gathered was around their age, socio-economic background, residence, details of the incident, health care provided, their experience with the police and the health system in term of medical treatment, supportive care and follow up.

2.3 APPROACHING THE RESEARCH PARTICIPANTS

They were approached through the hospital staff of the ward viz the nurses and social workers at the hospital. Two women who had suffered burns in the past approached the counseling centre for services while one required admission the other needed a surgery for a neck contracture. Of the ten contacts given by the specialized unit of women discharged recently, only two could be contacted and one of them agreed to speak on telephone.

3 RESULTS

3.1 PROFILE OF THE WOMEN

The women were mostly very young less than 30 years. The youngest was 17 year old student and the oldest was 45 years. Most women were currently unemployed, four of them who were employed were engaged in domestic work or small businesses and one working in a mall. They belonged to lower or middle class, mostly living in slums, chawls, villages/ Only three lived in a flat.

3.2 MARITAL STATUS

18 were married women, 2 were never married, one was divorced and one was deserted. Amongst the married women, most of them were married for less than 2 years, and few were married for more than 10 years. Three women were married only for a year and two were married for less than six months. Of the 18 married women, two were currently pregnant when they suffered burns and the others had 1 or two children.

3.3 SEVERITY OF BURNS

The lowest percentage of burns reported was 15% and highest was 95%. Those with 50% and above were critical and died. This was the average burn outcome across the two hospitals that provided their annual data and is reported as the current average outcome. (ref- gore et al, 2013)

The following provided a snapshot on the severity of burns and the outcomes in the sample.

Severity of burns (total surface area burnt)	Number	Died	Treatment underway	Treated and discharged
Less than 25%	6	-		5
26 to 50 %	12	3	6	1
51 to 75 %	2	1		1
76 and above	2	3		

Source: Empirical data

Only one woman who had suffered 75% burns two years back and had survived them due to unwavering support of her natal family and the fear of arrest that forced the husband and his mother to extend their support.

3.4 VEHICLE OF BURNS

The vehicles of burns were kerosene, diesel or gas cylinder. They all reported use of kerosene stoves at home even those using gas cylinder said that they use stoves for heating water or as back up. They all had kerosene at home

3.5 MANNER OF BURNS

15 of the 22 women had recorded the cause of burns as accident in kitchen, six reported suicide and one reported homicide. These kitchen accidents were all reported as “stove burst” or “cylinder blast” on the medical reports. These were identical to India wide studies on burns patients published by forensic scientists and surgeons.

However, as part of the research process, when the patients were asked to describe the incident in some detail in terms of who was at home, how the blast occurred, who saved her, was anyone else injured, how was the fire doused which are essential elements from a public health as well as injury prevention perspective, these blasts were no more blasts in all cases.

	Accidents	Accident but experience of DV	Suicide but reported as accident	Suicide	Homicide	Total
Medical records	15	-	-	6	1	22
As told to researcher	3	4	7	6	2	22

Source: Empirical data

The various scenarios that emerged were:

i. Accidents:

Of the 15 women who had reported the incident as accident, three women described in detail the episode of burning as a kitchen accident. The records indicated that they had 13%, 15% and 22% burns. The description was consistent with the description given by the family member. Their description was consistent with what their relatives said. None of them reported any violence from their partners. One of them was pregnant and she mentioned that she was relieved that her foetus was fine. All of them had managed to mitigate severe damage by their own action and that of their family members.

One of them described how she was saved by the quick reaction of her older son who pouring water over her. She did not realize that the match stick that she used to light the stove accidentally got placed on her gown, there was a burning sensation and she suddenly saw a flame. Her husband was shocked but her elder son (14 year old) was quick and poured water on her.

They did not report any stressor on the day of the incident and their families were beside them at the hospital. The husband, mother-in-law and/or mother were dedicatedly taking care of them.

ii. Accidents with a history of domestic violence:

Of the 15 women reporting accidents to the hospitals, four women told the researcher that it was an accident and described in detail what had happened on the day of the incident. But this description was full of loopholes such as

“stove was leaking- kerosene was on the floor but she did not realize”

“ was pouring kerosene when stove was burning”

“ kept gas on.....i always wear cotton maxi but was wearing a nylon one that day.....”

"saree caught fire while making tea",

The burns injuries caused were of moderate severity -between 40 to 50% burns. Three of the four women reported domestic violence from marital family and/or husband. The violence reported was physical, emotional and financial. One of them did not speak at all and the history was given by her mother. The mother consented to the interview but responded in a pre- determined way.

Their narratives raise several concerns about whether this was a genuine accident or there was any foul play. Another vexing question is about the impact of domestic violence, living under immense stress and whether or not that could make them vulnerable to such 'lapses" or lack of safety measures.

iii. Accidents but actually attempted suicides:

Seven women clearly stated that they had reported the incident as accident to avoid any police investigation. These were in fact suicidal attempts and women were experiencing violence and were fed up and frustrated. Of these two died in the hospital and the other four had different sequel.

In the case of two women, the husband stopped violence after this episode as the natal family came into the picture and provided support through the entire hospitalization. Due to social pressure and continued support, the husbands stopped their violent behaviour. In another case, the women sought an intervention to stop violence in her life and asked for a joint meeting. One of these women, survived the burns with the strong support of her natal family but lives separately from her husband now.

All of them suffered a lot, they were hospitalized for a long period and had to undergo several surgeries. They suffered Scars and disfigurement.

iv. Suicides:

Six women had attempted suicide by burning themselves and had reported this at the time of admission. The relatives too described the incident in the same way. Of the six, one was a 19 year old college student, one was a divorced woman living in her natal family and four were married women. The college student attempted suicide as she failed and the divorced woman wanted to scare her mother as she kept verbally abusing her. The four married women reported facing all forms of violence, three of them were married for 10 to 19 years and one of them was married only for five months. They had weak ties with the natal family and were coping up with abuse and other life stressors. In each of these cases there was an incident of abuse that triggered off this act-

" husband shouted or said he did not want to live with her."

Two of them reportedly had some mental health problem.

In one case, the woman's SIL kept referring to her as "she was a bit off" from the time she lost her fourth daughter.

In another, the brother reported that she was on psychiatric drugs and had probably not taken her medicines that day.

However, the other women did not seem to have any specific mental health issues. But living in abusive relationships is known to cause suicidal ideation especially when there was no support available. None of them had approached the police or anyone to stop this violence in their lives.

The burns injuries were 50% to 95% except in the case of the college student who suffered 40% burns as her brother saved her.

v. Homicides:

Only woman reported homicide to the hospital. Her husband poured kerosene on her and threw a match stick. She was shocked but acted quickly and ran into the bathroom to pour water. She suffered 5-10% burns. She revealed it to her parents when her marital family did not take her to the doctor for treatment. She was facing domestic violence for a long time.

Two women who had reported the incident as accident told the researcher that these were in fact attempts to kill them. In both the cases, women were under tremendous pressure from their families to not report their husbands who had caused these injuries.

"A" suffered 77% burns and was threatened that her parents will be harmed. In her case she had told the local police that it was homicide but the family did not allow her to tell the hospital.

“S” suffered 10% burns injuries and reported it as accident as she was just very frightened. But once her parents came into the picture and extended support, she decided to change her statement. The same was recorded by the doctor.

3.6 FOLLOW UP CARE AND REHABILITATION

As reported earlier, the follow up by women patients was lower as compared to men. Three of the 22 women spoken to had been discharged after receiving complete treatment and so it was possible to explore the impact of the burns injuries. They shared the pain of having to live with the scars and the unique ways in which they had learnt to conceal the scars. They required surgery as well as physiotherapy and were following up locally for these services.

One of them had a bad neck contracture which she was concealing with a collar (used in case of neck pain), another could hardly speak as she had burns on the neck for which she went in for surgery after five months of discharge. The one with hand burns had to follow up with the physiotherapist for hand movements.

4 DISCUSSION

What emerges from the narratives of women is the clear gap between what is reported as cause of injury and what the fact is. The looming fear of arrest and police investigation pushes the facts under cover and the story of ‘kitchen accidents’ becomes the dominant narrative. As seen in 8 cases they honestly told the researcher the reasons for not speaking the truth. Sharma et al [10] question the accident theory quoting Rao’s study [11] which found that in 29% of cases the cause of death was reported as bursting of kerosene stove while there was not even a stove in the kitchen. Jutla et al [12] raise concerns about investigation and treatment and report work by Agnihotri [13] that found that in many cases even the dead body of the victim is unavailable because the offenders have disposed of the body by cremation without informing the police or relatives of the deceased individual. Venkoba Rao [14] had reported that of his sample of 100 cases of female burns in the hospital 70 per cent were suicidal and 74 per cent were married.

A CEHAT study in 2014 found substantial difference (>60%) between the history provided by a burns patient to the doctor (mostly accidents) and that given to a counsellor. [14] These findings are supported by study by SNEHA where they found that the classification of cause of death amongst women dying of burns may depend on interest and resources available to the doctors, victims, victim families, the victim’s husband and his family and importantly the police leading to biases and injustice to the treatment of victims and alleged offenders. (8) Work done by women’s groups such as Vimochana in Bangalore at Victoria Hospital has brought to light that these deaths could be homicidal (where the partner and his family have connived to murder her by burning) or these could be suicidal (where the woman fed up with ongoing abuse has burnt herself). However, women succumb to family pressure and their concern for their children prevents them from speaking out against the abuse faced by them. Most cases therefore remain ‘accidents’ only. [17]

The fact that 19 of the 22 women were experiencing domestic violence indicates the widespread occurrence of DV and its linkages to burns injuries. Domestic violence in all its forms physical, emotional, sexual and financial was reported by women spoken to. Experiencing domestic violence was one the most significant risk factor to suffering burn injuries contrary to the reported stove and/or cylinder blasts or the perception of *saris* and *dupattas* that are likely to cause burns injuries. Women said that they deliberately reported incidents of homicide and suicide as accidents as they did not want any police investigation lest their partners are arrested. Even those who reported suicide did not mention domestic violence to the hospital or police.

Of those who survived the burns, the support of natal families was pivotal in completing the treatment and follow up. The completion of treatment for burns, which is a long process, requiring several follow up visits for surgeries and physiotherapy is gendered. Women who survive are less likely to access the necessary services thus pushing them into closed spaces and living in seclusion from public gaze and glare.

The specialized centres provided services such as special diet, physiotherapy and counseling. While one was on payment the other provided it free. Even where it was free, the follow up by women was low. The long term impact of burns as shared by the three survivors makes it imperative for general hospitals to also provide these services so that women are able to easily access them.

5 CONCLUSION

The medical literature reports on high incidence of burns deaths in young women as being due to kitchen accidents. The empirical work done here brings into question the recording of all burn injuries as “kitchen accidents” through the study of

perspectives of women patients/their families. The studied silence about the actual cause of incident, investigation and documentation in cases of burns injuries and/or deaths in women is catastrophic. This poses a big challenge in comprehensive understanding of the issue hindering the development of any systematic approach to burns prevention and response. If burns injuries amongst women are largely suicidal or homicidal in nature due to domestic violence, then the prevention efforts will have to address different issues such as domestic violence, dowry, and suicide prevention and also set up services for responding to domestic violence.

Hospitals and health professionals too perceive it as a private matter that they should not get into. In fact there is a systemic avoidance/reluctance to enquire into the cause of injury for women which is further compounded by a tendency to trivialize the matter. Strategies for routine screening to identify violence at an earlier stage need to be put in place to enable women to receive counselling services so that they can resist and stop violence in their lives. The role of primary prevention strategies including awareness on the issue of domestic violence, changing existing beliefs that domestic violence is normal and integral part of families also needs to be examined.

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