

# Study of Age and Gender Predilections amongst the Victims of Burns of Domestic Violence

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## ABSTRACT

**Background:** Human life from conception till death needs some sources of energy or heating mechanism to advance from a day to another in the process of livelihood. From innocent infants falling victims to fires, toddlers to scalds, youth to vitriolage and elders to enmity of a variety of sources or to their own debilitation bring them close to the fire source let them fell a prey to burns.

**Aim:** To observe the age and gender predilections amongst the victims of burns

**Methods:** The study was carried out among 250 victims of burns presented from December 2017 to August 2018 and reported in the Accident and Emergency Department of Mayo Hospital Lahore and filtered in Medicolegal Clinic of King Edward Medical University Lahore.

**Results:** The study revealed maximum involvement of pediatric and geriatric age groups falling victim to burn incidents. In an analysis as a whole almost 84% victims were belonging to these two extremes of ages. Gender disparity showed a slight difference of just 10% showing female preponderance being exposed to burns.

**Keywords:** Burns, Age, Gender, Variation, Disparity

## INTRODUCTION

Burn is form of injury varying in degree due some form injury and to the least makes 1% of non-fatal injuries among all formats<sup>1</sup>. A profound influence on the mortality due to burns irrespective of the source and mechanisms of burns is primarily determined by age and sex<sup>2</sup>. Historically sex of the victim has not been included in data for studies of burn outcome and hence was not found to have profound implications on the outcome of the burns.<sup>3</sup> Mortality and morbidity is well documented fact in the victims of burns outcome grossly determined by the age being more drastic in children age group<sup>4</sup>. Age of the victim persistently had been depicted as a major and critical factor determining the mortality and morbidity of the burns. Besides that female gender has also been found having the same pivotal role for contribution towards the burns mortality<sup>5</sup>.

Age above 60 years, total surface area of the victim burnt and inhalational injuries were found as three primary factors grossly affecting the treatment outcome and morbidities<sup>6</sup>. Burns invariably occurs in both the genders and all age groups with great seasonal variations<sup>7</sup>.

The masses in Pakistan showed a very high involvement of pediatric age groups especially below 5 years of age<sup>8</sup>. Adults suffered almost double the number of children or infants in the incidents of burns with female preponderance in children or pediatric age groups and male preponderance in adults or adolescent age groups<sup>9</sup>. The hospital admissions were higher in younger children than older children due to burns<sup>10</sup>. The incidence of burns were reported to be much higher in children and females though the severity was much worse in males as compared to that of females. The study showed the age and gender predilections are very important aspects to be considered in victims of burns<sup>11</sup>.

The objective of the study was to observe the age and gender predilections amongst the victims of burns

## MATERIALS AND METHODS

The study consisted of 250 subjects presented to Accident and Emergency Department of Mayo Hospital Lahore stretched over a period of eight months from December 2017 to July 2018 after approval from IRB. All the subjects under study reported during the above mentioned period in the medicolegal clinic of the said tertiary care hospital.

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All the volunteering subjects were included in the study, those who did not consent were spared. The study design was a descriptive cross-sectional study on and gender predilections amongst the victims of burns. A non-probability consecutive sampling technique was applied to all the subjects included in the study. A pre-tested standard questionnaire was used to collect the sample. Age and gender were the demographic variables collected and analyzed for the study. The SPSS version 20.0 was applied for analysis of the study on data collected. In order to analyze the age and gender predilections the descriptive analysis was applied.

## RESULTS

**Age:** All the ages of the victims of burns for the purpose of study were classified into different classes. From birth till terminal stage the age of the victim was stratified as shown in the table 1 & 2.

Highest age predilections was 45.2% observed in 113 children among a total of 250 subjects followed by elders making 28.8% of 72 elders as shown in table 02 above. The least burns victims were in the age group of adolescents having just 1.2% being just 3 subjects. Rest of the age groups were adults and infants contributing 15.2% (38 subjects) and 9.6% (24 subjects) respectively. Ideally speaking the infants to be categorized into pediatric age groups along with children and hence accumulatively rising to more than half of the entire population under study.

**Gender:** Gender was categorized as empirically into males and females. The frequency distribution of the analyzed data is depicted in the following frequency distribution table.

Table 1: Classification of Age Groups

Class	Age (in years)
Infants	Less than 01 year
Children	01 year to 12 years
Adolescents	13 years to 25 years
Adults	26 years to 50 years
Elders	Above 50 years

Female surpassed the males being exposed to burns more than 10% as compared to their opposite gender. The exposure of female gender was 55.2% involving 138 females while male gender exposed were 44.8% having 112 males to burn incidents.

Only male children suffered the burn incidents more than females as shown in the table 02 above. There were 62(24.8%) male children and 51(20.4%) female children exposed to burns. In

all of the rest categories female gender was exposed more than male gender, showing female preponderance quite higher in incidents of burns.

Similarly, when each category was analyzed separately, the female preponderance was high in infants, adolescents and adults for their exposure to burns. There were 13(5.2%) females and 11(4.4%) males among the burn victims of infants, 2(0.8%) females and 1(0.4%) males adolescents exposed to burns showing double the involvement of females and 24(9.6%) females and 14(5.6%) males adult facing burns incidents of total 250 subjects, again almost double the number of males, females were exposed to burns.

There were even more than twice the count of males the females were exposed to burns in elders' age group. There were

49(19.6%) females as compared to that of its opposite gender making 23(9.2%) males in the age group of adults among a total of 250 victims of burns.

Table 2: Age predilection amongst the Victims of Burns

Age Group	Frequency	%age
Infants (Less than 1 Year)	24	9.6
Child (1 Year to 12 Years)	113	45.2
Adolescents (13 Years to 25 Yrs)	3	1.2
Adults (26 Years to 50 Years)	38	15.2
Elders (Above 50 Years)	72	28.8
Total	250	100.0

Table 1: Gender Predilections amongst the Victims of Burns

Subject	Infants (< 1 Year)		Children (1-12 Years)		Adolescents (13-25 Years)		Adults (26-50 Years)		Elders (> 50 Years)		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Male	11	4.4	62	24.8	1	0.4	14	5.6	23	9.2	112	44.8
Female	13	5.2	51	20.4	2	0.8	24	9.6	49	19.6	138	55.2
Total	24	9.6	113	45.2	3	1.2	38	15.2	72	28.8	250	100

## DISCUSSION

The study revealed that age group comprising of children from 1 year to 12 years almost contributed half of the entire population rising to 45.2% with another addition of infants of 9.6% accumulative score for pediatric age group was 54.8%. Therefore more than half of the total subjects under study was found to be pediatric age groups i.e. from birth up to 12 years of age. The study was found to be consistent with those found by Colleen M. (1998)<sup>6</sup>, Goswami P. (2016)<sup>7</sup>, Ahmad M. (1999)<sup>8</sup> and Siddique E. (2015)<sup>10</sup>.

Followed by infants and children the second most frequent age group falling victims to burns were elders having age more than 50 years of age. And when both the pediatric age groups with 54.8% as elaborated above and those of geriatric age groups with 28.8% involvement in burns the total score was found to be 83.6%. These findings are consistent with most of the researchers' findings so far<sup>6-8,9-11</sup>.

Rest all age classes were least contributory in the population of 250 subjects. The adolescents were just 1.2%, followed by 38% of adults age group. The gender distribution for the victims of burns in current study was not much promising to be differentiated for a specific gender. The study revealed for the burns not to be grossly discriminatory when it comes to gender of the victim.<sup>5</sup> The current study showed a mere difference of 10% with 44.8% males and 55.2% females. Although the study findings are in consistence with those Capek KD (2018)<sup>2</sup>, Goswami P. (2016)<sup>7</sup>, He S. (2017)<sup>12</sup> and Li H. (2017)<sup>13</sup>.

## CONCLUSION

Our study revealed that burn victims presented in medicolegal clinic were mostly pediatric age group. The children were maximum with almost half the percentage of the entire population though it was mandatory for all the burn victims to be registered as medicolegal cases irrespective of the cause and mode of them to be falling to the victimization process of burns. When infants were included in pediatric age group along with children the percentage even rose to more than half of the entire population under study<sup>6-8,10-12</sup>.

Following the pediatric age group the next most commonly encountered victims to the burns were geriatric age group those who were above 50 years of age. Again it is pertinent to mention here that all the cases of burns present to the emergency of the study settings were registered as medicolegal cases as per law of the land without going into details of manners of one falling victim to incidents of burns.

The gender disparity though was not found so much profound but with a margin 10% the females were victims of the burns more than males. The study revealed that preponderance of gender disparity was more towards the females though having the pediatric age group having contribution more than 50% of the entire research population, needs to be addressed in future research projects<sup>2,3,7,12,13</sup>.

**Conflict of interest:** Nil

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